ABSTRACT

Communication, processing, and storage technology innovation has changed nowadays business environment. E-commerce booming has forced a company to face rapid competition in giving better services for their clients. A company searching for cost reduction has to eliminate the constraints of time and distance to deliver their product and services. Wireless application technology with the "anywhere" and "anytime" concept using mobile devices offers a more competitive advantage for today's electronic commerce.

The objective of this study is primarily to investigate the impact of wireless application technology to a company's competitive advantage. Focusing on the benefit of wireless application, this study aims to investigate what wireless technology, information, and factors that should carefully designed and maintained to ensure successful implementation in Indonesia, especially in Jakarta.

The result of this study shows a fact that wireless application technology gives significant impact to competitive advantage with coefficient correlation of 0.892. Further analysis shows wireless application has most significant impact for bargaining power to buyers, creating barrier to entry, and rivalry among competitors with regression strength of 0.879, 0.766, and 0.753 respectively.

In conclusion, with a careful planning, the implementation of wireless application is expected to strengthen a company position, especially to provide services for the customers and in competition with new and existing competitors.

Keywords: wireless application technology, competitive advantage
## TABLE OF CONTENTS

COVER PAGE ................................................................. i  
STATEMENT PAGE ........................................................... ii  
APPROVAL PAGE ............................................................. iii  
ACKNOWLEDGE ............................................................... iv  
ABSTRACT ........................................................................ v  
TABLE OF CONTENTS ......................................................... vi  
LIST OF TABLE ................................................................. viii  
LIST OF FIGURES ............................................................... x  

Chapter 1 INTRODUCTION ................................................. 1  
  1.1. Background ............................................................. 1  
  1.2. Research Problems .................................................. 2  
  1.3. Scope of the Study .................................................... 4  
  1.4. Research Objectives .................................................. 5  
  1.5. Benefit of study ....................................................... 5  

Chapter 2 LITERATURE REVIEW ...................................... 7  
  2.1. Theoretical Description ........................................... 7  
    2.1.1. Company Competitive Strategy ............................ 7  
      2.1.1.1. Barrier to Entry ....................................... 9  
      2.1.1.2. Potential Development of Substitute Product .... 9  
      2.1.1.3. Bargaining Power of Buyers ....................... 10  
      2.1.1.4. Bargaining Power of Suppliers .................... 10  
      2.1.1.5. Rivalry among Existing Competitors ............ 10  
    2.1.2. Impact of Technology Evolution ......................... 11  
      2.1.2.1. Internet ............................................... 12  
      2.1.2.2. E-Commerce ......................................... 12  
      2.1.2.3. Wireless Technology ................................. 14  
    2.1.3. Wireless Application Success Factor .................. 16  
      2.1.3.1. Information Quality ................................ 17  
      2.1.3.2. Business Information System ..................... 18  
  2.2. Relevant Research ................................................ 22  
  2.3. Framework of Thinking ......................................... 25  
  2.4. Hypothesis ......................................................... 26  

Chapter 3 RESEARCH METHODOLOGY ............................... 28  
  3.1. Place and Time of the Research .............................. 28  
  3.2. Population and Sample ........................................... 28  
  3.3. Research Method .................................................. 28  
  3.4. Variable of Study ................................................ 29
### Chapter 4 RESULT AND ANALYSIS .............................................37
  4.1. Respondent and Instrument ...........................................37
      4.1.1. Respondent ..................................................37
      4.1.2. Instrument ..................................................38
            4.1.2.1. Items Test ........................................38
                  4.1.2.1.1. Items Validity Test .......................38
                  4.1.2.1.2. Items Reliability Test ....................39
      4.1.2.2. Variables Test .........................................40
  4.2. Data analysis ....................................................42
      4.2.1. Descriptive Analysis .....................................42
      4.2.2. Hypothesis Analysis ....................................59
            4.2.2.1. Hypothesis 1 ....................................60
            4.2.2.2. Hypothesis 2 ....................................61
            4.2.2.3. Hypothesis 3 ....................................63
            4.2.2.4. Hypothesis 4 ....................................64
            4.2.2.5. Hypothesis 5 ....................................66
            4.2.2.6. Hypothesis 6 ....................................68
            4.2.2.7. Hypothesis 7 ....................................70
  4.3. Result and Discussion ..........................................71

### Chapter 5 CONCLUSION AND SUGGESTION .................................77
  5.1. Conclusion .......................................................77
  5.2. Suggestion .......................................................78
  5.3. Implication ......................................................79
  5.4. Open Problem ...................................................81

REFERENCE ...........................................................................83
BIBLIOGRAPHY .................................................................85
CURRICULUM VITAE .............................................................87
APPENDIX A: QUESTIONNAIRE ........................................A-1
APPENDIX B: DATA TABULATION ....................................B-1
APPENDIX C: OUTPUT OF SPSS ..........................................C-1
LIST OF TABLE

Table 2-1. Wireless Application ................................................................. 19
Table 4-1. Summary of Respondents .......................................................... 37
Table 4-2. Summary of Items Test .............................................................. 40
Table 4-3. Summary of Variable Test ......................................................... 41
Table 4-4. Age of Respondent ................................................................. 42
Table 4-5. Gender Composition ............................................................... 43
Table 4-6. Respondent Last Education ....................................................... 43
Table 4-7. Respondent Profession ............................................................. 44
Table 4-8. Respondent Wireless Devices .................................................... 45
Table 4-9. Years Experience of Using Wireless Devices ............................. 46
Table 4-10. Hours of Wireless Device use per day ................................. 47
Table 4-11. Wireless Technology (Bearers) Used by Respondent ............. 48
Table 4-12. Wireless Network Used by Respondent ................................ 49
Table 4-13. Respondent Wireless Provider .............................................. 50
Table 4-14. Wireless Application Use by Respondent ............................... 51
Table 4-15. Respondent Answer on Information Quality ............................ 53
Table 4-16. Respondent Answer on Business Information System ............ 54
Table 4-17. Respondent Answer on Competitive Advantage ..................... 55
Table 4-18. Respondent Answer on Competitive Advantage Base on Respondent Profession .......................................................... 56
Table 4-19. Respondent Answer on Factor that Encourage the use of Wireless Technology ........................................................... 57
Table 4-20. Respondent Answer on Factor that Discourage the use of Wireless Technology .............................................................. 57
Table 4-21. Respondent Answer on Features that is most useful in using Wireless Technology .......................................................... 58
Table 4-22. Respondent Answer on Application that is most Beneficial for them to use with Wireless Technology ........................... 58
Table 4-23. Correlation between Wireless Application and Competitive Advantage ................................................................. 60
Table 4-24. Model Summary: Wireless Application and Competitive Advantage ................................................................. 61
Table 4-25. ANOVA: Wireless Application and Competitive Advantage .......... 62
Table 4-26. Regression Coefficient: Wireless Application and Competitive Advantage ................................................................. 62
Table 4-27. Model Summary: Wireless Application and Create Barrier to Entry ............................................................................. 63
Table 4-28. ANOVA: Wireless Application and Create Barrier to Entry ...................................................................................... 63
Table 4-29. Regression Coefficient: Wireless Application and Create Barrier to Entry ................................................................. 64
Table 4-30. Model Summary: Wireless Application and Potential Development of Substitute Product ............................................. 65
Table 4-31. ANOVA: Wireless Application and Potential Development of Substitute Product .................................................... 65
Table 4-32. Regression Coefficient: Wireless Application and Potential Development of Substitute Product .................................. 65
Table 4-33. Model Summary: Wireless Application and Bargaining Power of Buyers ........................................................................ 66
Table 4-34. ANOVA: Wireless Application and Bargaining Power of Buyers .................................................................................. 67
Table 4-35. Regression Coefficient: Wireless Application and Bargaining Power of Buyers ..................................................................... 67
Table 4-36. Model Summary: Wireless Application and Bargaining Power of Suppliers ............................................................... 68
Table 4-37. ANOVA: Wireless Application and Bargaining Power of Suppliers ................................................................................ 69
Table 4-38. Regression Coefficient: Wireless Application and Bargaining Power of Suppliers ..................................................... 69
Table 4-39. Model Summary: Wireless Application and Rivalry Among Competitors ................................................................. 70
Table 4-40. ANOVA: Wireless Application and Rivalry Among Competitors ................................................................................ 70
Table 4-41. Regression Coefficient: Wireless Application and Rivalry Among Competitors ......................................................... 71
Table 4-42. Summary of Hypothesis Analysis .............................................................................................................................. 73
LIST OF FIGURES

Figure 1-1. Porter’s five-forces Model ................................................................. 8
Figure 2-1. Worldwide Mobile Subscribers by Technology 2000-2005 .................. 23
Figure 3-1. Research Design Model: Correlation and Regression between
            Independent Variables and Dependent Variable ..................................... 30
Figure 3-2. Research Design Model: The impact of Independent Variables
            to each component of Dependent Variable .............................................. 31
Figure 4-1. Age of Respondent ........................................................................... 42
Figure 4-2. Gender Composition ........................................................................ 43
Figure 4-3. Respondent Last Education .............................................................. 44
Figure 4-4. Respondent Profession .................................................................... 45
Figure 4-5. Respondent Wireless Devices ........................................................... 46
Figure 4-6. Years Experience of Using Wireless Devices ................................. 47
Figure 4-7. Hours of Wireless Device use per day ............................................ 48
Figure 4-8. Wireless Technology (Bearers) Used by Respondent ...................... 49
Figure 4-9. Wireless Network Used by Respondent .......................................... 49
Figure 4-10. Respondent Wireless Provider ...................................................... 50
Figure 4-11. Wireless Application Use by Respondent ...................................... 52
Figure 4-12. Respondent Answer on Information Quality ................................. 53
Figure 4-13. Respondent Answer on Business Information System .................. 54
Figure 4-14. Respondent Answer on Competitive Advantage .......................... 55