

# An Approach of Combined Taguchi Methods and DEA in Product Quality Improvement

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## ABSTRACT

Nowadays, owing to the increased purchasing power, consumer's demand for material life's enjoyment has become higher than before, especially for luxury car. Besides, the concept has been changed from transportation to recreation. In addition, due to the popularity of short-term traveling, car's loading ability become consumers' main concern. There are many essential factors that affect consumers' behavior. In this paper, the author has focused on relationship between vehicle's tires and purchasing motivation. Tires' quality have great influence on car's speed and loading ability, which affect consumers' purchasing decision. Focused on two domestic tire companies' sedan tires, and based on factors that affect tires' quality such as aspect ratio, loading, speed, selling price and tread wear, the author uses Taguchi Methods and Data Envelopment Analysis to analysis tires' products. Finally, according to the result, the author estimates every tire's production specification's quality problems.

Keywords : tires' production ; Taguchi Methods ; Data Envelopment Analysis

## Table of Contents

目錄封面內頁簽名頁博碩士論文暨電子檔案上網授權書.....	iii	中文摘要.....	iv
ABSTRACT.....	v	目錄.....	vi
圖目錄.....	viii	表目錄.....	ix
第一章緒論.....	1	1.1 研究背景與動機.....	1
1.2 研究目的.....	4	1.3 研究流程.....	6
第二章文獻探討.....	10	2.1 輪胎產品簡介.....	10
2.2 績效的概念.....	12	2.3 田口法相關文獻.....	13
2.3.1 基本概念.....	13	2.3.2 田口法文獻探討.....	14
2.4 資料包絡分析法相關文獻探討.....	18	2.4.1 基本概念.....	19
2.4.2 資料包絡分析法應用文獻探討.....	19	第三章研究方法.....	27
3.1 田口法簡介.....	29	3.1.1 信號雜音比.....	31
3.1.2 正規化.....	32	3.2 資料包絡分析法.....	32
3.2.1 資料包絡分析法基本介紹.....	34	3.2.2 資料包絡分析法的特性與限制.....	38
第四章實證分析.....	40	4.1 因子的選取.....	40
4.2 傳統資料包絡分析結果.....	42	4.3 結合田口法與資料包絡分析法分析結果.....	44
第五章結論與建議.....	49	5.1 結論.....	49
5.2 未來研究建議.....	50	參考文獻.....	52
附錄一輪胎代碼對照表.....	54	附錄二輪胎規格樣本.....	55
附錄三新舊方法改善分析.....	59		

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