

# An Empirical Study between TPS, TQM, TPM and Business Performance A-Team Firms in Bicycle's Industry

賴入定、魏文欽

E-mail: 9701181@mail.dyu.edu.tw

## ABSTRACT

For many years, the enterprise develops various management technologies and improvements to boost the operation quality in order to have the business continuity. However, most of the management improving has an aptitude to a single area. For example, IE, QC and Six-Sigma Analysis in the early stage, all of them focus on the single improving activity in the practice. The weakness is the limited view in the above action. It just avoids the waste, but cannot be positive and aggressive to fulfill the value creation. This study focuses on the supply chain from upper to the lower stage of a certain industry. Through the cooperation of A-Team organization to promote the 3 in 1 system (TPS, TQM, TPM), this study takes the example of 3 in 1 system from the company practice in the reality and empirical the relation between 3 in 1 system and the company operation. A-Team constantly coordinates the main manufacturers and the factories in the lower stage to work out together in the aspect of management, supply chain maintains. Furthermore, A-team helps the companies to disentangle the restriction of the market border and raise the competitive ability by blue-ocean strategy. The questionnaire of this study samples the members of the A-Team organization and focuses on the key managers of the companies, which animate 3 in 1 system. (TPS, TQM, TPM). Via applying the statistic method of Lisrel (Linear Structural Relation), this study plan to empirical the consequence among all the relative factors.. Accordingly, conclude the relative practice and the concept of the management from the study result.

Keywords : Toyota Production System , Total Quality Management , Total Productive Maintenance , A-Team

## Table of Contents

內容目錄 中文摘要	iii	英文摘要	
iv 誌謝辭		vi 內容目錄	
vii 表目錄		ix 圖目錄	
x 第一章 緒論	1	第一節 研究背景與動機	1
1 第二節 研究目的	2	第三節 研究範圍及對象	2
3 第四節 研究流程	3	第二章 文獻回顧	3
5 第一節 TPS、TQM與TPM之定義與衡量要素	5	第二節 企業績效之衡量	5
8 第三節 A-Team(自行車協進會)簡介	10	第四節 TPS、TQM及TPM推進介紹	14
14 第三章 研究方法	37	第一節 研究架構	37
37 第二節 研究假設	38	第三節 變數衡量	41
41 第四節 研究對象與資料蒐集	42	第五節 資料分析方法	42
42 第四章 實證分析		50 第一節 樣本基本資料分析	50
50 第二節 敘述性分析		53 第三節 信度與效度分析	56
56 第四節 LISRE模式分析		59 第五章 結論與建議	66
66 第一節 研究結論		66 第二節 研究貢獻	67
67 第三節 管理意涵		68 第四節 研究限制與未來研究建議	72
72 參考文獻		73 附錄A 研究問卷	79

## REFERENCES

參考文獻 一、中文部份 大野耐一(1978), 豐田生產方式, 國瑞協力會TPS自主研究會譯, 中衛發展中心出版。大野耐一、三戶節雄著, (2004), 豐田成功經營學的真髓, 吳廣洋譯, 東販出版社。大野耐一著(1983), 豐田生產方式與現場管理, 林耀川、成玉山譯, 中華企業管理發展中心出版。小田正義(1990), TQC與TPM實務, 聯經總經銷出版。中鳴清一著(1993), 生產革新的TPM入門, 先鋒出版。今井正明著(1997), 現場改善, 許文治譯, 麥格羅.布爾出版。日本設備維護協會編(1987), TQC與TQM無限驚異的相乘效果, 李爾雅譯, 中衛發展中心出版。王派榮(2001), 豐田生產方式運作之研究台灣國瑞汽車公司及協力廠之成功案例, 中原大學企管理研究所

碩士論文。江瑞坤(2002), 整合TQC、TPS、TPM生產管理改善活動實證之研究, 雲林科技大學工業工程與管理研究所碩士論文。吳廣洋譯(2005), 解讀TOYOTA成功模式, 東販出版。李兆華(2005), 能力競爭, 許經明譯, 中衛發展中心出版。李朝森(2002), 從製造成本來探JIT生產方式, 國立中央大學管理學院高階主管企管碩士論文。李瓊瑤(2000), 士林電機TPM拓碑有成, 中衛簡訊, 143期, 92-95。杉浦政好(1994), TPM、TQC與豐田生產之關係, 中衛簡訊, 112期, 68-75。林偉仁(2004), 設備維護管理系統與生產製造績效之關係探討, 國立中央大學企業管理學系碩士論文。洪村明(2007), 剖析A-Team導入TPS的個案, 中衛報告(01), 41-45。高福成(1995), TPM全面生產保養推進實務, 中衛發展中心出版。張俊俠(2001), 及時存貨制度幫助中小企業成長, 會計研究月?, 19期, 60-83。張致誠(2002), 實行TQM、JIT及TPM與企業績效間的關係, 大同大學事業經營研究所論文。張書文(2001), 台灣日系企業TPM導入、生根和擴散模式與成功因素之研究, 東海大學工業工程與經營資訊研究所。張嗣浩(2000), TQM與企業績效間關係之實證研究, 大同大學事業經營研究所論文。莊明煌(1996), 推行TQM診斷, 中原大學工業工程研究所碩士論文。陳文鴻(2006), 台灣型精實製造文化探討, 東海大學工業工程經營研究所碩士論文。陳光辰(1999), 什麼是及時化生產, 機械工業, 第44期。陳光耀(1984), MRP系統與豐田生產方式之機能比較, 臺灣經際研究月?, 6月分, 第七卷, 第六期 52-60。陳順宇(2005), 多變量分析, 華泰出版。馮修源(2000), 推行TPM關鍵成功因素與績效之研究, 國立成功大學碩士論文。蕭文龍(2007), 多變量分析最佳入門實用書, 基峰訊股份有限公司。鐘朝嵩著(1988), 全公司品質管制, 先鋒出版。二、英文部份 Agus Arawait & Mokhtar Abduliah. (2000), " Total Quality Management Practices in Manufacturing Companies in Malaysia: An Exploratory Analysis. " Total Quality Management 11, no. 8: 1041-1051. Bagozzi R. P. and Youjae Yi. (1988), On the Evaluation of Structural Equation Models. , Journal of the Academy of Marketing Science 16(Spring 1988): 74-94. Balakrishnan R., T. J. Linsmeier, & M. (1996), enkatachalam. Financial Benefits from JIT Adoption: Effects of Customer Concentration and Cost Structure. " The Accounting Review 71, no.2: 183-205. Barker Katherine J. (2000), New Evidence Relating TQM to Financial Performance: An Empirical Study of Manufacturing Firms. Ph. D. diss., University of Texas Brown K. A. and T. R. Mitchell. (1991), A Comparison of Just-In-Time and Batch Manufacturing: The Role of Performance Obstacles. Academy Management Journal 34, no. 4 ; 906 – 917. Crawford , K. M. , J. H. Blackstone Jr., & J. F. ( 1988 ) Cox. " A Study of JIT Implementation and Operating Problems. International Journal of Production Research 26, no.9 1561 – 1568. Cua, Kristy O. Kathleen E. McKone, & Roger G. (2001), Schroeder. Relationship sbetween Implementation of TQM, JIT, and TPM and Manufacturing performance. " Journal of Operations Management 19 ; 675-694. HuangP. (1991), World Class Manufacturing in the 1990: Integrating JIT, TQC, FA, and TPM with Worker Participation. In Modern Production Concepts: Theory and Applications , ed. G. Fandel et al., 491 – 507. New York: Springer。 Huang(1991), P. World Class Manufacturing in the 1990s: Integrating JIT, TQC, FA, and TPM with Worker Participation. In Modern Production Concepts: Theory and Applications, ed. G. Fandel et al., 491 – 507. New York: Springer. Kunst(2000), Paul & Jos Lemmink. Quality Management and usiness Performance in Hospitals: A Search for Success Parameters. Total Quality Management 11, no. 8. 1123-1133. Monden , Yasuhiro(1981), Smoothed Production Lets Toyota Adapt to Demand Changes And Reduce ynventory, Industrial Engineering, August, pp 42-51. Safayeni F., L. Purdy, R. Van Engelen, & S. Pal. (1991), Difficulties of Just-In-Time Implementation: A Classification Scheme. International Journal of Operations and Production Management 11, no. 7: 27 – 36. Steinbacher H. R. and N. L. Steinbacher. (1993),. TPM for America: What It Is and Why You Need It. Cambridge: Productivity Press. Teece, D. and Pisano, G. (1990), The Dynamic Capabilities of Firm:an Introduction, Industrial And Corporate Change, Vol.3 No. 3, pp537-555. Tunalv C. (1992), Manufacturing Strategy- Plans and Business Performance. International Journal of Operations and Production Management 12, no. 3: 4 – 24.