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Enhancing Vehicle Utilization via a Mobile Application within the Courier Industry in New Zealand

A thesis presented in partial fulfillment of the requirement for the degree of Master of Supply Chain Management

At Massey University, College of Sciences, School of Engineering and Advanced Technology, Manawatu, New Zealand

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ABSTRACT

In the New Zealand transport sector, the Owner-Operator is an indispensable part of Logistics industry. Most couriers and road freight companies Owner-Operators as independent contractors for delivery service. Hence, the vehicle utilization of Owner-Operators might directly influence the profitability and service quality of couriers companies as well as their personal incomes. With respect to the inefficient vehicle utilization, it normally represents as underutilized capacities of part-load shipments, empty movements or idle time.

In conducting the qualitative research, the researcher has interviewed thirty respondents who consist of Owner-Operators and Operations team staff. According to the relevant qualitative data, the research found that the inefficient activities, such as empty run, unpaired shipments and part load shipments are principally caused by unsteady delivery frequency, lack of business acquisition opportunities and small time window. These causes provide mobile technology with a significant potential to enhance the vehicle efficiency. A Logistical Mobile Application, which is installed in a smart phone or portable electronic devices, offers a cost-effective and real-time information exchange platform between customers and service providers.

From the perspectives of respondents, Owner-Operators believe that the mobile app is a new trend of integrating the functions of scanner, GPS and pager. Furthermore, around ninety percent of them perceive that it is a useful tool for improving the vehicle utilization and incomes. However, although the respondents have relatively positive attitudes on this new technology and business model, there are some constraints of its practical effect, due to the boundary and policy of the companies, as well as the population density of New Zealand.

KEYWORDS: Mobile Commerce, Mobile App, Owner-Operators, Vehicle Utilization, Logistics Management
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# TABLE OF CONTENTS

ABSTRACT .............................................................................................................. ii  
ACKNOWLEDGEMENTS ..................................................................................... iii  
1.  INTRODUCTION ........................................................................................... 1  
   1.1  RESEARCH TOPIC ................................................................................. 1  
   1.2  RESEARCH OBJECTIVES/QUESTIONS ............................................. 1  
   1.3  SCOPE AND BOUNDARIES OF RESEARCH ..................................... 2  
   1.4  IMPORTANCE OF RESEARCH ............................................................ 2  
   1.5  RESEARCH METHOD OVERVIEW ..................................................... 4  
   1.6  POTENTIAL CONTRIBUTION TO KNOWLEDGE ............................ 4  
   1.7  LIMITATIONS OF THE STUDY ............................................................ 4  
   1.8  FLOW AND CONTENTS OF REMAINING CHAPTERS .................... 5  
2.  LITERATURE REVIEW ................................................................................ 7  
   2.1  LOGISTICS MANAGEMENT ................................................................. 8  
   2.2  VEHICLE UTILIZATION ..................................................................... 8  
      2.2.1  VEHICLE UTILIZATION MEASUREMENT ............................ 10  
      2.2.2  CAUSE & EFFECT ON INEFFICIENT VEHICLE UTILIZATION ................................................................. 11  
   2.3  INFORMATION TECHNOLOGY SUPPORT ...................................... 15  
      2.3.1  MOBILE APPLICATION ............................................................. 16  
      2.3.2  CRITICAL THINKING OF TECHNOLOGY ADOPTION ......... 20  
   2.4  CONCEPTUAL MODEL ...................................................................... 21  
   2.5  RESEARCH GAP .................................................................................. 23  
   2.6  SUMMARY ........................................................................................... 24  
3.  RESEARCH METHODOLOGY .................................................................. 25  
   3.1  ONTOLOGICAL PERSPECTIVE ............................................................. 25  
   3.2  EPISTEMOLOGICAL PERSPECTIVE .................................................... 26  
   3.3  APPRAISAL OF ALTERNATIVE RESEARCH METHODOLOGIES 27  
      3.3.1  QUANTITATIVE RESEARCH .................................................... 27  
      3.3.2  QUALITATIVE RESEARCH ....................................................... 28  
   3.4  DATA COLLECTION METHODS ......................................................... 31
3.5 DATA ANALYSIS ................................................................................. 36
3.6 ETHICAL CONSIDERATIONS ............................................................. 38
3.7 CONCLUSION .................................................................................... 40
4. LOGISTICS TECHNOLOGY – MOBILE APPLICATION ......................... 41
4.1 ELABORATION OF THE MOBILE APP .............................................. 41
4.2 MOBILE APP ADOPTION IN COURIERS MARKET ............................ 42
5. DATA ANALYSIS .................................................................................... 46
5.1 OVERVIEW OF DATA COLLECTED .................................................. 46
5.2 SAMPLING FRAME ............................................................................ 47
  5.2.1 OWNER-OPERATORS IN NEW ZEALAND ..................................... 49
  5.2.2 PROFILES OF RESPONDENTS .................................................. 51
5.3 DAILY OPERATIONS OF RESPONDENTS ......................................... 53
  5.3.1 RUNNING MODEL ........................................................................ 53
  5.3.2 KEY PARAMETERS OF DAILY OPERATION ................................... 56
5.4 CAUSE & EFFECT OF INEFFECTIVE VEHICLE UTILIZATION ............. 61
5.5 CURRENT APPROACH TO EFFICIENCY IMPROVEMENT .................... 64
5.6 PERSPECTIVES OF THE MOBILE APP .............................................. 67
  5.6.1 INTERPRETATION OF THE MOBILE APP .................................... 67
  5.6.2 ATTITUDES OF THE MOBILE APP ............................................ 69
  5.6.3 CRITICAL THINKING OF THE MOBILE APP ............................... 72
5.7 SUMMARY OF FINDINGS .................................................................... 75
6. DISCUSSION .......................................................................................... 77
  6.1 REVIEW OF CONCEPTUAL MODEL IN LIGHT OF DATA ...................... 77
  6.2 CORRELATION OF FINDINGS WITH LITERATURE ............................ 78
  6.3 RECOMMENDATION ....................................................................... 80
  6.4 CRITIQUE OF THE RESEARCH ......................................................... 82
  6.5 FURTHER RESEARCH ..................................................................... 83
    6.5.1 WORKLOAD DISTRIBUTION FOR COURIERS .............................. 84
    6.5.2 MOBILE APP ADOPTION IN LAST MILE SOLUTION .................. 85
    6.5.3 THREAT OR OPPORTUNITY ...................................................... 86
7. CONCLUSION ......................................................................................... 87
REFERENCE ............................................................................................. 88
APPENDIX A ............................................................................................. 93
LIST OF TABLES

Table 1.1 Distributions of Road Freight Companies by Employee Numbers.............. 3
Table 2.1 Road Freight Rationalization research in the period of the 1990s............. 9
Table 2.2 Causes of Inefficient Vehicle Capacity Utilization........................................... 13
Table 2.3 Technological Profile of the Basic Logistics ............................................. 19
Table 2.4 ICT Adoption within Logistics Service ....................................................... 20
Figure 2.8 Conceptual Model .................................................................................. 22
Table 3.1 Comparison between Objectivism and Constructionism........................ 25
Table 3.2 Comparison between Positivism and Interpretivism .............................. 26
Table 3.3 Research Strategy for the Methodology Aligns with Research Theory . 28
Table 3.4 Compare and Contrast between Quantitative and Qualitative Methodology .................................................................................................................. 29
Table 3.5 Synthesis of Research Strategy .................................................................... 30
Table 3.6 Difference between Primary and Secondary Data Sources ..................... 31
Table 3.7 Types of Interview Questions ..................................................................... 33
Table 4.1 Backloads Finding on Internet .................................................................... 43
Table 5.1 General Situation of Owner-Operators .................................................... 49
Table 5.2 Approach Comparisons between Two Models ......................................... 65
Table 5.3 Perspective of the Mobile App .................................................................... 69
Table 6.1 Evaluate Mobile App Performance by Supply Chain Metrics .............. 79
# LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1</td>
<td>Logical Literature Structure</td>
<td>7</td>
</tr>
<tr>
<td>2.2</td>
<td>Vehicle Utilization Measuring Instance</td>
<td>10</td>
</tr>
<tr>
<td>2.3</td>
<td>Unproductive Times Constitution</td>
<td>11</td>
</tr>
<tr>
<td>2.4</td>
<td>Five Influential Categories of Vehicle Utilization</td>
<td>12</td>
</tr>
<tr>
<td>2.5</td>
<td>Information Support for Vehicle Utilization</td>
<td>16</td>
</tr>
<tr>
<td>2.6</td>
<td>Mobile Device Capabilities</td>
<td>17</td>
</tr>
<tr>
<td>2.7</td>
<td>Supply Chain Framework in B2B Market</td>
<td>18</td>
</tr>
<tr>
<td>2.9</td>
<td>Research Gap</td>
<td>23</td>
</tr>
<tr>
<td>3.1</td>
<td>Contextual and Sampling framework</td>
<td>32</td>
</tr>
<tr>
<td>3.2</td>
<td>Inductive Measurement Process</td>
<td>36</td>
</tr>
<tr>
<td>3.3</td>
<td>Data Analysis Spiral</td>
<td>37</td>
</tr>
<tr>
<td>4.1</td>
<td>Uber Rush Service V.S. Traditional Courier Service</td>
<td>44</td>
</tr>
<tr>
<td>5.2</td>
<td>Overviews of Owner-Operators</td>
<td>51</td>
</tr>
<tr>
<td>5.3</td>
<td>Contract Relationships</td>
<td>52</td>
</tr>
<tr>
<td>5.4</td>
<td>Proportion of Running Model</td>
<td>53</td>
</tr>
<tr>
<td>5.5</td>
<td>Running Models</td>
<td>54</td>
</tr>
<tr>
<td>5.6</td>
<td>Comparisons of Working Time</td>
<td>56</td>
</tr>
<tr>
<td>5.7</td>
<td>Comparisons of Daily Delivery Orders &amp; Running Distance</td>
<td>57</td>
</tr>
<tr>
<td>5.8</td>
<td>Comparisons of Operations for Each Delivery</td>
<td>58</td>
</tr>
<tr>
<td>5.10</td>
<td>In Comparison with Inefficient Vehicle Utilization</td>
<td>61</td>
</tr>
<tr>
<td>5.11</td>
<td>Causes of Inefficient Vehicle Utilization</td>
<td>62</td>
</tr>
<tr>
<td>5.12</td>
<td>Overall Proportion of Current Approach</td>
<td>64</td>
</tr>
<tr>
<td>5.13</td>
<td>Approach Comparisons between Two Models</td>
<td>66</td>
</tr>
<tr>
<td>5.14</td>
<td>Virtual Scenario of Adopting Mobile Application</td>
<td>68</td>
</tr>
<tr>
<td>5.15</td>
<td>Attitudes of Adopting Mobile App in Real Work</td>
<td>73</td>
</tr>
<tr>
<td>6.1</td>
<td>Conceptual Model Review</td>
<td>77</td>
</tr>
<tr>
<td>6.1</td>
<td>Territory Arrangement</td>
<td>84</td>
</tr>
</tbody>
</table>