# A STUDY OF SUPPLIERS PARTICIPATION IN NEW PRODUCT DEVELOPMENT---USING MANUFACTURING BUSINESS AS AN EXAMPLE

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#### **ABSTRACT**

A GOING CONCERN OF ENTERPRISE IN THE GLOBAL COMPETITIVE ENVIRONMENT IS THAT CONTINUOUS INNOVATION DESIGN AND NEW PRODUCT DEVELOPMENT (NPD) IS NEEDED TO STRENGTHEN ENTERPRISE'S ACTIVITY. SO NPD IS VERY IMPORTANT FOR ENTERPRISE TO SURVIVE. IN FOREIGN COUNTRIES. THERE HAD BEEN RESEARCHES ABOUT SUPPLIER'S PARTICIPATION IN NPD. BUT FEW HAD BEEN FOUND IN DOMESTIC. AND THEREFORE. IT NEEDS MORE STUDY IN THIS AREA. IN THIS STUDY. I SHALL BE MENTION SOME SUGGESTIONS FOR ENTERPRISE AFTER RESEARCHING LITERATURE AND THE PRACTICE OPERATION OF MANUFACTURING BUSINESS OF NPD IN DOMESTIC. THE SUPPLIER'S PARTICIPATION IN NPD PROJECT IS A CONCURRENT ENGINEERING WITH OUTSIDE PARTNERSHIPS. IT WILL CONSIDER THE BUYER'S FOCUS TARGET/MANAGEMENT AND THE SUPPLIER'S FOCUS CAPACITY/KNOWLEDGE/SPECIALIST; INTEGRATE SUPPLIER INTO NPD PROJECT PROCESS THROUGH RISK ASSESSMENTS AND TIERS MANAGEMENT TO THE SUPPLIER. WITH THE PROPER TIER SUPPLIER PARTICIPATION IN EACH STAGE OF NPD PROJECT PROCESS, SOME SUPPLIERS HAVE RESPONSIBILITY FOR THE NPD PROJECT PROFESSION DESIGN SKILL. THEREFORE, THERE WILL BE SOME POSITIVE ASSESSMENTS FOR NPD PROJECT PERFORMANCE IN PRODUCT COST, MAKING UP THE QUALITY BETTER, AND REDUCING ITS LEAD-TIME. THIS STUDY PROVIDES SOME INSIGHTFUL CONCLUSIONS FOR MANUFACTURING BUSINESS THROUGH RESEARCH AND THE SURVEY ANALYSIS. IT WILL GIVE SOME SUGGESTIONS FOR ENTERPRISE'S NPD PROJECT, AND SPAWN FUTURE STUDIES IN THIS AREA. IT IS HOPED THAT THIS STUDY WILL HAVE SOME CONTRIBUTIONS TO THE MANUFACTURING BUSINESS

Keywords: NEW PRODUCT DEVELOPMENT KNOWLEDGE MANAGEMENT SUPPLIER MANAGEMENT INNOVATION MANAGEMENT RISK ASSESSMENT TECHNOLOGY ROADMAP CONCURRENT ENGINEERING

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### **REFERENCES**

一、中文部份【01】劉水深著 (民70) 產品規劃與策略運用,學者自印。【02】陳定國著 (民83) 企業管理,三民書局。【03】楊子江、王美音譯 (民86) 創新求勝,遠流出版。【04】齊思賢譯 (民89) 知識經濟時代,時報出版。【05】陳俞君、楊素貞譯 (民86) 透視策略聯盟,遠流出版。【06】黃俊英著 (民81) 行銷研究:管理與技術(第四版),華泰書局【07】許士君著 (民69) 現代行銷管理,商略印書館。【08】徐作聖著 (民88) 國家創新系統與競爭力,聯經出版社。【09】丁錫鏞著 (民81) 圖解科技政策學,嵐德出版社。【10】郭崑謨著 (民77) 企業概論,華泰書局。【11】林隆儀、羅文坤、鄭英傑譯 (民77) 新產品行銷策略,清華圖書。【12】王宜婷著 (民88) 新產品開發流程動態模型之建構,成功大學企業管理研究所碩士論文。【13】劉美慧著 (民88) 不同創新類型下新產品發展階段跨部門互動之探討,中央大學企業管理研究所博士論文。【14】何安邦著 (民89) 供應商涉入角色與新產品開發專案績效關係之研究,中央大學企業管理研究所碩士論文。【15】江增常著(民88)市場知識能力與組織應變能力影響產品優勢之研究 台灣地區食品飲料之實証,大葉大學事業經營研究所碩士論文。【16】林淳一著(民88)建立管理知識資料庫以提昇企業競爭力之研究,大葉大學事業經營研究所碩士論文。【17】林明瑩著(民88)以創新理論探討企業發展電子商店之研究,大葉大學資訊管理研究所碩士論文。【18】王成定著(民85)新產品發展過程與組織網

路資源運用對新產品發展績效之影響,大葉大學事業 經營研究所碩士論文。 【19】蔡裕源著(民83)移轉技術類型、管理機制與移專 績效關係之研究,政治大學企業管理研究所博士學位論文(預考)。【20】吳明隆著(民89)SPSS統計應用實務,松崗圖書【21】陳 正昌、程炳林著(民87)SPSS、SAS、BMDP統計軟體在多變量統計上的應用,五南圖書。【22】廖肇弘 善用知識管理系統創造企業 智慧 管理雜誌第310期。 二、 英文部份【01】ROBERT B. HANDFIELD, GARY L. RAGATZ, KENNETH J. PETERSEN, & ROBERT M. MONCZKA "INVOLV -ING SUPPLIERS IN NEW PRODUCT DEVELOPMENT", CALIFORNIA MANAGEMENT REVIEW VOL.42 NO.1 FALL 1999 PP: 59-82 【02】C. MERLE CRAWFORD "NEW PRODUCT MANAGEMENT" (1991) 3RD ED. 【03】ERIC H. KESSLER, PAUL E. BIERLY, AND SHANTHI GOPALAKRISHNAN "INTERNAL VS. EXTERNAL LEARNING IN NEW PRODUCT DEVELOPMENT: EFFECTS ON SPEED, COSTS AND COMPETITIVE ADVANTA -GE" R&D MANAGEMENT 30, 3, 2000 PP: 213 - 223 [04] JEFFREY. H. DYER AND WILLIAM G. OUCHI "JAPANESE-STYLE PARTNERSHIPS: GIVING COMPANIES A COMPETITIVE EDGE", SLOAN MANAGEMENT REVIEW/FALL 1993 PP: 51-63 【05】KIM B. CLARK & STEVEN C. WHEELWRIGHT (1992) "REVOLUTIONIZING PRODUCT DEVELOPMENT" [06] JANET L. HARTLEY, JACK R. MEREDITH, DAVID MCCUTHEON, & RAJAN R. KAMATH, "SUPPLIERS' CONTRIBUTIONS TO PRODUCT DEVELOPMENT: AN EXPLORATORY STUDY" IEEE TRANSACTIONS ON ENG -INEERING MANAGEMENT VO1.44 NO.3 (AUGUST 1997) PP: 258 - 267 [07] GIL & PEDRO "STRATEGIC ALLIANCES, ORGANIZATIONAL LEARNING AND NEW PRODUCT DEVELOPMENT: THE CASES OF ROVER AND SEAT" R & D MANAGEMENT 29,4,1999 PP: 391 - 404 (P391) 【08】 WILLOW A. SHEREMATA "CENTRIFUGAL AND CENTRIPETAL FORCES IN RADIAL NEW PRODUCT DEVEL -OPMENT" ACADEMY OF MANAGEMENT REVIEW 2000 NO.2 VOL.25 PP: 389 - 408 [09] RAJESH SETHI "NEW PRODUCT QUALITY AND PRODUCT DEVELOPMENT TEAMS" JOURNAL OF MARKETI -NG VOL.64 (APRIL 2000) PP: 1-14 【10】 KIRKOR BOZDOGAN, JOHN DEYST, DAVID HOULT, AND MALEE LUCAS "ARCHITECTURAL INNOVATION IN PRODUCT DEVELOPMENT THROUGH EARLY SUPPLIER INTEGRATION" R & D MANAGEMENT 28,3,1998 【11】 SUSAN HELPER "STRATEGY AND IRREVERSIBILITY IN SUPPLIER RELATIONS: THE CASE OF THE U. S. AUTOMOBILE INDUSTRY "BUSINESS HISTORY REVIEW 65 (WINTER1991) PP: 781 - 824 [12] KIM B. CLARK "PROJECT SCOPE AND PROJECT PERFORMANCE" MANAGEMENT SCIENCE (OCTOBER 1989) PP: 1247-1263 【13】 RAJAN R. KAMATH AND JEFFREY K. LIKER "A SECOND LOOK AT JAPANESE PRODUCT DEVELOPMENT" HARVARD BUSINESS REVIEW (DECEMBER/NOVEMBER 1994) PP: 154-170 【14】MICHAEL D. HUFF & THOMAS W. SPEH "BUSINESS MARKETING MANAGEMENT" 6TH ED. PP: 315-342 【15】STANLEY B. BLOCK, ROAM J. ALDAG, & WILLIAM H. CUNNINGHAM "BUSINESS IN A CHANGING WOR -LD" 1993 3RD ED. PP: 371-391 【16】B.J. HODGE, WILLIAM P. ANTHONY, & LAWRENCE M. GALES "ORGANIZATION THEORY: A STRATEG -IC APPROACH" 1996 5TH ED.PP: 356-.385 【17】PHILIP KOTLER "MARKETING MANAGEMENT"1994 8TH ED. PRENTICE-HALL, INC. [18] WILLIAM G. ZIKMUND "BUSINESS RESEARCH METHOD" 2000 HARCOURT, INC. [19] SCARBOROUGH & NORMAN "BUSINESS: GAINING THE COMPETITIVE EDGE" 1990 CHAPTER 12 【20】 ITALO S. SERVI "NEW PRODUCT DEVELOPMENT AND MARKETING: A PRACTICAL GUIDE " 1990 1ST ED . 【21】ROBERT J. THOMAS "NEW PRODUCT DEVELOPMENT: MANAGING AND FORECASTING FOR STRATEGIC SUCCESS" 1993 【22】 JOHN E. VAN AKEN AND MATHIEU P. WEGGEMAN " MANAGING LEARNING IN INFORMAL INNOVATION NETWORKS: OVERCOMING THE DAPHNE-DILEMMA" R & D MANAGEMENT 30, 2, 2000. [23] ] SUSAN K. MCEVILY, SHOBHA DAS, & KEVIN MCCABE " AVOIDING COMPETENCE SUBSTITUTION THRO -UGH KNOWLEDGE SHARING" ACADEMY OF MANAGEMENT REVIEW 2000 VOL. 25 NO. 2 294-311 【24】ROSABETH MOSS KANTER "COLLABORATIVE ADVANTAGE" HARVARD BUSINESS REVIEW JULY-AUGUST 1994 【25】 BART NOOTEBOOM INNOVATION, LEARNING, AND INDUSTRIAL ORGANIZATION" CAMBRIDGE JOURNA -L OF ECONOMICS 1999, 23, 127-150" [26] DIRK FRANTZEN "INNOVATION, INTERNATIONAL TECHNOLOGICAL DIFFUSION AND THE CHANGING INFLUENCE OF R&D ON PRODUCTIVITY" CAMBRIDGE JOURNAL ECONOMICS 2000, 24, 193-211