

**ROAD TRANSPORTATION INFRASTRUCTURE
DEVELOPMENT AND ITS IMPLICATION IN
BAGO DIVISION (WEST)**

PhD DISSERTATION

NWE YIN MIN

**DEPARTMENT OF GEOGRAPHY
UNIVERSITY OF YANGON
MYANMAR**

MAY, 2007

Abstract

The main objectives of this dissertation are to assess the development of road transportation infrastructure and to investigate the travel-time and travel cost in the Bago Division (West). Road transport is analyzed by comparing the development of road based on network analysis for three periods- before 1948, between 1948 and 1988, and between 1988 and 2004. Passenger, freight and passenger-cum-freight transports are also related to the change and development of transportation infrastructure. This study also explores the impact of development of road transportation infrastructure upon socio-economic conditions of the study area. The methodology used for this study includes interviews, field surveys, collection of data from departments concerned, and application of GIS. The topological indices for the motor road network of the Bago Division (West) indicated an upward trend. In the accessibility value of nodes in Bago Division (West), Pyay ranked first in three periods. However, Nattalin ranked second before 1948 period, Paungtale ranked second during the period between 1948 and 1988, and Okshitpin ranked second during the period between 1988 and 2004. Together with the development of road transportation, socio-economy of the study area has also improved.

CONTENT

	Page
Acknowledgement	
Abstract	
List of Maps	iii
List of Figures	iv
List of Tables	v
List of Plates	vii
INTRODUCTION	1
CHAPTER 1. PHYSICAL AND HUMAN BACKGROUND	
GEOGRAPHY OF THE STUDY AREA	6
1.1 Physical Bases	6
1.1.1 Location, Size and Shape	6
1.1.2 Relief and Drainage	7
1.1.3 Climate	11
1.1.4 Geology	11
1.1.5 Soils and Natural Vegetation	13
1.2 Population	13
1.2.1 Population Growth and Density	13
1.2.2 Population Distribution	14
1.2.3 Urban and Rural Population	17
CHAPRET 2. HISTORICAL AND STRUCTURAL DEVELOPMENT	
OF THE TRANSPORTATION ROUTES IN THE	
STUDY AREA	19
2.1 Roads in before 1948 period	21
2.2 Roads in between 1948 and 1988 period	22
2.3 Roads in between 1988 and 2004 period	23
2.4 Location of Bridges	24
2.5 Road Networks Analysis	27
2.5.1 Road Network in before 1948 period	29
2.5.2 Road Network in between 1948 and 1988 period	30
2.5.3 Road Network in between 1988 and 2004 period	31
2.5.4 Comparison of Graphs	33
2.5.5 Accessibility	34

CHAPTER 3. THE ROLE OF ROAD INFRASTRUCTURE IN THE DEVELOPMENT OF PASSENGER TRANSPORTATION	36
3.1 Number of Bus Lines and Buses	36
3.2 Types of Passenger Bus	38
3.3 Passengers Flow	40
3.4 Travel Time and Travel Cost	44
CHAPTER 4. THE ROLE OF ROAD INFRASTRUCTURE IN THE DEVELOPMENT OF FREIGHT TRANSPORTATION	50
4.1 Number and Types of Vehicles	50
4.2 Vehicles, Freight Weight (Ton) and Flow	52
CHAPTER 5. THE ROLE OF ROAD INFRASTRUCTURE IN THE DEVELOPMENT OF PASSENGER-CUM-FREIGHT TRANSPORTATION	55
5.1 Number and Types of Passenger-cum-Freight Vehicles	55
5.2 Passenger and Freight	58
CHAPTER 6. COMPARISON OF ROAD TRANSPORTATION WITH OTHER TRANSPORTATION FACILITIES	61
6.1 Passenger and Freight Transport	61
6.2 Distance and Travel Time	63
6.3 Travel Cost	65
CHAPTER 7. IMPACT OF ROAD TRANSPORTATION INFRASTRUCTURE ON REGIONAL DEVELOPMENT	67
7.1 Gross Domestic Product	67
7.2 Education Sector	72
7.3 Health Condition	75
7.4 Commodity Flow	77
CHAPTER 8. FINDINGS AND SUGGESTIONS	79
CONCLUSION	84
REFERENCES	
APPENDICES	