CONTENTS

	Page
Acknowledgement	iii
Abstract in Thai	iv
Abstract in English	V
List of Figures	vii
List of Symbols	viii
Chapter 1 Introduction	1
Chapter 2 Preliminaries	4
2.1 Distribution Functions	4
2.2 Probability Measures	13
2.3 Subcopulas and Copulas	15
2.4 Subcopula Extensions	23
Chapter 3 Main results	37
Chapter 4 Copula Approximation	53
Chapter 5 Conclusion and Discussion	60
Bibliography	62
Curriculum Vitae	64

LIST OF FIGURES

Page

Figure 2.1 The corresponding constants related to M_S and W_S

25



ลิขสิทธิ์มหาวิทยาลัยเชียงใหม่ Copyright[©] by Chiang Mai University All rights reserved

LIST OF SYMBOLS

 \triangle_a^b the difference operator, page 6

(a,b] left-open right-closed intervals, page 4

 $[-\infty, \infty]$ the set of extended real numbers, page 4

 $\begin{bmatrix} \overrightarrow{a}, \overrightarrow{b} \end{bmatrix}$ n-boxes in \mathbb{I}^n , page 4

[a, b] closed intervals, page 4

I the closed unit interval, page 4

 $N\left(\overrightarrow{v}\right)$ the number of i such that $v_i = a_i$, page 6

 $T_{\overrightarrow{a}}$ $\prod_{i=1}^{n} \left[a_i, a_i^+ \right], \text{ page } 34$

 V_H the volume of function H, page 6

ลิ**ขสิทธิ์มหาวิทยาลัยเชียงใหม**่ Copyright[©] by Chiang Mai University All rights reserved