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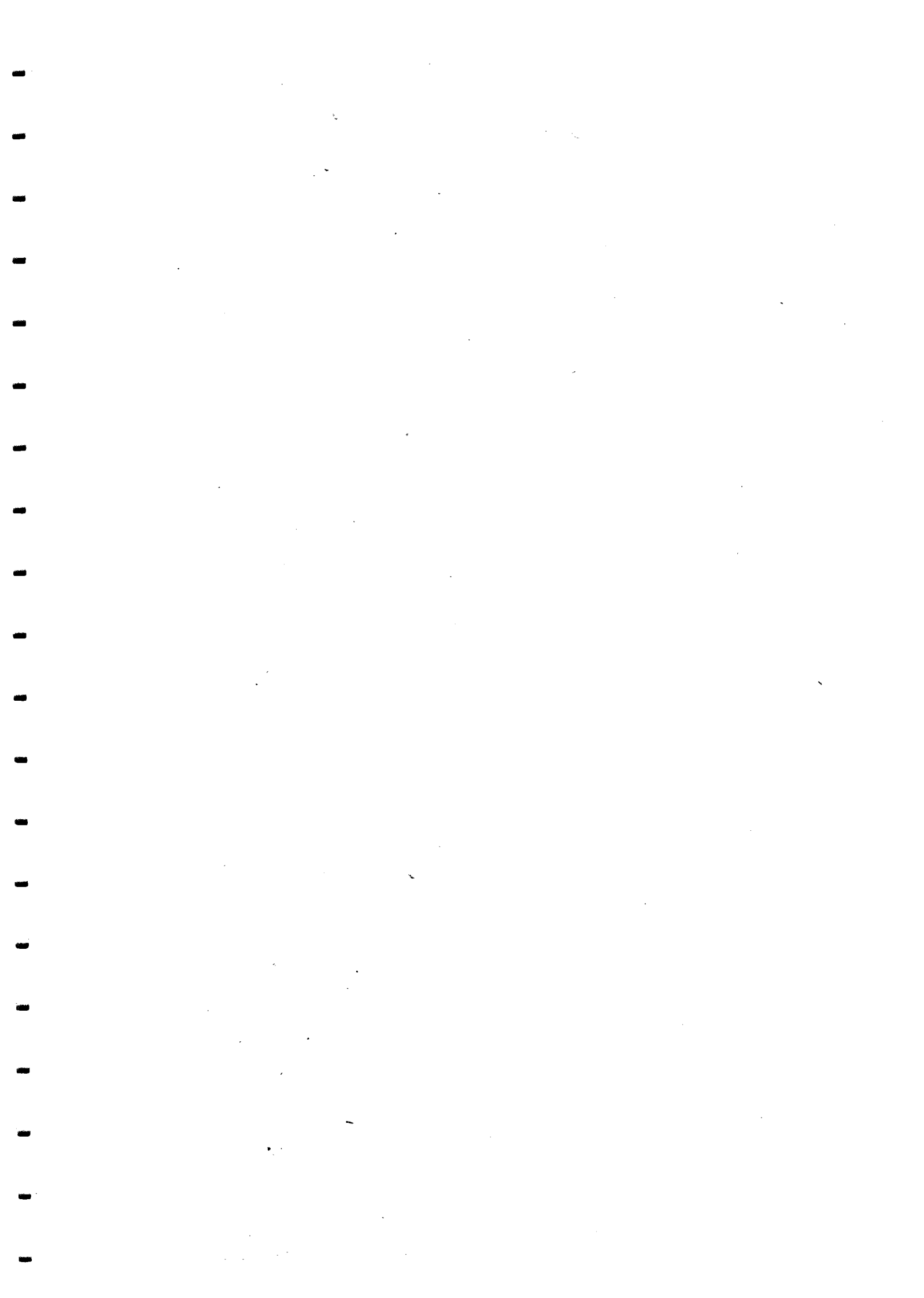
**RELATIONSHIP BETWEEN FIRM
RESOURCES AND PRODUCT INNOVATION
PERFORMANCE IN MALAYSIAN SMALL
MEDIUM ENTERPRISES: THE
MODERATING ROLE OF AGE & SIZE**

LILY JULIENTI ABU BAKAR

**DOCTOR OF PHILOSOPHY
UNIVERSITI UTARA MALAYSIA**

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RESOURCES AND PRODUCT INNOVATION
PERFORMANCE IN MALAYSIAN SMALL
MEDIUM ENTERPRISES: THE
MODERATING ROLE OF AGE & SIZE**

LILY JULIENTI ABU BAKAR

Thesis submitted to Othman Yeop Abdullah
Graduate School of Business in fulfillment of the
requirement for the degree of Doctor of Philosophy



Kolej Perniagaan
(College of Business)
Universiti Utara Malaysia

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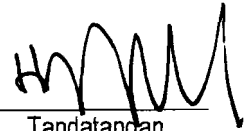
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ABSTRAK

Tujuan kajian ini adalah untuk menilai prestasi inovasi produk (PIP) di kalangan enterprais kecil dan sederhana (EKS) bagi sektor pengeluaran di Malaysia. Perhatian difokuskan ke atas EKS memandangkan sebahagian besar peratusannya berada di dalam populasi bisnes di Malaysia. Tambahan pula, kebanyakan sektor pengeluaran dalam EKS terlibat di dalam aktiviti inovasi. Di samping itu juga, terdapat peningkatan tahap inovasi produk di dalam sektor pengeluaran sejak tahun-tahun kebelakangan ini. Kajian ini telah menilai perhubungan sebenar dan jangkaan ke atas sumber-sumber EKS dan PIP. Ia juga membincangkan kesan penyederhana saiz dan usia EKS terhadap perhubungan tersebut. Tambahan lagi, terdapat juga dapatan kajian mengenai industri pengeluaran paling inovatif di Malaysia. Penyelidikan ini menggunakan metodologi kajian yang meliputi analisis deskriptif, ujian *non-response bias*, analisis kesahan dan kebolehpercayaan dan analisis regresi (*multiple* dan *hierarchical*) ke atas populasi kajian dari kalangan EKS dalam sektor pengeluaran. Dapatan kajian berkaitan PIP dan sektor pengeluaran mendapati industri elektrik dan elektronik (E&E) telah mencapai PIP yang tertinggi. Di dalam kes perhubungan secara langsung antara sumber-sumber EKS dan PIP, hasil kajian menunjukkan sumber-sumber ketara tidak mempunyai hubungan dengan PIP. Namun demikian, sumber-sumber tidak ketara menunjukkan perhubungan yang positif dengan PIP. Seterusnya, dapatan kajian mendapati usia EKS mempunyai kesan penyederhana ke atas sumber-sumber ketara dan PIP. Berlainan pula apabila mengaitkan kesan penyederhana saiz EKS, kajian menyimpulkan bahawa saiz EKS tidak memberi kesan penyederhana ke atas perhubungan antara sumber-sumber dan PIP. Keaslian kajian ini adalah dengan sumbangan terhadap aliran penyelidikan *resource-based view (RBV)* dan inovasi khususnya dalam konteks kajian, konseptualisasi dan metodologi. Penemuan kajian ini juga memberikan sumbangan penting bagi para pengamal dan pembuat dasar dalam membangunkan polisi dan strategi untuk mempromosikan EKS.

Katakunci: prestasi inovasi produk, enterprais kecil dan sederhana (EKS), sumber-sumber EKS, saiz EKS, usia EKS.

ABSTRACT

The purpose of this research was to assess the product innovation performance (PIP) in small and medium-sized enterprises (SMEs) in the Malaysian manufacturing sector. The research focused on SMEs because of the high percentage of them in the Malaysian business population. Furthermore, manufacturing SMEs are mostly involved in innovation activities. Also, there are increasing levels of product innovation in the manufacturing sector in recent years. The present research has assessed the actual and expected relationship of the resources of SMEs and PIP. It has also discussed the moderation effect of the size and age of the SME on this relationship. In addition, there are also findings on the most innovative manufacturing industries in Malaysia. This research uses survey methodology that includes a descriptive analysis, test of non-response bias, validity and reliability analysis and regression analysis (multiple and hierarchical) of the study population from among SMEs in the manufacturing sector. Findings showed that the production of electrical and electronic industry (E&E) has achieved the highest PIP. In terms of the direct relationship between SME resources and PIP, the results showed no relationship between tangible resources and PIP. On the other hand, intangible resources demonstrated a positive relationship with PIP. Moreover, there was a moderation effect of the SME's age towards tangible resources and PIP. Conversely, the size does not moderate the relationship between SME resources and PIP. Originality of this study is to contribute to the flow of resource view (RBV) and innovation research, especially in the context of the study, conceptualization and methodology. The findings of this research also provide important contributions for practitioners and policy-makers in developing policies and strategies for promoting SMEs.

Keywords: product innovation performance, small medium enterprises (SMEs), SME resources, SME size, SME age.

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In the name of ALLAH (SWT)

Alhamdulillah, thanks to Allah, first and last Lord and Cherisher of all the worlds who taught humankind, may his blessing and his mercy be upon the holy Prophet Muhammad (SAW) who oversaw the creation of God and sent as a mercy to the all worlds.

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Lily Julienti Abu Bakar,

UUM

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LIST OF ABBREVIATIONS

ANOVA	Analysis of variance
BCG	Boston Consulting Group
BNM	Bank Negara Malaysia
BOS	Blue Ocean Strategy
DTI	Department of Trade & Industry
DV	Dependent variable
EFA	Exploratory factor analysis
E&E	Electrical and electronic industry
EO	Entrepreneurial orientation
ESI	Engineering supporting industry
FAO	Food and agriculture organization
F&B	Food and beverages
GDP	Gross domestic product
HI	Human intellectual
ICA	Industrial coordination act
ICT	Information and communication technology
IO	Industrial organization
IP	Intellectual property
IPR	Intellectual property rights
IV	Independent variable
KMO	Keiser Meyer-Olkin

LSI	Life Science Industry
M&E	Machinery and equipment
MIDA	Malaysian industrial development authority
MiGHT	Malaysian Industry-Government Group for High Technology
MITI	Ministry of Trade and Industry
MOF	Ministry of Finance
MOSTI	Ministry of Science Technology and Innovation
Myke Survey	Malaysian content knowledge survey
NPD	New product development
NSDC	National SME Development Council
NSI	National survey of innovation
OECD	Organization for Economic Co-operation and Development
OEM	Original equipment manufacturer
OR	Original resources
PCA	Principal Component analysis
PDP	Product development performance
PIP	Product innovation performance
RBV	Resource-based view
R&D	Research and development
RM	Ringgit Malaysia
SEM	Structure equation model
SMEs	Small medium enterprises

SMIDEC	Small and medium industries Development Corporation
UK	United Kingdom
UNDP	United Nation Development Program
USA	United States of America
UUM	Universiti Utara Malaysia
VRIN	Valuable, rare, inimitable and non-substitutable
VRIO	Valuable, rare, inimitable and organization

CHAPTER ONE

INTRODUCTION

1.1 Research Background

Governments worldwide recognize the importance of small and medium-sized enterprises (SMEs) and their contribution to economic growth, social cohesion, employment and local development (Oke, Burke, & Myers, 2003). The governments of most developed economies, including Malaysia, see SMEs as the well-spring of economic growth and job and wealth creation. In Malaysia, the Small and Medium Industries Development Corporation (SMIDEC) is responsible for formulating policy and strategy for SMEs (BERNAMA, 2008). SMIDEC was renamed the SME Corporation, becoming fully operational on 2 January 2009, to widen its scope as a central coordinating agency for Malaysian SMEs.

In order to formulate broad policies and strategies, and at the same time to oversee and guide the overall development of SMEs, the National SME Development Council (NSDC) was established in June 2004 as the highest policy-making body to chart the direction and strategies for SMEs in Malaysia. Bank Negara Malaysia (BNM) was responsible as the secretariat for the NSDC from its establishment on 1st June 2004 (BNM, 2005). On 24th July 2008, BNM's function as the NSDC secretariat was handed over to the SME Corporation (BNM, 2008).

The Malaysian government recognizes that innovation is an important factor for the success of SMEs since the emergence of new technologies and products have influenced the way business is conducted (NSDC, 2007). This

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REFERENCES

- Abbott, S. (2006). Innovation Organization, *Innovation Management: Policy Buzzword or Critical Success Factor?* (Vol. 2). Ontario, Canada: Abbott Research & Consulting.
- Abdullah, F., Hamali, J., Deen, A.R., Saban, G., Abg Abdulrahman, A.Z. (2009). Developing a framework of success of Bumiputra entrepreneurs, *Journal of Enterprising Communities: People and Places in the Global Economy*, 3(1), 8-24.
- Abdullah, M. M., Uli, J., & Tari, J. J. (2008). The influence of soft factors on quality improvement and performance: Perceptions from managers. *The TQM Journal*, 20(5), 436-452.
- Aberdeen Group. (2005). *The Product Innovation Agenda Benchmark Report*. Boston, MA: Aberdeen Group.
- Aboulnasr, K., Narasimhan, O., Blair, E., & Chandy, R. (2008). Competitive response to radical product innovations. *Journal of Marketing*, 72(May), 94-110.
- Abrunhosa, A. (2003). The National Innovation Systems Approach and the Innovation Matrix, *Danish Research Unit for Industrial Dynamics (DRUID) Summer Conference*. Copenhagen.
- Acs, Z. J., Carlsson, B., & Karlsson, C. (Eds.). (1999). *Entrepreneurship, Small and Medium Enterprises and the Macroeconomy*. Cambridge: Cambridge University Press.
- Advisory Council on Science and Technology (1992). *The Enterprise Challenge: Overcoming Barriers to Growth in Small Firms*. London: Advisory Council on Science and Technology (ACOST).
- Agarwal, N. C. (1979). On the interchangeability of size measures. *Academy of Management Journal*, 22(2), 404-409.
- Agarwal, R., & Gort, M. (1996). The evolution of markets and entry, exit and survival of firms. *Review of Economics and Statistics*, 78, 489-498.
- Agarwal, R., & Gort, M. (2002). Firm product life cycles and firm survival. *American Economic Review*, 92, 184-190.
- Aghion, P., & Howitt, P. (1992). A model of growth through creative destruction. *Econometrica*, 60(2), 323-351.
- Aguinis H., & Gottfredson, R. K. (2010). Best-practice recommendations for estimating interaction effects using moderated multiple regression. *Journal of Organizational Behaviour*, 31(6), 776-786.

- Aiginger, K., & Tichy, G. (1991). Small firms and the merger mania. *Small Business Economics* 3, 83-101.
- Aiken, L. S., & West, S. G. (1991). *Multiple Regression: Testing and Interpreting Interactions*. Newbury Park CA and London: Sage.
- Akhavan, P., & Jafari, M. (2008). Towards learning in SMEs: An empirical study in Iran. *Development and Learning in Organizations*, 22(1), 17-19.
- Aldrich, H. E., & Auster, E. R. (1986). Even dwarfs started small: Liabilities of age and size and their strategic implications. *Research in Organizational Behavior*, 8(1), 165-198.
- Alegre, J., Lapiedra, R., & Chiva, R. (2006). A measurement scale for product innovation performance. *European Journal of Innovation Management*, 9(4), 333-346.
- Alvarez, S. A., & Barney, J. B. (2001). How can entrepreneurial firms really benefit from alliances with large firms? *Academy of Management Executive*, 15, 139-148.
- Allison PD (1999) *Logistic regression using the SAS system – theory and application*. SAS Institute, Cary, NC
- Alvarez, S. A., & Barney, J. B. (2004). Organizing rent generation and appropriation. *Journal of Business Venturing*, 19, 621-635.
- Amabile, T., Conti, R., Coon, H., Lazenby, J., & Herron, M. (1996). Assessing the work environment for creativity. *Academy of Management Journal*, 39(5), 1154-1185.
- Amit, R., & Schoemaker, P. (1993). Strategic assets and organizational rent. *Strategic Management Journal*, 14(1), 33-46.
- Ancona, D. G., & Caldwell, D. F. (1992). Demography and design: Predictors of new product team performance. *Organization Science*, 3(3), 321-341
- Andersen, E. S. (1994). Innovation and Quality Standardisation: The Evolution of Complex Industrial Systems and Complex Product Designs, *International Schumpeter Society Conference*. Münster.
- Andrew, J. P., Haanaes, K., Michael, D. C., Sirkin, H. L., & Taylor, A. (2008). *Innovation 2008: Is the tide turning?* Boston, MA: The Boston Consulting Group.
- Andrew, J. & Smith, D. C. (1996). In search of marketing imagination: Factors affecting the creativity of marketing programs for mature products. *Journal of Marketing Research*, 33(1), 17-37.

- Apintalisayon. (2008). *Tangible versus Intangible Assets*. Retrieved 29 March 2009, from <http://apintalisayon.wordpress.com/2008/12/14/d11-tangible-versus-intangible-assets/>.
- APSC (2003). Human Resources Capability Model. Phillip Act: Australian Public Service Commission.
- Ariff, M. (2007). *Analyses of Industrial Agglomeration, Production Networks and FDI Promotion* (ERIA Research Project Report). Chiba: Economic Research Institute for ASEAN and East Asia.
- Ariffin, N., & Figueiredo, P. N. (2003). Internationalisation of Innovative Capabilities Counter-evidence from the Electronics Industry in Malaysia and Brazil, *DRUID Summer Conference 2003*. Copenhagen.
- Armstrong, J., & Overton, T. (1977). Estimating non-response bias in mail surveys. *Journal of Marketing Research*, 14, 396-402.
- Atkins, C. R., Dykes, P., Hagerty, J., & Hoye, J. (2002). How customer performance partnerships can sharpen your competitive edge. *The Journal for Quality and Participation*, 25(3), 22.
- Audet, J., & d'Amboise, G. (2001). The multi-site study: An innovative research methodology. *The Qualitative Report* 6(2).
- Avermaete, T., Viaene, J., Morgan, E. J., & Crawford, N. (2003). Determinants of innovation in small food firms *European Journal of Innovation Management*, 6(1), 8-17.
- Bain, J. S. (1959). *Industrial Organization*. New York: John Wiley & Sons.
- Bakar, A. B. A. (2004). Library and information science journal as a tool for continuing professional development in Malaysia: A bibliometric study, *The World Library And Information Congress: 70th. IFLA General Conference and Council*. Buenos Aires, Argentina: Malaysian Journal of Library & Information Science.
- Bakar, L. J. A., & Ahmad, H. (2010a). Assessing the relationship between firm resources and product innovation performance: A resource-based view. *Business Process Management Journal*, 16(3), 420-435.
- Bakar, L. J. A., & Ahmad, H. (2010b). Small [and] medium enterprises' resources and the development of innovation in Malaysia. *Journal of Innovation Management in Small and Medium Enterprises*, 2010(Article ID 128184), 14.
- Balabanis, G. I., & Katsikea, E. S. (2003). Being an entrepreneurial exporter: Does it pay? *International Business Review*, 12(2), 233-252.
- Baldwing, W. L., & Scott, J. (1987). *Market Structure and Technological Change*. Chur, Switzerland and New York: Harwood Academic.

- Bantel, K. A., & Jackson, S. E. (1989). Top management and innovations in banking: Does the composition of the top team make a difference? *Strategic Management Journal* 10, 107-124.
- Barney, J.B. (1986). Strategic factor markets: Expectation, luck and business strategy. *Management Science*, 32(10), 1231-1241.
- Barney, J. B. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99-120.
- Barney, J. B. (1995). Looking inside for competitive advantage. *Academy of Management Executive*, 9(4), 49-61.
- Barney, J. B. (1997). *Gaining and Sustaining Competitive Advantage*. Reading, MA: Addison-Wesley.
- Barney, J.B. (2001). Resource-based theories of competitive advantage: A ten year retrospective on the resource-based view. *Journal of Management*, 27(Special Issue), 643-650.
- Barney, J.B., Wright, M., & Ketchen, D. J. (2001). The resource-based view of the firm: Ten years after 1991. *Journal of Management*, 27(6), 625-641.
- Baron, R. A., & Shane, S. A. (2005). *Entrepreneurship: A Process Perspective*. Ohio, USA: Thomson South-Western.
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic and statistical considerations. *Journal of Personality and Social Psychology*, 51, 1173-1182.
- Bartlett, J. E., Kortlik, J. W., & Higgins, C. C. (2001). Organizational research: Determining appropriate sample size in survey research. *Information Technology. Learning and Performance Journal*, 19(1), 43-50.
- Bear, M., & Frese, M. (2002). Innovation is not enough: Climates for initiative and psychological safety, process innovations and firm performance. *Journal of Organizational Behaviour*, 24, 45-68.
- Beckett, R. C. (2005). When innovation is necessary but not sufficient. Paper presented at the 6th International Continuous Innovation Network Conference, Brighton, UK.
- BERNAMA. (2008). *Smidec to be central of Coordinating Agency, says Abdullah*. Retrieved 5th June, 2008, from <http://www.bernama.com>
- Bhaskaran, S. (2006). Incremental innovation and business performance: Small and medium-size food enterprises in a concentrated industry environment. *Journal of Small Business Management*, 44(1), 64-80.

- Birchall, D. W., Chanaron, J. J., & Soderquist, K. E. (1996). Managing innovation in SMEs. A comparison of companies in the UK, France and Portugal. *International Journal of Technology Management*, 12(3), 291-305.
- Blakeley, N., Lewis, G., & Mills, D. (2005). *The Economics of Knowledge: What makes Ideas Special for Economic Growth*. Wellington, NZ: The Treasury.
- Bloom, N., Dorgan, S., Dowdy, J., Reenen, J. V., & Rippin, T. (2005). Management practices across firms and nations (pp. 1-38): Centre for Economic Performance, London School of Economics.
- Blunck, F. (2006). What is competitiveness? Retrieved 9 September 2008, from www.competitiveness.org/article/articleview.
- BNM (2005). *Definitions for Small and Medium Enterprise in Malaysia (Approved for adoption by National SME Development Council on June 2005)*. Kuala Lumpur: Bank Negara Malaysia.
- BNM. (2007, November 2010). *SME Info Portal*. Retrieved June, 2007, from <http://www.smeinfo.com.my/>
- BNM (2008). Bank Negara Malaysia. *Handing over of National SME Development Council Secretariat Function to SMIDEC*. Retrieved 17 June 2009, from <http://www.bnm.gov.my/index>.
- Bösch, D., & Kobe, C. (2005). Structuring the Uses of Innovation Performance Measurement Systems, *Working Paper Series by the University of Applied Sciences of Vienna*. Vienna, Austria: Department of Industrial Management, Vienna University of Economics and Business Administration.
- Bowman, C. (2003). Differential labour and competitive advantage: Embedding resource-based theory within Marx's labour theory of value. *The Cranfield School of Management Working Paper Series*, 3, 1-16.
- Bowman, E. H. (1980). A risk-return paradox for strategic management. *Sloan Management Review*, 21, 17-31.
- Branen, M. Y. (1991). Culture as the critical factor in implementing innovation. *Business Horizons*, 34, 59-67.
- Breschi, S. (1999). Spatial patterns of innovation: Evidence from patent data. In A. Gambardella & F. Malerba. (Eds.), *The Organisation of Economic Innovation in Europe* (pp. 71-103). New York: Cambridge University Press.
- Brush, C. G., Greene, P. G., & Hart, M. M. (2001). From initial ideas to unique advantage: The entrepreneurial challenge of constructing a resource base. *Academy of Management Executive*, 15(1), 64-78.
- Bryman, A. (2001). *Social Research Methods*. New York: Oxford University Press.

- Bueno, E., Aragon, J. A., Salmador, M. P., & Garcia, V. J. (2010). Tangible slack versus intangible resources: The influence of technology slack and tacit knowledge on the capability of organisational learning to generate innovation and performance. *International Journal of Technology Management*, 49(4), 314-337.
- Bundy, W. M. (2002). *Innovation, Creativity and Discovery in Modern Organizations*. Westport CT and London: Quorum Books.
- Burgelman, R., & Madique, M. (1988). *Strategic Management of Technology and Innovation*. HomewoodIL: Irwin.
- Calantone, R. J., Vickery, S. K., & Dröge, C. (1995). Business performance and strategic new product development activities: An empirical investigation. *Journal of Product Innovation Management*, 12, 214-223.
- Capon, N., Farley, J. U., Lehman, D. R., & Hulbert, J. M. (1992). Profiles of product innovators among large US manufacturers. *Management Science*, 38(2), 157-169.
- Capron, L., & Hullan, J. (1999). Redeployment of brands, sales forces and general marketing management expertise following horizontal acquisitions: A resource based view. *Journal of Marketing*, 63(4), 41-54.
- Carland, J. W., & Carland, J. C. (1992). Managers, small business owners and entrepreneurs, the cognitive dimensions. *Journal of Business and Entrepreneurship*, 4(2), 55-62.
- Casey, L., & Ging, L. C. (2007). Encouraging innovation in Malaysia: Appropriate sources of finance. *Journal of Confederation of Asia-Pacific Chambers of Commerce and Industry* 1.
- Casson, M. (1982). *The Entrepreneur and Economic Theory* (2nd ed.). Oxford: Martin Robertson.
- Casson, M. (2004). *Entrepreneurship and the Theory of the Firm*. Paper presented at the ATOM Workshop, Paris.
- Castelli, C. (2007). *SMEs in Malaysia: Leading in Mobility*. Retrieved 4 May 2009, from <http://store.ovum.com/cu.asp>.
- Cater, T., & Cater, B. (2009). (In) tangible resources as antecedents of a company's competitive advantage and performance. *Journal for East European Management Studies* 14(2), 186-209.
- Cefis, E., & Marsili, O. (2003). Survivor: The Role of Innovation in Firms' Survival, *Conference of "What do we know about innovation?"* University of Sussex: Tjalling C. Koopmans Research Institute.

- Chandler, A. D. (1990). *Scale and Scope: The Dynamics of Industrial Capitalism*. Cambridge, MA: Belknap Press.
- Chesbrough, H. W. (2003). *Open Innovation: The New Imperative for Creating and Profiting from Technology*. Boston MA: Harvard Business School Press.
- Clark, K. B., & Fujimoto, T. (1991). *Product Development Performance: Strategy, Organization, and Management in the World Auto Industry*. Harvard MA: Harvard College.
- Claver, E., Llopis, J., Garcia, D., & Molina, H. (1998). Organizational culture for innovation and new technological behaviour. *The Journal of High Technology Management Research*, 9, 55-68.
- Clulow, V. (2007). The resource based-view and value: The customer-based view of the firm. *Journal of European Industrial Training*, 31(1), 19-35.
- Coakes, S. J., Steed, L., & Dzidic, P. (2006). *SPSS Version 13.0 for Windows: Analysis without Anguish*. Milton Qld: John Wiley and Sons Australia.
- Cogan, D. J. (2001). *Managing Learning and Knowledge: Reflections on the Irish Growth Experience*. Paper presented at the Specialised Workshop on Innovation and Competence Building, 21-23 June 2001, Taguspark, Oeiras, Portugal.
- Cohen, W. M. (1995). Empirical studies of innovative activity. In P. Stoneman (Ed.), *Handbook of the Economics of Innovation and Technological Change*. Oxford: Blackwell.
- Collis, D., & Montgomery, C. (1994). Competing on resources: Strategy in the 1990s. *Harvard Business Review*, 7-8, 118-128.
- Colombo, M. G., Delmastro, M., & Grilli, L. (2002). Entrepreneurs' Human Capital and the Start-up Size of New Technology-Based Firms, *29th EARIE Conference*. Groupe HEC.
- Conner, T. (2002). The resource-based view of strategy and its value to practicing managers. *Strategic Change*, 11, 307-316.
- Cooke, P. (1996). The new wave of regional innovative networks: analysis, characteristics and strategy. *Small Business Economics*, 26(4), 475-491.
- Coombs, R. (1996). A literature-based innovation output indicator. *Research Policy*, 25, 403-413.
- Cooper, R.G. (1984). The strategy-performance link in product innovation. *R&D Management*, 14(4), 247-267.

- Cooper, R.G. (1988). A multidimensional approach to the adoption of innovation. *Management Decision*, 36(8), 493-502.
- Cooper, R.G. (1999). The invisible success factors in product innovation. *Journal of Product Innovation Management* 16(2), 115-133.
- Cooper, R.G., & Kleinschmidt, E. J. (1987). Success factors in product innovation. *Industrial Marketing Management*, 16(3), 215-223.
- Cooper, R. G. (2000). Product innovation and technology strategy. *Research Technology Management*, 43(1), 38-40.
- Cooper, D. R., & Schindler, P. S. (2003). *Business Research Methods*. Boston, MA: McGraw-Hill/Irwin.
- Cortina, J.M. (1993). What Is Coefficient Alpha? An Examination of Theory and Applications. *Journal of Applied Psychology*, 78(1), 98-104.
- Costello, A. B., & Osborne, J. W. (2005). Best practices in exploratory factor analysis: Four recommendations for getting the most from your analysis. *Practical Assessment, Research & Evaluation*, 10(7), 1-9.
- Covin, J. G., & Slevin, D. P. (1986). *The Development and Testing of an Organizational-Level Entrepreneurship Scale*. Boston, MA: Babson College.
- Covin, J. G., & Slevin, D. P. (1989). Strategic management of small firms in hostile and benign environments. *Strategic Management Journal*, 10, 75-87.
- Covin, J., & Slevin, D. (1991). A conceptual model of entrepreneurship as firm behaviour. *Entrepreneurship Theory and Practice*(Fall), 7-25.
- Cramer, D. (1998). *Fundamental statistics for social research: step by step calculations and computer techniques using SPSS for Windows*. Routledge.
- Crant, J. M. (1996). The proactive personality scale as a predictor of entrepreneurial intentions. *Journal of Small Business Management*, 7, 1.
- Crowther, D. (1996). From the foundations upwards: evaluating business performance. *Managerial Auditing Journal*, 11(1), 35-47.
- Damanpour, F. (1996). Innovation effectiveness, adoption and organizational performance. In M. A. West & J. L. Farr (Eds.), *Innovation and Creativity at Work* (pp. 125-141). New York: Wiley.
- Damodaran, R. (2008). Malaysia not losing its investment appeal. *New Straits Times*, 14 October 2008, p. 41.
- Danneels, E., & Kleinschmidt, E. J. (2001). Product innovativeness from the firm's perspective: Its dimensions and their relation with project selection and performance. *Journal of Product Innovation Management*, 18(6), 357-373.

- DaRocha, A., Christensen, C. H., & Paim, N. A. (1990). Characteristics of innovative firms in the Brazilian computer industry. *Journal of Product Innovation Management*, 7, 123-134.
- Day, G. S., & Wensley, R. (1988). Assessing advantage: A framework for diagnosing competitive superiority. *Journal of Marketing*, 52(April), 1-20.
- Dean, M. A., Shook, C. A., & Payne, G. T. (2007). The past, present, and future of entrepreneurship research: Data analytic trends and training, *Entrepreneurship: Theory and Practice*, 7.
- de Brentani, U., & Kleinschmidt, E. J. (2004). Corporate culture and commitment: Impact on performance of international new product development programs. *Journal of Product Innovation Management*, 21(5), 309-333.
- Dess, G. G., Lumpkin, G. T., & Taylor, M. L. (2004). *Strategic Management: Creating Competitive Advantages* (2nd ed.) McGraw Hill Professional.
- Devi, P. (2007). Enhancing the opportunities of SMEs. *Penang Economic Monthly*, 9(4), 1-5.
- Dierckx, J., & Cool, K. (1989). Asset stock accumulation and sustainability of competitive advantage. *Management Science*, 35(12), 1504-1511.
- Dillman, D. A., & Frey, J. H. (1974). Contribution of personalization to mail questionnaire response as an element of a previously tested method. *Journal of Applied Psychology*, 59, 297-301.
- Dollinger, M. J. (1999). *Entrepreneurship: Strategies and Resources*. New Jersey: Prentice Hall.
- Dougherty, D., & Hardy, C. (1996). Sustained product innovation in large, mature organizations: Overcoming innovation-to-organization problems. *The Academy of Management Journal*, 39(5), 1120-1153.
- Doyle, P. (1994). Setting business objectives and measuring performance. *European Management Journal* 12(2), 123-132.
- Driva, H., Pawar, K. S., & Menon, U. (1999). A framework for product development performance metrics. *International Journal of Business Performance Management* 1(3), 312-326.
- Drucia, E., Cornescu, V., & Bratu, A. (2009). *The reputation risks as the risks of risks*. Paper presented at the 12th International Business Information Management Association Conference, 29-30 June 2009, Hotel Istana, Kuala Lumpur.
- Drucker, P. (1985). *Innovation and Entrepreneurship: Practice and Principles*. New York: Harper and Rowe.

- DTI (2001). United Kingdom Innovation Survey 2001 Questionnaire. In Department of Trade and Industry (Ed.) (pp. 1-6): Department of Trade and Industry.
- DTI (2005). Innovation in the UK: Indicators and insights. In Department of Trade and Industry (Ed.) (6th ed.)(Vol. 6, pp. 1-89): Department of Trade and Industry.
- Ebrahim, N. A., Ahmed, S., & Taha, Z. (2008). *Virtual R&D Teams: A Sustainable Infrastructure for Promoting SMEs*. Paper presented at the 2nd Engineering Conference on Sustainable Engineering, Infrastructures Development & Management, Kuching, Sarawak, Malaysia.
- Edvinsson, L., & Malone, M. (1997). *Intellectual Capital: Realizing your Company's True Value by Finding its Hidden Brainpower*. New York: Harper.
- Economic Business Review (2006). Moving the manufacturing sector up the value chain (Part II), *Economic Review* (Vol. 2010). Kuala Lumpur, Malaysia: Public Bank Berhad.
- Economic Planning Unit. (2010). *Tenth Malaysian Plan 2011-2015*. Retrieved 16th June 2011, from www.epu.gov.my
- Entrialgo, M., Fernandez, E., & Vazquez, C. J. (2000). Psychological characteristics and process: The role of entrepreneurship in Spanish SMEs. *European Journal of Innovation Management*, 3(3), 137-151.
- Erdil, S., Erdil, O., & Keskin, H. (2004). The relationships between market orientation, firm innovativeness and innovation performance. *Journal of Global Business and Technology*, 1(1), 1-11.
- Ettlie, J. E., & Rubenstein, A. H. (1987). Firm size and product innovation. *Journal of Product Innovation Management*, 4(2), 89-108.
- Evangelista, R., Lammarino, S., Mastrostefano, V., & Silvani, A. (2001). Measuring the regional dimension of innovation: Lessons from the Italian Innovation Survey. *Technovation*, 21, 733-745.
- Evans, E., & Saxton, J. (2004). *Innovation rules: A roadmap to creativity and innovation for not-for-profit organizations*. Retrieved 16th November, 2010, from <http://www.thinkcs.org/downloads/innovationrulesreportsept2004.pdf>
- Fahy, J. (2000). The resource-based view of the firm: Some stumbling-blocks on the road to understanding sustainable competitive advantage. *Journal of European Industrial Training*, 24(2/3/4), 94-104.
- Fahy, J., & Smithee, A. (1999). Strategic marketing and the resource based view of the firm. *Academy of Marketing Science Review* (10), 1-21.

- Feinberg, R. M. (2007). Determinants of small-firm entry in US manufacturing, *The 6th Annual International Industrial Organization Conference*. Marymount University, Washington DC, Industrial Organization Society.
- Felin, T., & Hesterly, W. S. (2007). The knowledge-based view, nested heterogeneity, and new value creation: Philosophical considerations on the locus of knowledge. *Academy of Management Review*, 32(1), 195-218.
- Ferreira, J., & Azevedo, S. (2007). Entrepreneurial orientation as a main resource and capability on small firm's growth, *Munich Personal RePEc Archive* (Vol. 5682, pp. 1-20).
- Field, A. (2000). *Discovering Statistics Using SPSS for Windows*. New Delhi: Sage.
- Fitriah, I., & Wafa, S. (2006). *Innovation Antecedents in Malaysia Manufacturing Small and Medium Enterprises*. Paper presented at the International Borneo Business Conference (IBBC) 2006.
- Fitz-enz, J. (2000). *The ROI of Human Capital*. New York: Amacom.
- Fombrun, C., & Shanley, M. (1980). What's in a name? Reputation building and corporate strategy. *Academy of Management Journal* 33, 233-258.
- FAO (2009). *State of Food and Agriculture 2009* (Publication). Rome : Food and Agricultural Organization.
- Forrest, J. E. (1990). Strategic alliances and the small technology-based firm. *Journal of Small Business Management*, 7, 37-45.
- Forza, C. (2002). Survey research in operations management: A process-based perspective. *International Journal of Operations and Production Management*, 22(2), 152-194.
- Foss, N. J. (2001). Assets, attributes and ownership. *International Journal of the Economics of Business*, 8(1), 19-37.
- Foss, N. J., & Klein, P. G. (2007). Original and derived judgement: An entrepreneurial theory of economic organization. *Organization Studies*.
- Foss, N. J., Kor, Y. Y., Klein, P. G., & Mahoney, J. T. (2006). Entrepreneurship, Subjectivism, and the Resource-Based View: Towards a New Synthesis. *Strategic Entrepreneurship Journal*.
- Foster, R., & Kaplan, S. (2001). *Creative Destruction: Why Companies that are Built to Last Underperform the Market - And how to Successfully Transform Them*. New York, USA : Currency Publisher.
- Freeman, C. (1974). *The Economics of Innovation*. Harmondsworth, UK: Penguin.
- Frese, M., & Fay, D. (2001). Personal initiative: An active performance concept for work in the 21st century. *Research in Organizational Behaviour*, 23, 133-187.

- Futurethink. (2007). Turn innovation into action. *Cracking the code of effective innovation: Organization size and style is driving innovation success* (Vol. 6, pp. 1-18).
- Galbraith, J. (1970). Environmental and technological determinants of organization design. In J. W. Lorsch & P. R. Lawrence (Eds.), *Studies in Organization Design* (pp. 113-139). Homewood, IL: Richard D. Irwin.
- Galbreath, J. (2002). Success in relationship [to] age: Building quality relationship assets for market value creation. *The TQM Magazine*, 14, 8-24.
- Galbreath, J. (2004). *Determinants of Firm Success: A Resource-based Analysis*. Curtin University of Technology, Western Australia.
- Galbreath, J. (2005a). The intangible economy and firm superior performance: Evidence from Australia. *Journal of Management and Organization*, 11(1).
- Galbreath, J. (2005b). Which resources matter the most to firm success? An exploratory study of resource-based theory. *Technovation*, 25(9), 979-987.
- Ganiaris, G., & Okun, J. (2001). *To Riches from Rags: Profiting from Waste Reduction* (Report): Textile Development and Marketing Department of the Fashion Institute of Technology and Long Island City Business Development Corporation, New York.
- Garengo, P., Biazzo, S., & Bititci, U. S. (2005). Performance measurement systems in SMEs: A review for a research agenda. *International Journal of Management Review*, 7, 25-47.
- Gartner, W. (1989). Some suggestions for research on entrepreneurial traits and characteristics. *Entrepreneurship Theory and Practice*, 14(1), 27-38.
- Gatignon, H., & Xuereb, J.-M. (1997). Strategic orientation of the firm and new product performance. *Journal of Marketing Research*, 34(1), 77-90.
- Gaylen, N. C., & Douglas, W. L. (2001). Issues of research design and construct measurement in entrepreneurship research: The past decade. *Entrepreneurship: Theory and Practice*, 25, 1.
- Gemunden, H. G., & Heydebreck, P. (1992). Technological interweavement: A means of achieving innovation success. *R&D Management*, 22(4), 359-376.
- Geyskens, I., Gielens, K., & Dekimpe, M. (2002). The market valuation of internet channel additions. *Journal of Marketing Research*, 66(2), 102-119.
- Glassmann, O., & Becker, B. (2006). Towards a resource-based view of corporate incubators. *International Journal of Innovation Management*, 10(1), 19-45.

- Glor, E. D. (2004). Review essay: Canada's system of innovation. *The Public Sector Innovation Journal*, 10(2), article 25.
- Goll, I., Johnson, N. B., & Rasheed, A. A. (2007). Knowledge capability, strategic change, and firm performance: The moderating role of the environment. *Management Decision*, 45(2), 161-179.
- Gonzalez, A., Jimenez, J. J., & Saez, F. J. (1997). *SME's Innovative Behavior: An Empirical Study*. University of Castilla-La Mancha, Albacete, Spain.
- Goudis, A., Skuras, D., & Tsegenidi, K. (2003). *Innovation and business performance in rural peripheral area of Greece*. Paper presented at the 43rd European Regional Science Association Congress, 27-30 August 2003, University of Jyväskylä, Finland.
- Grandstrand, O., Patel, P., & Pavitt, K. (1997). Multi-technology corporations: Why they have distributed rather than distinctive core competencies. *California Management Review*, 39(4), 8-25.
- Greene, P. G., & Brown, T. E. (1997). Resource needs and the dynamic capitalism typology. *Journal of Business Venturing*, 12, 161-173.
- Griffin, A. (1997). PDMA research on new product development practices: Updating trends and benchmarking best practices. *Journal of Product Innovation Management*, 14(6), 429-459.
- Grigoriou, K., & Rothaermel, F. T. (2010). Organizing for adaptation: Innovative capabilities, relational stars, coordination costs, and boundary choices, *Summer Conference 2010, "Opening Up Innovation: Strategy, Organization and Technology"*. Business School, Imperial College London.
- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006). *Multivariate Data Analysis*. New Jersey: Pearson Prentice Hall.
- Hall, R. (1989). The management of intellectual assets: A new corporate perspective. *Journal of General Management*, 15, 53-68.
- Hall, R. (1993). A framework linking intangible resources and capabilities to sustainable competitive advantage. *Strategic Management Journal*, 14(8), 607-618.
- Hamel, G. (2003). Innovation as a deep capability, *Leader to Leader* (pp. 27).
- Hanna, V., & Walsh, K. (2002). Small firm networks: A successful approach to innovation. *R&D Management*, 32(3), 201-207.
- Hansen, J. A. (1992). Innovation, firm size and firm age. *Small Business Economics*, 4, 37-34.

- Harris, K. (2002). Innovation: Management Process or Unmanageable Events? (Vol. 2010, pp. 1-5). Stamford, USA: Gartner.
- Harrison, N. J., & Watson, T. (1998). *The focus for innovation in small and medium service enterprises*. Paper presented at the Western Decision Science Institute, 27th Annual Meeting. Reno, NV.
- Hart, P. E., & Oulton, N. (1996). Growth and size of firms. *The Economic Journal*, 106(438), 1242-1252.
- Hashim, M. K. (1999). SMEs in Malaysia: Past, present and future. *Malaysian Management Review*, 35(June).
- Hashim, M. K. (2004). Relative strengths and weaknesses of SMEs in Malaysia: A review of literature. *The Asian Economic Review*(April).
- Hashim, M. K., & Ahmad, S. A. (2008). Internationalization of Malaysian SME's: influencing factors, sources of information and options, 2008 *International Council for Small Business World Conference*. Halifax, Nova Scotia, Canada.
- Hauser, J., Tellis, G. J., & Griffin, A. (2005). *Research on innovation: A review and agenda for marketing science*. Paper presented at the MSI Conference, March 2005, Emory University, Atlanta GA.
- Hayes, R. H., & Upton, D. M. (1998). Operations-based strategy. *California Management Review*, 40(4, Summer), 8-25.
- Hegde, D., & Shapira, P. (2007). Knowledge, technology trajectories, and innovation in a developing country context: evidence from a survey of Malaysian firms. *International Journal of Technology Management*, 40(4), 349-370.
- Heidt, T. v. d. (2008). *Developing and Testing [a] Model of Cooperative Interorganizational Relationships (IORs) in Product Innovation in an Australian Manufacturing Context: A Multi-stakeholder Perspective*. Southern Cross University, Lismore, NSW, Australia.
- Herbig, P., & Dunphy, S. (1998). Culture and innovation. *Cross Cultural Management*, 5, 13-22.
- Herzog, P. (2008). *Open and Closed Innovation: Different Cultures for Different Strategies* (1st ed.). Frankfurt: Gabler-Verlag.
- Heunks, J. (1998). Innovation, creativity and success. *Journal of Small Business Economics*, 10, 263-272.
- Hill, C. W. L., & Deeds, D. L. (1996). The importance of industry structure for the determination of firm profitability: A Neo-Austrian perspective. *Journal of Management Studies*, 33, 429-451.

- Hine, D., & Ryan, N. (1999). Small service firms – Creating value through innovation. *Managing Service Quality*, 9(6), 411-422.
- Hise, R. T., & O'Neal, L. (1990). Marketing/R&D interaction in new product development. Implications for new product success rates. *Journal of Product Innovation Management*, 7(2), 142-155.
- Hitt, M. A., & Ireland, R. D. (1986). Relationships among corporate level distinctive competencies, diversification strategy, corporate structure and performance. *Journal of Management Studies*, 23(4), 401-416.
- Hitt, M. A., Ireland, R. D., Camp, S. M., & Sexton, D. L. (2001). Strategic entrepreneurship: Entrepreneurial strategies for wealth creation. *Strategic Management Journal*, 22(6), 479-492.
- Hofer, C. W. (1975). Toward a contingency theory of business strategy. *Academy of Management Journal*, 1, 784-810.
- Hofstede, G. (Ed.). (1980). *Culture's Consequences: International Differences in Work-related Values* (Abridged ed.). Beverly Hills CA: Sage.
- Hofstede, G., Neuijen, B., & Ohavy, D. D. (1990). Measuring organizational cultures: A qualitative and quantitative study across twenty cases. *Administrative Science Quarterly*, 35, 286-316.
- Hollenstein, H. (1996). A composite indicator of a firm's innovativeness: An analytical analysis based on survey data for Swiss manufacturing. *Research Policy*, 25, 633-645.
- Holt, D. (2007). Health and safety in SMEs. *Management Today*, 6, 1-7.
- Hooley, G., Greenley, G. E., Cadogan, W. J., & Fahy, J. (2005). The performance impact of marketing resources. *Journal of Business Research*, 58, 18-27.
- Hoskisson, R. E., Hitt, M. A., Wan, W. P., & Yiu, D. (1999). Theory and research in strategic management: Swings of a pendulum. *Journal of Management*, 25, 417-456.
- How, A. Y. (2008, 3rd June 2008). Produk IKS perlu patuh spesifikasi. *Utusan Malaysia Online*.
- Huergo, E., & Jaumandreu, J. (2002). *How does probability of innovation change with firm age?* Paper presented at the 29th EARIE Conference, Universidad Carlos III de Madrid, Spain.
- Huergo, E., & Jaumandreu, J. (2004). How does probability of innovation change with firm age? *Small Business Economics*, 22(3), 193-207.
- Hung, T. V. (2007). SMEs and supply chain. Vietnam (Ed.) (pp. 1-8): National Office of Intellectual Property of Vietnam.

- Hurley, R. F., & Hult, G. T. M. (1998). Innovation, market orientation and organizational learning: An integration and empirical examination. *Journal of Marketing*, 62, 42-54.
- Hurmelinna-Laukkanen, P., & Puumalainen, K. (1997). Formation of the appropriability regime: Strategic and practical considerations, *Innovation: Management, Policy, & Practice*.
- Husher, P. G. (1984). The nature and design of post-industrial organizations. *Management Science*, 30, 9-33.
- Hyvarinen, L. (1992). Innovativeness and its indicators in small and medium sized industrial enterprises. *International Small Business Journal*, 9(1), 65-77.
- Ibrahim, A. R., Zolait, A. H. S., Subramaniam, S., & Ashtiani, A. V. (2009). *Organizational innovative capabilities: An empirical study of Malaysian firms*. Paper presented at the 12th International Business Information Management Conference, Hotel Istana, Kuala Lumpur.
- Ismail, W. K. W., & Abdmajid, R. (2007). Framework of the culture of innovation: A revisit. *Jurnal Kemanusiaan*, 9 (June), 49.
- Israel, G. D. (1992). Sampling The Evidence Of Extension Program Impact. Program Evaluation and Organizational Development. The Institute of Food and Agricultural Sciences (IFAS), Program Evaluation and Organizational Development (PEOD)-5(October).
- Janey, J. J., & Dess, G. (2006). When entrepreneurs bundle resources: Toward an integration of entrepreneurial-orientation and the resource-based view of the firm In M. A. Rahum (Ed.), *Current Topics in Management* (Vol. 11, pp. 157-173). New Brunswick NJ: Transaction Publishers.
- Jayne, M. E. A., & Dipboye, R. L. (2004). Leveraging diversity to improve business performance: Research findings and recommendations for organizations *Human Resource Management*, 43(4), 409-424.
- Jin, B. (2006). Performance implications of information technology implementation in an apparel supply chain. *Supply Chain Management: An International Journal*, 11, 309-316.
- Jingjing, W. (2004). *A study of perceived key success factors among salmon importers and distributors in Shanghai*. Unpublished dissertation, Masters of Science in Fisheries Management, University of Tromso, Norway.
- Jiyang, B., & Glen, C. T. (2006). Conditioning effect of prior reputation on perception of corporate giving. *Public Relations Review*, 32(2006), 144-150.

- Johnson, M., & Zinkhan, G. M. (1990). Defining and measuring company image. In B. J. Dunlap (Ed.), *Developments in Marketing Science*. Provo, UT: Academy of Marketing Science.
- Josty, P. (2002). *Measuring Innovation – a discussion paper*. Retrieved 17th June, 2011, from <http://www.thecis.ca/cms3/userfiles/File/Oct>
- Jusoh R., & Parnell, J. A. (2008). Competitive strategy and performance measurement in the Malaysian context: An exploratory study. *Management Decision*, 46(1), 5-31
- Kahn, K. B. (1996). Interdepartmental integration: A definition with implications for product development performance. *Journal of Product Innovation Management*, 13, 137-151.
- Kaiser, H. F., & Rice, J. (1974). Little Jiffy, Mark IV. *Educational and Psychological Measurement*, 34, 111-117.
- Kam, R. (2008,). Local SMEs mature to move up value chain. *The Star Online*, 8 August 2008.
- Kanter, R. M. (1983). *The Change Masters*. London: Unwin
- Kao, J. (1989). *Entrepreneurship, Creativity and Organization: Text, Cases and Readings*. New Jersey: Prentice Hall.
- Kapasuwan, S., Rose, J., & Tseng, C.-H. (2007). The synergistic effects of strategic flexibility and technological resources on Performance of SMEs. *Journal of Small Business and Entrepreneurship*, 20(3), 257-272.
- Kapelko, M. (2006). Evaluating efficiency in the framework of resource-based view of the firm: Evidence from the Polish and Spanish textile and clothing industries. *Bellaterra*(1), 1-56.
- Kaplan, S. N., Sensoy, B. A., & Strömberg, P. (2005). What Are Firms? Evolution from Birth to Public Companies, *NBER Working Paper Series*. Cambridge, MA: National Bureau of Economic Research.
- Kasim, N. A. A., Minai, B., & Chun, L. S. (1989). Performance measures in Malaysia. The state of the art. *Malaysian Management Review*, 24, 3-9.
- Kaufmann, A., & Todtling, F. (2002). How effective is innovation support for SMEs? An analysis of the region of upper Austria. *Technovation*, 22(3), 147-159.
- Keizer, J. A., Dijkstra, L., & Halman, J. I. M. (2002). Explaining innovative efforts of SMEs. An exploratory survey among SMEs in the mechanical and electrical engineering sector in the Netherlands. *Technovation*, 22(1), 1-13.
- Kennedy, P. 1992. *A Guide to Econometrics*. MIT Press, Cambridge, MA.

- Kerin, R. A., & Peterson, R. A. (2007). *Strategic Marketing Problems: Cases and Comments* (11th ed.). New Jersey: Pearson Prentice Hall.
- Khan, A. M., & Manopicitwattana, V. (1989). Innovative and noninnovative small firms: Types and characteristics. *Management Science*, 35(5), 597-606.
- Kiggundu, M. N. (2002). Entrepreneurs and entrepreneurship in Africa: What is known and what needs to be done. *Journal of Developmental Entrepreneurship Theory and Practice*, 7(3), 239-258.
- Kim, & Mauborgne, R. (1999). Strategy, value innovation, and the knowledge economy. *Sloan Management Review*, 40.
- Kim, K. S., Keller, A. C., & Bottin, R. R. (2009). Examining the financial profile of Smaller Manufacturing Enterprises (SMEs). *International Journal of Entrepreneurship and Small Business*, 8(2), 292-307.
- Kim, W. C. (2008). Blue Ocean Strategy: How to Create Uncontested Market Space and Make Competition Irrelevant *Academy, Autumn*, 21.
- Kimberly, J. R. (1976). Firm size and the structuralist perspective: A review, critique, and proposal. *Administrative Science Quarterly*, 21(12), 571-597.
- Kimberly, J. R. (1981). Managerial Innovation. In P. C. Nystrom & W. H. Starbuck (Eds.), *Handbook of Organizational Design*. New York: Oxford University Press.
- Kitchell, S. (1995). Corporate culture, environmental adaptation, and innovation adoption. *Journal of the Academy of Marketing Science*, 23(3), 195-205.
- Kitchen, P. J., Pelsmacker, P. d., & Eagle, L. (2005). *A Reader in Marketing Communications*. New York: Routledge.
- Kline, P. (1999). *The handbook of psychological testing* (2nd ed.). London: Routledge.
- Kor, Y. Y., & Mahoney, J. T. (2000). Penrose's resource-based approach: The process and product of research creativity. *Journal of Management Studies*, 37, 109-139.
- Kostopoulos K., Spanos Y., & Prastacos G.P. (2001). The Resource-Based View of the firm and innovation: Identification of critical linkages. *Management Science Laboratory*, 24(1).
- Kotabe, M., & Swan, K. S. (1995). The rule of strategic alliances in high-technology new-product development. *Strategic Management Journal*, 16, 621-636.

- Kotelnikov, V. (2001). *Corporate innovation management system*. Retrieved 16th November, 2010, from http://www.1000ventures.com/business_guide/innovation_system.html
- Kotelnikov, V. (2008). *Resource-Based View (RBV) of firms. Resource-based Model: Achieving Superior Returns by Best Exploiting Internal Resources and Capabilities*. Retrieved 16th November, 2010, from <http://www.1000ventures.com>
- Krejcie, R., & Morgan, D. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, 30, 607-610.
- Krishnan, V., & Ulrich, K. T. (2001). Product development decisions: A review of the literature. *Management Science*, 47(1), 1-21.
- Laforet, S. (2007). Size, strategic, and market orientation affects on innovation. *Journal of Business Research*, 61(2008), 753-764.
- Lai, K. P., Nathan, R. J., Thambiah, S., Tan, K. S., & Chan, B. B. (2009). *Innovation as a success factor for female entrepreneurs*. Paper presented at the 12th International Business Information Management Conference, 29–30 June 2009, Hotel Istana, Kuala Lumpur
- Lawrence, P. R., & Lorsch, J. W. (1967). *Organization and Environment: Managing Differentiation and Integration*. Harvard University Press.
- LeCompte, M., & Goetz, J. (1984). *Ethnography and Qualitative Design in Educational Research*. Orlando FL: Academic Press.
- Lee, K., & Kang, S. M. (2007). Innovation types and productivity growth: Evidence from Korean manufacturing firms. *Global Economic Review*, 36(4), 343-359.
- Lemmens, P. H. H. M., Tan, E. S. & Knibbe, R. A. (1988) Bias due to non-response in a Dutch survey on alcohol consumption. *British Journal of Addiction* 83, 1069–1077.
- Lengnick-Hall, M. L., & Lengnick-Hall, C. A. (2003). Human resource management in the knowledge economy: New challenges, new roles, new capabilities. *Business & Economics* (pp. 204): Berrett-Koehler.
- Lev, B. (2001). *Intangibles: Management, Measurement, and Reporting*. Washington DC: Brookings Institution Press.
- Levinthal, D. A. (1991). Random walks and organizational mortality. *Administrative Science Quarterly*, 36, 397-420.
- Levitas, E., & Chi, T. (2002). Rethinking rouse and Daellenbach's rethinking: Isolating vs testing for sources of sustainable competitive advantage. *Strategic Management Journal*, 23, 957-962.

- Lichtenstein, B. M. B., & Brush, C. G. (2001). How do "resource bundles" develop and change in new ventures? A dynamic model and longitudinal exploration. *Entrepreneurship Theory and Practice*, 25(3), 37-58.
- Lin, B., Vassar, J. A., & Clark, L. S. (1993). Information technology strategies for small businesses. *Journal of Applied Business Research*, 9(2), 25-30.
- Liu, S. S., Luo, X., & Shi, Y. (2002). Integrating customer orientation in organization in transition: An empirical study. *International Journal of Research in Marketing*, 19, 367-382.
- Luecke, Richard, & Katz. (2003). *Managing Creativity and Innovation*. BostonMA: Harvard Business School Press.
- Lumpkin, G. T., & Dess, G. G. (1996). Clarifying the entrepreneurial orientation construct and linking it to performance. *Academy of Management Review*, 21(1), 135-172.
- Lunati, M., Dembinski, P. H., & Farinelli, F. (2004). *Enhancing the Role of SMEs in Global Value Chains* (Report). Tokyo: Organization for Economic Cooperation and Development.
- Malaysian Defence Industrial Council (2005). *Catalyst for Building Competitiveness*. Retrieved 17 March 2008 from <http://www.malaysia-innovation.com/main.htm>.
- Malaysian Science and Technology Information Center (2006). *National Survey of Innovation 2002-2004*. Putrajaya, Malaysia: Malaysian Science and Technology Information Center (MASTIC).
- Malerba, F., & Orsenigo, L. (1995). Schumpeterian pattern of innovation. *Cambridge Journal of Economics*, 19(1), 47-65.
- Mani, S. (2008). Innovation surveys in developing countries: What can we learn [from] it for public innovation policies, *Conference on Micro Evidence on Innovation in Developing Countries*. Maastricht, The Netherlands.
- March, J., & Simon, H. (1958). *Organizations*. New York: J.Wiley.
- Marsh, S. J., & Stock, G. N. (2003). Building dynamic capabilities in new product development through intertemporal integration. *Journal of Product Innovation Management*, 20, 136-148.
- Mathews. (2006). *Resource and activities are two sides of the same coin: Duality of the activities and resource-based views of strategic management*. Paper presented at the Conference on Strategic Management, Copenhagen.
- Mathur, G., Jugdev, K., & Fung, T. S. (2007). Intangible project management assets as determinants of competitive advantage. *Management Research News*, 30(7), 460-475.

- Matlay, H. (2005). The impact of resource on SMEs: Critical perspective. *Journal of Manufacturing Technology*, 17(2).
- Matthews, M. (2009). Giving Preparedness a Central Role in Science and Innovation Policy (pp. 12). Canberra: Federation of Australian Scientific and Technological Societies (FASTS).
- McAdam, R., McConvery, T., & Armstrong, G. (2004). Barriers to innovation within small firms in a peripheral location. *International Journal of Entrepreneurial Behavior and Research*, 10(3), 206-221.
- McEvily, S. K., & Chakravarthy, B. (2002). The persistence of knowledge-based advantage: An empirical test for product performance and technological knowledge. *Strategic Management Journal*, 23(4), 285-305.
- McLean, L. D. (2005). Organizational culture's influence on creativity and innovation: A review of the literature and implications for human resource development. *Advances in Developing Human Resources*, 7(2), 226-246.
- Meredith, J. (1987). The strategic advantages of new manufacturing technologies in small firm
- Meyer, C. (1998). *Relentless Growth*. Retrieved 11 January 2007 from http://www.1000ventures.com/business_guide/innovation_system_op.html.
- Michael, S. C., & Palandjian, T. P. (2004). Organizational learning in new product introduction. *Journal of Product Innovation Management*, 21, 268-276.
- Michalisin, M. D., Smith, R. D., & Kline, D. M. (1997). In search of strategic assets. *The International Journal of Organizational Analysis*, 5, 360-387.
- Michalski, M. S., & Martinez, F. J. V. (2008). *The Importance of Intellectual Capital for the Entrepreneurial Firm*. Unpublished thesis, Master's degree in Business and Administration, Mälardalen University, Sweden.
- MIDA. (2007, 2nd April 2010). *Investment opportunities*. Retrieved March, 2007, from http://www.mida.gov.my/en_v2/index.php
- MIDA. (2009, 2nd April 2010). *Industries in Malaysia*. Retrieved 10th March, 2010, from http://www.mida.gov.my/en_v2/index.php
- MIDA (2010). *Malaysia: Performance of the Manufacturing and Services Sectors 2009* (Government Report). Kuala Lumpur: Malaysian Industrial Development Authority.
- MIGHT (2010). RM2,000,000 Cash Prize for the Most Innovative SMEs at the SME Innovation Award 2010, Malaysia (pp. 1). Kuala Lumpur: Corporate Communications and Relations Department, Malaysian Industry-Government Group for High Technology.

- Milbergs, E., Cook, C., Bloxham, E., Bates, M., Warren, T., Sanjay, K., et al. (2004). *National Innovation Initiative*. Washington DC: 21st Century Innovation Working Group.
- Miller, D. (1983). The correlates of entrepreneurship in three types of firms. *Management Science*, 29(7), 770-791.
- Miller, D. E., & Kunce, J. T. (1973). Prediction and statistical overkill revisited. *Measurement and Evaluation in Guidance*, 6(3), 157-163.
- Miller, D., & Friesen, P. H. (1982). Innovation in conservative and entrepreneurial firms: Two models of strategic momentum. *Strategic Management Journal*, 3(1), 1-25.
- Miller, D., KetsDeVries, M. F. R., & Toulouse, J. M. (1982). Top executive locus of control and its relationship to strategy-making, structure and environment *Academy of Management Journal*, 25(2), 237-253.
- Ministry of Finance (2003). Malaysia Economic Report 2003/2004. Kuala Lumpur: Ministry of Finance.
- Ministry of Finance (2009). Malaysia Economic Report 2009/2010. Kuala Lumpur: Ministry of Finance.
- Miron, E., Erez, M., & Naveh, E. (2004). Do personal characteristics and cultural values that promote innovation, quality, and efficiency compete or complement each other? *Journal of Organizational Behaviour*, 25, 175-199.
- MITI (2010). Ministry of Trade and Industry Annual Dialogue 2009, 23 July 2009. Kuala Lumpur: Ministry of Trade and Industry.
- Mohan, A. V. (2006). Promotion of High-Tech SMEs through Clustering and Networking – Cases from Malaysia's MSC Cluster and the MSC Technopreneur Development Flagship Programme, *National Workshop on Sub-national Innovation Systems and Technology Capacity: Building Policies to Enhance Competitiveness of SMEs*. Beijing, China.
- Mokyr, J. (1990). *The Lever of Riches: Technological Creativity And Technological Progress*. New York: Oxford University Press
- Montana, P. J., & Charnov, B. H. (2000). *Management* (3rd ed.), Hauppauge, NY: Barron's Educational Series.
- Morone, P., & Testa, G. (2008). Firms growth, size and innovation: An investigation into the Italian manufacturing sector. *Economics of Innovation and New Technology*, 17(4), 311-329.

- MOSTI (2003). National Survey of Innovation 2000-2001. In Ministry of Science, Technology and Innovation (MOSTI) Centre (Ed.) (Vol. 3, pp. 38). Kuala Lumpur: Ministry of Science Technology and Innovation
- Murray, J. Y., & Chao, M. C. H. (2005). Market orientation, product innovation, and new product performance in foreign markets, *Social Science Research Network*.
- Mutlu, B., & Er, A. (2003). *Design Innovation: Historical and theoretical perspectives on product innovation by design*. Paper presented at the 5th European Academy of Design Conference, Barcelona, April 2003.
- Nelson, R. R., & Winter, S. G. (1982). *An Evolutionary Theory of Economic Change*. Cambridge, MA: Harvard University Press.
- Netherlands Institute for Advanced Study in the Humanities and Social Sciences (2005). *Innovation for Australians: Public Awareness and Understanding of Innovation* (pp. 1-4): Commonwealth of Australia.
- New Straits Times (2008,). Plastic makers say sector will meet projected growth. *New Straits Times*. 14 October 2008, p. 39.
- Ndubisi, N. O. (2005). Effect of Perception and Personal Traits on Computer Technology Adoption by Women Entrepreneurs in Malaysia. *Journal of Asia Entrepreneurship and Sustainability*, 1(2), 1-23.
- Norušis, Marija J. (1995). *SPSS for Windows base system user's guide, release 6.1*. Chicago: SPSS, Inc.
- NSDC (2006). SME Annual Report 2006. Kuala Lumpur: National Small Medium Enterprise Development Council
- NSDC (2007). SME Annual Report 2007: National SME Development Council.
- Neely, A., & Hii, J. (1998). Innovation and Business Performance: A Literature Review. The Judge Institute of Management Studies, University of Cambridge.
- OECD(1992). *OECD Proposed Guidelines for Collecting and Intrepreting Technological Innovation*. Paris: Organization for Economic Co-operation and Development.
- OECD (1997). *The Measurement of Scientific and Technological Activities. Proposed Guidelines for Collecting and Interpreting Technological Data*. Paris: Organization for Economic Co-operation and Development.
- OECD (2002). *High-Growth SMEs and Employment* (OECD Report). Paris: Organization for Economic Co-operation and Development.
- OECD (2005). Organization for Economic Co-operation and Development, *Oslo Manual*, from <http://www.oecd.org/dataoecd/35/61/2367580.pdf>.

- Oke, A., Burke, G., & Myers, A. (2003). *Innovation types and their impact on performance in UK SMEs*. Retrieved 18 January 2007, from <http://www.sm.cranfield.ac.uk/som/groups>.
- Olavarrieta, S., & Friedmann, R. (1999). Market-oriented culture, knowledge-related resources, reputational assets and superior performance: a conceptual framework. *Journal of Strategic Marketing*, 7, 215-228.
- O'Regan, N., & Ghobadian, A. (2004). The importance of capabilities for strategic direction and performance. *Management Decision* 42(2), 292-312.
- O'Regan, N., Ghobadian, A., & Sims, M. (2006). Fast tracking innovation in manufacturing SMEs. *Technovation*, 26, 251-261.
- O'Sullivan, M. A. (2000). *Contest for Corporate Control: Corporate Governance and Economic Performance in the United States and Germany*. New York: Oxford University Press.
- Oviatt, B. M., & McDougall, P. P. (1994). Toward a theory of international new ventures. *Journal of International Business Studies*, 45-64.
- Palenberg, M.; Reinicke, W., & Witte, J. M. (2006). Trends in non-financial reporting, *United Nations Environment Programme, Division of Technology, Industry and Economics (DTIE)*. Berlin, Germany: Global Public Policy Institute.
- Pallant, J. (2007). *SPSS Survival Manual*. 3rd Ed, New York: McGraw-Hill.
- Performance Management and Delivery Unit (2010). *National Key Economic Areas*. Retrieved 16th June, 2011, from www.pemandu.gov.my
- Pengarang. (2008, 4th June 2008). IKS: RM4.5b disediakan tahun ini. *Utusan Malaysia Online*.
- Penrose, E. T. (1959). *The Theory of the Growth of the Firm*. New York: John Wiley.
- Piana, V. (2003). *Dynamic Competition with Bi-Directional Product Differentiation, Bounded Rational Consumers, Innovation, Advertising, and Finance*, from <http://www.economicwebinstitute.org/essays/dyncomp.htm>.
- Porter, M. E. (1980). *Competitive Strategy: Techniques for Analyzing Industries and Competitors*. New York: Free Press. Porter, M.E (1990). *The Competitive Advantage of Nations*. New York: The Free Press.
- Prahalad, C. K., & Hamel, G. (1990). The core competence of the corporation. *Harvard Business Review*, 68(3), 79-91.

- Prajogo, D. I., & Ahmed, P. K. (2006). Relationships between innovation stimulus, innovation capacity, and innovation performance. *R&D Management*, 36(5), 499-515.
- Pratt, J. W. (1964). Risk aversion in the small and in the large. *Econometrica*, 32.
- Pratt, S. P., & Niculita, A. V. (2007). *Valuing a Business: The Analysis and Appraisal of Closely Held Companies* (5th ed.). New York: McGraw Hill.
- Prime Minister Department (2006). Ninth Malaysia Plan 2006-2010. In Prime Minister Department (Ed.) (pp. 556): The Economic Planning Unit.
- Puente, L. M., & Rabbino, H. (2003, 9th June 2009). Creating value with strategic resources. Retrieved 9 June 2009, from <http://www.iseesystems.com/community/connector/Zine/SeptOct03/luz.html>.
- Puia, G. M., & Ofori-Dankwa, J. (2005). Intra-cultural variation and entrepreneurship: exploring the effect of diversity on national levels of innovation. *Review of Small Business and Entrepreneurship Research*, 31, 8-2.
- Ray, G., Barney, J. B., & Muhanna, W. A. (2004). Capabilities, business processes and competitive advantage: Choosing the dependent variable in empirical test of resource-based view. *Strategic Management Journal*, 25(1), 23-37.
- Raduan Che Rose, Naresh Kumar, & Yen, L. L. (2006). Entrepreneurs Success Factors and Escalation of Small and Medium-sized Enterprises in Malaysia. *Journal of Social Sciences*, 2(3), 74-80.
- Raymond, L., & St-Pierre, J. (2005). Antecedents and performance outcomes of advanced manufacturing systems sophistication in SMEs. *International Journal of Operations and Production Management*, 25(6), 514-529.
- Ricker, R. (2005). *Organisational Change*. Retrieved 4 February 2008, from <http://www.soi.org/reading/change/culture.shtml>
- Ritter, T., & Gemunden, H. G. (2004). The impact of [a] company's business strategy on its technological competence, network competence and innovation success. *Journal of Business Research*, 57, 548-556.
- Rivaud-Danset, D. (2002). *Innovation and New Technologies: Corporate Finance and Financial Constraint*. Paper presented at the International Conference "Financial Systems, Corporate Investment in Innovation and Venture Capital", Brussels.
- Rizzoni, A. (1991). Technological innovation and small firms, a taxonomy. *International Small Business Journal*, 9(3), 31-42.
- Roberts, D., Baker, S., & Walker, D. (2005). Can we learn together? Co-creating with consumers. *International Journal of Market Research*, 47(4), 1-21.

- Robertsa, P. W., & McEvily, S. (2005). Product-line expansion and resource cannibalization. *Journal of Economic Behavior & Organization*, 57, 49-70.
- Robertson, T. S., & Wind, Y. (1980). Organizational psychographics and innovativeness. *Journal of Consumer Research*, 7, 24-31.
- Rogers, E.M., & Shoemaker, F.F.(1971). *Communications of Innovations*. New York: The Free Press.
- Roscoe, J. T. (1975). *Fundamental Research Statistics for the Behavioural Sciences* (2nd ed.). New York: Holt, Rinehart and Winston.
- Rosenau, D. M. (1996). *The PDMA Handbook of New Product Development*. New York, NY: John, Wiley and Sons.
- Ross, D. (2009). Foundations, *Customer Needs and Innovation Effectiveness* (pp. 1-5).
- Rothwell, R., & Dodgson, M. (1991). External linkages and innovation in small and medium-sized enterprises. *R&D Management*, 21(2), 125-137.
- Rugman, A. M., & Verbeke, A. (2002). Edith Penrose's contribution to the resource-based view of strategic management. *Strategic Management Journal*, 23, 769-780.
- Rumelt, R. P. (1987). Theory, strategy and entrepreneurship. In D. Teece (Ed.), *The Competitive Challenge* (pp. 137-158). Cambridge, MA: Ballinger.
- Runyan, R., Huddleston, P., & Swinney, J. (2006). Entrepreneurial orientation and social capital as small firm strategies: A study of gender differences from a Resource-Based View. *Entrepreneurship Management*, 2, 455-477.
- Salaman, G., Storey, J., & Billsberry, J. (Eds.) (2005). *Strategic Human Resource Management: Theory and Practice*. London: Sage Publication.
- Salavou, H. (2004). The concept of innovativeness: Should we need to focus? *European Journal in Innovation Management*, 7(1), 33-44.
- Salavou, H., Baltas, G., & Lioukas, S. (2004). Organisational innovation in SMEs: The importance of strategic orientation and competitive structure. *European Journal of Marketing*, 38(9/10), 1091-1112.
- Salavou, H., & Lioukas, S. (2003). Radical product innovations in SMEs: The dominance of entrepreneurial orientation. *Creativity and Innovation Management*, 12(2), 94-107.
- Saleh, A.S., & Ndubisi, N. O. (2006). An evaluation of SME development in Malaysia. *International Review of Business Research Papers*, 2(1), 1-14.

- Saleh, S. D., & Wang, C. K. (1993). The management of innovation: Strategy, structure, and organizational climate. *IEEE Transactions on Engineering Management*, 40(1), 14-21.
- Sanders, W. M. G., & Boivie, S. (2004). Sorting things out: Valuation of new firms in uncertain markets. *Strategic Management Journal*, 25, 167-186.
- Scherer, F. M., & Ross, D. (1990). *Industrial Market Structure and Economic Performance*. Boston, MA: Houghton Mifflin.
- Schroede, D. M., Congden, S. W., & Gopinath, C. (1989). New technology and the small manufacturer: Panacea or plague? *Journal of Small Business Management*(July), 1-10.
- Schumpeter, J. A. (1934). *The Theory of Economic Development*. Cambridge MA: Harvard University Press.
- Schumpeter, J. A. (1939). *Business Cycles: A Theoretical, Historical, and Statistical Analysis of Capitalist Process*. New York and London: McGraw-Hill.
- Schumpeter, J. A. (1942). *Capitalism, Socialism and Democracy*. New York: Harper.
- Scott, J. (2000). *Rational Choice Theory*. Retrieved 20 April 2009, from <http://privatewww.essex.ac.uk>.
- Scranton, P. (1999). Moving outside manufacturing: Research perspectives on small business in twentieth-century America. In K. Odaka & M. Sawai (Eds.), *Small Firms, Large Concerns*. Oxford: Oxford University Press.
- Serger, S. S., & Hansson, E. W. (2004). Innovation in The Nordic-Baltic Sea Region - A Case for Regional Cooperation, *The Baltic Sea Metropolises - Tomorrow's Global Centres for Tourism, Inward Investments and Exports*. Copenhagen: Baltic Development Forum.
- Sethi, R., Smith, D. C., & Park, C. W. (2001). Cross-functional product development teams, creativity and the innovativeness of new consumer products. *Journal of Marketing Research*, 38, 73-86.
- Shane, S., & Venkataraman, S. (2000). The promise of entrepreneurship as a field of research. *Academy of Management Review*, 25, 217-226.
- Shefsky, L. (1994). *Entrepreneurs Are Made Not Born: Secrets from 200 Successful Entrepreneurs*. New York: McGraw-Hill.
- Shepherd, W. G. (1990). *The Economics of Industrial Organization* (3rd ed.). Englewood Cliffs NJ: Prentice-Hall.
- Shoham, A., & Fiegenbaum, A. (2002). Competitive determinants of organizational risk-taking attitude: The role of strategic reference points. *Management Decision*, 40(2), 127-141.

- Shum, P., & Lin, G. (2010). A resource-based view on entrepreneurship and innovation. *International Journal of Entrepreneurship and Innovation Management* 11(3), 264-281.
- Shuman, J. C., Shaw, J. J., & Sussman, G. (1985). Strategic planning in smaller rapid growth companies. *Long Range Planning*, 18, 48-53.
- Silva, M. J., & Leitão, J. (2007). What determines the entrepreneurial innovative capability of portuguese industrial firms? *Munich Personal RePEc Archive* (Vol. 5216).
- Slater, S. F. (1996). The challenge of sustaining competitive advantage. *Industrial Marketing Management*, 25, 79-86.
- SMIDEC. (2003). *SME Performance Report 2003: Small and Medium Industries Development Corporation*.
- SMIDEC. (2005). *SME Performance Report 2005: Small and Medium Industries Development Corporation*.
- SMIDEC (2008). *Profile of SMEs in the Manufacturing Sector*. Kuala Lumpur: Small and Medium Industries Development Corporation.
- SMIDEC (2009). *Matching Grant for Product and Process Improvement*. Retrieved 11 March 2010 from <http://www.smecorp.gov.my>
- Smith, K. G., Gannon, M. J., & Sapienza, H. J. (1989). Selecting methodologies for entrepreneurial research: Trade-offs and guidelines. *Entrepreneurship Theory and Practice*, 13, 39-49.
- Smith, K. G., Guthrie, J. P., & Chen, M. (1989). Strategy, size, and performance. *Organizations Studies*, 10(1), 63-81.
- Snoj, B., Milfelner, B., & Gabrijan, V. (2007). An examination of the relationships among market orientation, innovation resources, reputational resources, and company performance in the transitional economy of Slovenia. *Canadian Journal of Administrative Science* 24(3), 151-164.
- Song, M. X., & Montoya-Weiss, M. M. (1998). Critical development activities for really new versus incremental products. *Journal of Product Innovation Management*, 15, 124-135.
- Sorensen, J. B. (2000). Aging, obsolescence, and organizational innovation, *Administrative Science Quarterly*, 1-30.
- Sorescu, A., Chandy, R., & Prabhu, J. (2003). Sources and financial consequences of radical product innovation: Insights from pharmaceuticals. *Journal of Marketing*, 66(October), 82-102.

- Srivastava, R. K., Shervani, T. A., & Fahey, L. (1998). Market-based assets and shareholder value: A framework for analysis. *Journal of Marketing*, 62(1), 2-18.
- Steiner, M. P., & Solem, O. (1988). Factors for success in small manufacturing firms. *Journal of Small Business Management*, 26(1), 51-56.
- Sternberg, R. J. (1999). *Handbook of Creativity*. Cambridge: Cambridge University Press.
- Stewart, A. T. (1997). *Intellectual Capital, The New Wealth of Organizations*. New York: Bantam Doubleday.
- Stinchcombe, A. L. (1965). Organizations and social structure. In J. G. March (Ed.), *Handbook of Organizations*. Chicago: Rand-McNally.
- Stone, A. S., Rose, B., Lal., & Shipp., S. (2008). *Measuring Innovation and Intangibles: A Business Perspective*. Washington, DC: Institute for Defense Analysis, Science and Technology Policy Institute.
- Storey, D. J. (1994). *Understanding the Small Business Sector*. Croatia: Thomson.
- Sullivan, M. (1991). *Controlling non-response bias and item non-response bias using CATI techniques*. Retrieved 20th July, 2011, from <http://www.quirks.com/articles/a1991/19911105>
- Tanewski, G., Projogo, D., & Sohal, A. (2003). *Strategic orientation and innovation performance between family and non-family firms*. Paper presented at the 48th World Conference of the International Council of Small Business, Belfast, Northern Ireland, June 2003.
- Tan, K. S., Chong, S. C., Lin, B., & Eze, U. C. (2010). Internet-based ICT adoption among SMEs demographic versus benefits, barriers, and adoption intention. *Journal of Enterprise Information Management*, 23(1), 27-55.
- Tayeb, M. (1994). Organizations and national culture: Methodology considered. *Organization Studies*, 15(3), 429-446.
- Teece, D. J., & Pisano, G. (1994). The dynamic capabilities of firms: An introduction. *Industrial and Corporate Change*, 3, 537-556.
- Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18(7), 509-533.
- Therin, F. (2003). *Organizational Learning and Innovation in High Tech Small Firms*. Paper presented at the 36th Hawaii International Conference on System Sciences, Hawaii.
- Thornhill, S., & Amit, R. (2003). Learning about failure: Bankruptcy, firm age and the resource-based view. *Organisation Science*, 14, 497-509.

- Thornhill, S., & Amit, R. (2003). Analytical Studies Branch Research Paper Series, *Learning from failure: Organizational mortality and the resource-based view* (Vol. 202, pp. 1-26).
- Tidd, J., Bessant, J., & Pavitt, K. (1997). *Managing Innovation*. Chichester UK: Wiley.
- Tokuda, A. (2004). Amending the resource-based view of strategic management from an entrepreneurial perspective (pp. 21). Reading, UK: Henley Business School, University of Reading.
- Tourism Publications Corporation Sdn Bhd (2008). *Overview of SMIs/SMEs*. Retrieved 31 March 2008, from <http://www.smibusinessdirectory.com.my/smisme-editorial>.
- Tracy, K. B. (1992). *Effects of need for achievement, task motivation, goal setting and planning on the performance of the entrepreneurial firm*, unpublished dissertation, PhD, University of Maryland, Baltimore, USA.
- Trott, P. (2005). *Innovation Management and New Product Development* (3 ed.): Financial Times Prentice Hall.
- Tsen, W. H. (2005). The Determinants of Foreign Direct Investment in the Manufacturing Industry in Malaysia. *Journal of Economic Cooperation*, 26(2), 91-110.
- Tsui, Anne S., Susan J. Ashford, Lynda St. Clair, and Katherine R. Xin 1995 "Dealing with discrepant expectations: Response strategies and managerial effectiveness." *Academy of Management Journal*, 38: 1515-1543.
- Tushman, M., & Nadler, D. (1986). Organizing for innovation. *California Management Review*, 28(3), 74-92.
- Tushman, M., & O'Reilly, C. A. (1997). *Winning through Innovation*. Boston, MA: Harvard Business School Press.
- Tyler, B. B. (2001). The complementarity of cooperative and technological competencies: A resource based perspective. *Journal of Engineering Technology Management*, 18, 1-27.
- Uhlener, L., Stel, A. v., Meijaard, J., & Folkeringa, M. (2007). *Scientific Analysis of Entrepreneurship and SMEs*. Zoetermeer, The Netherlands: EIM Business and Policy Research.
- Ulusoy, G., & Yegenoglu, H. (2005). Innovation performance and competitive strategies in the Turkish manufacturing industry (pp. 1-11): Sabanci University, Turkey.

- UNDP (2007). *Malaysia Small and Medium Enterprises* (Report). Kuala Lumpur: United Nations Development Programme.
- Utterback, J. M., & Abernathy, N. J. (1975). A dynamic model of product and process innovation. *Omega*, 36, 639-656.
- Valle, S., & Avella, L. (2003). Cross-functionality and leadership of the new product development teams. *European Journal of Innovation Management*, 6(1), 32-47.
- Van, A. H. (1986). Central problems in the management of innovation. *Management Science*, 32(5), 590-607.
- Venkataraman, S. (2004). Regional transformation through technological entrepreneurship. *Journal of Business Venturing*, 19(1), 153-167.
- Vesper, K. (Ed.) (1980). *New Venture Strategies*. Englewood Cliffs, NJ: Prentice-Hall.
- Victor, B., Boynton, A., & Stephens, J. T. (2000). The effective design of work under Total Quality Management. *Organization Science*, 11, 102-117.
- Villalonga, B. (2004). Intangible resources, Tobin's q, and sustainability of performance differences. *Journal of Economic Behavior & Organization*, 54, 205-230.
- Vrande, V. v. d., Jong, J. P. J. d., Vanhaverbeke, W., & Rochemont, M. d. (2008). *Open Innovation in SMEs: Trends, Motives and Management Challenges*. Netherlands: Netherlands Ministry of Economic Affairs.
- Walker, R. M. (2007). An empirical evaluation of innovation types and organizational and environmental characteristics: Towards a configuration framework. *Journal of Public Administration Research*, 10.
- Walsh, V., Roy, R., & Bruce, M. (1988). Competitive by design. *Journal of Marketing Management*, 4(2).
- Wang, W. P. (2009). Evaluating new product development performance by fuzzy linguistic computing. *Expert Systems with Applications: An International Journal Archive*, 36(6), 9759-9766.
- Wang, Z. (2007). Technological Innovation and Market Turbulence: The Dot-com Experience. *Review of Economic Dynamics*, 10(1), 78-105.
- Weerawardena, J., & Coote, L. (2001). An empirical investigation into entrepreneurship and organizational innovation-based competitive strategy. *Journal of Research in Marketing & Entrepreneurship*, 3(1), 51-70.
- Wernerfelt, B. (1984). A resource-based view of the firm. *Strategic Management Journal*, 5, 171-180.

- West, M.A. (1990). The social psychology of innovation in groups. In M. A. West & J. L. Farr (Eds.), *Innovation and Creativity at Work: Psychological and Organizational Strategies* (pp. 309-333). Chichester, UK: John Wiley.
- West, & Bamford, C. (2006). Sources of Initial Resources Positions in New Ventures (pp. 1-10): Babson College, Wellesley, MA.
- Westfield, P., & Cookson, P. (2008). *Australian National Innovation Survey*. Melbourne: Australia Innovation.
- Wheelwright, S. C., & Clark, K. B. (1992). *Revolutionizing Product Development – Quantum Leaps in Speed, Efficiency, and Quality*. New York: The Free Press.
- Winter, S. (1987). Knowledge and competence as strategic asset. In D. J. Teece (Ed.), *The Competitive Challenge: Strategies for Industrial Innovation and Renewal* (pp. 159-184). Cambridge, MA: Ballinger.
- Wiratmo, M. M., & Wibawa, F. (1996). *Creating entrepreneur through technological innovation*. Paper presented at the Annual National Conference, Atlanta, Georgia.
- Wright, P. M., Dunford, B. B., Snell, S. A. (2003). Human Resources and the Resource Based View of the Firm. *Journal of Management*, 27, 701-721.
- Yakimov, G., & Woolsey, L. (2010). *Innovation and Product Development in the 21st Century* (Report): Hollings Manufacturing Extension Partnership Advisory Board.
- Yasuda, H. (2005). Strategic alliances for SMEs. *Confederation of Asia-Pacific Chambers of Commerce and Industry (CACCI) Journal*, 1, 1-12.
- Yin, X., & Zuscovitch, E. (1998). Is firm size conducive to R&D choice? A strategic analysis of product and process innovation. *Journal of Economic Behavior and Organization*, 35, 243-262.
- Yusuf, A. (1995). Critical success factors for small business: Perceptions of South Pacific entrepreneurs. *Journal of Small Business Management*, 32(3), 68-73.
- Zahra, S. A. (1996). Technology strategy and financial performance: Examining the moderating role of the firm's competitive environment. *Journal of Business Venturing*, 11, 189-219.
- Zhan, Q., & Doll, W. J. (2001). The fuzzy front end and success of new product development causal model. *European Journal of Innovation Management*, 4(2), 95-112.
- Zhang, J., Benedetto, C. A. D., & Hoenig, S. (2009). Product development strategy, product innovation performance, and the mediating role of knowledge

utilization: Evidence from subsidiaries in China. *Journal of International Marketing* 17(2).

Zillmer, E. A., & Vuz, J. (1995). Factor analysis with Rorschach data. In J. E. Exner, Jr. (Ed.), *Methods and issues in Rorschach research* (pp. 251-306). Hillsdale, NJ: Lawrence Erlbaum Associates.

Zimmerer, T. W., & Scarborough, N. M. (Eds.). (1998). *Essentials of Entrepreneurship and Small Business Management* (2nd ed.). New Jersey: Prentice Hall.