

# The Study on Application of Cross-Selling to Consumer Loans in Bank

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## ABSTRACT

Due to the "Enjoy before payment" opinion of all consumers, the consumer loans are greater and greater recently. Nowadays most of the banks changed their focus from business loans to the consumer loans, which are growing up now. On the intensely competition, the cost of exploiting a new customer is higher than maintain the exist one. By this customer analysis we can get the "Cross-Selling" opportunities. For business, the value of products is not only one single benefit but also the overall products they sold. The research plans to do an empirical study using multivariate Logistic Regression model to explore the customer loans of bank industry, including the consumers who choose the product and service of the mainly supplied by bank today and investigate consumers choose which bank. Using consumers' questionnaire data certify. The model predicts to supply cross selling of production and service to the right customers. In the analysis of product association explore, we found nine items are Significant so we can get together them to design product portfolios from Correlation Matrix, when customers is interesting of one product the sale can actively promote the others. Otherwise, from Covariance Matrix, we also know when customer loan more item, more banks they deal with. Consumers have no "one-stop-shop" behavior and transfer different banks to disperse risk. In LR model, we found if the customer will cross-loan and those factors such as product variable; bank number; demographic; overneed; oversatisfy and overloyalty are not main influences for the customers. To explore Customer Heterogeneity, the demand of consume loan products for male is higher than female. In Taiwan, customers do not have the behavior to deal with the specific bank. They will be fascinated by many factors and change their business to another bank. I would like to suggest the banker, who wants to exploit the customer loan market, have to consider the profit from the exist client and keep well the loyalty of them. Key Word: Consume Loans. Cross-Selling. Logistic Regression

Keywords : Consume Loans ; Cross-Selling ; Logistic Regression

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## REFERENCES

中文部分 1.CRM戰略執行手冊，ARC 遠擎管理顧問公司，紅螞蟻，（2000）。 2.Logistic迴歸模型方法與應用，王濟川、郭志剛，五南，（2003）。 3.SPSS For Windows-多變量統計分析，張勁勳、張勁評、林秀娟，台北松崗，(2002)。 4.中央銀行金融統計月報，中央銀行經濟研究處編，台灣台北，（2003年12月）。 5.王麒博，創業投資公司對創業投資案評估準則之灰層級分析，大葉大學事業經營研究所碩士論文，（2001）。 6.江世傑，利用模糊類神經網路系統評估消費性貸款，成功大學碩士論文，（2001）。 7.任立中，創造、挖掘消費者的潛在需求，遠見雜誌，第一六八期，（2000年6月）。 8.汪海清、黃景泰、謝維國、楊培宏、王南豪，消費貸款實務，金融人員研究訓練中心，二版，(2000)。 9.呂俊民，我國一般銀行顧客滿意來源之研究 以高雄市為例，中山大學企業管理研究所碩士論文

, (1995)。 10.呂鴻德、謝憶文, 顧客滿意、品牌權益與顧客終身價值關係之研究, 中原學報第28卷第二期, PP31-41, (2000)。 11.呂美慧, 銀行授信評等模式---Logistic Regression之應用, 政治大學金融學系碩士論文, (1999)。 12.尚郁慧, 本國一般銀行顧客滿意度與顧客忠誠度關係之研究, 淡江大學管理科學研究所碩士論文, (1996)。 13.林水茂, 消費金融市場發展趨勢, 財團法人金融人員研究訓練中心講義, (1998)。 14.林叔娥, 顧客滿意度與忠誠度之關聯性研究-以某驗證公司為例, 中原大學工業工程研究所碩士論文, (2003)。 15.消費者行為, Hawkins, Best & Coney, 第八版, 前程企業管理有限公司, (2001)。 16.羅南.史威福, 深化顧客關係管理, 遠擎出版社, (2001)。 17.葉凱莉、喬友慶, 台灣消費者負債因素之探討, 台灣銀行季刊第51卷第1期, p164-177-, (2000)。 18.許哲璋, 資料挖掘與統計方法應用於資料庫行銷之實證研究 以美妆保養品業為例, 台北大學企業管理學系碩士論文(2003)。 19.邱皓政, 量化研究與統計分析, 五南出版, (2000)。 20.黃景泰, 消費者貸款受理及審查要領, 財團法人金融人員研究訓練中心講義, (1998)。 21.黃正炫, 銀行消費金融業務的競爭策略-以個案銀行為例, 台北大學企業管理碩士論文, (2000)。 22.溫石松, 顧客價值與網路忠誠度之關係, 中興大學企業管理研究所碩士論文, (2002)。 23.鄭婉儀, 應用資料挖掘於交叉銷售之研究, 台北大學企業管理學系碩士論文, (2002)。 24.蔡永恆, 應用資料挖掘技術研究銀行顧客消費行為, 靜宜大學資訊管理研究所碩士論文, (2000)。 25.簡苜榛, 統計方法應用於消費性業務銀行顧客關係管理系統之研究, 成功大學統計研究所碩士論文, (2002)。 英文部分 1.Allenby, Greg M. and Peter E. Rossi, Marketing Models of Consumer Heterogeneity, Journal of Econometrics, 89: pp. 57-78. (1999) 2.Anand, S.S., A.R. Patrik ,J.G. Hughes and D.A. Bell, A Data Mining methodology for Cross-Sale, Knowledge Based System, pp.449-461. (1998) 3.Berry, M. J.A. and G. Linoff, Data Mining Techniques for Marketing, Sales, and Customer Support, (1997) 4.Berson ,A. ,S. Smith, and K. Thearling, Building Data Mining Application for CRM, McGraw-Hill Inc., (1999) 5.Fredericks, J. O., R. R. Hurd and J. M. Salter, Connecting customer loyalty to financial results, Marketing Management, 10(1), pp.26-32. (2001) 6.Fornell, C., A National Customer Satisfaction Barometer: The Swedish Experience, Journal of Marketing, Vol. 56, No. 1, pp. 6-21. , (1992) 7.Gelfand, A E., and A.F. M. Smith, Sampling-Based Approaches to Calculating Marginal Densities, Journal of the American Statistical Association, 85, 410: pp.398-409. (1990) 8.Gonul, Fusun, and Kannan Srinivasan, Estimating the Impact of Consumer Expectation of Coupons on Purchase Behavior: A Dynamic Structural Model, Marketing Science, 15, 3: pp.262-279. (1996) 9.Hauck ,W.W. and Donner ,A., Wald's Test as Applied to Hypothesis in Logit Analysis, 1977, Journal of the American Statistical Association, Vol.72, pp851-853 10.Heskett, J. L., T. O. Jones, G. W. Loveman, W. E. Sasser and L. A. Schlesinger, Putting the service-profit chain to work, Harvard Business Review, Mar-Apr, pp.164-172. (1994) 11.Hosmer ,D.W., and Lemeshow ,S., Applied Logistic Regression, 1989, New York: John Wiley & Sons, Inc 12.Hughes, A. M., Strategic Database Marketing-The Master plan for Starting and Managing a Profitable, Customer-Based Marketing Program, New York, The McGraw-Hill Companies Inc., (2000) 13.John Whitehead , An Introduction to Logistic Regression department of economics east Carolina university , (2000) 14.Jones, T. O. and W. E. Sasser, Why Satisfied Customers Defend, Harvard Business Review, 73(6), pp.88-99. (1995) 15.Kamakura, W.A., Wedel, M., Rosa, F.D., Mazzon , J.A., Cross Selling through Database Marketing :A Mixed Data Factor Analyzer for Data Augmentation and Prediction, International Journal of Research in Marketing, Vol. 20, No. 1, pp.45-65. (2003) 16.Kalbaugh, .G. E. and P. J. DiStefano, Cross-selling and account rounding: An economic approach, Rough Notes. (1999) 17.Kamakura , Wagner A., and Gary Russel , A Probabilistic Choice Model For Market Segmentation and Elasticity, Journal of Marketing Research, 26, 4, pp.379-391. (1989) 18.Kamakura W., S. Ramaswami, and R. Srivastava, Applying Latent Trait Analysis in the Evaluation of Prospects for Cross-Selling of Financial Services, International Journal of Research in Marketing, 8: pp. 329-349. (1991) 19.Kamakura, Wagner A. and Bruce S. Kossar, Identifying Innovators for the Cross-selling of New Products, working paper, Duke University. (2001) 20.Knott Aaron, Andrew Hayes and Scott A. Neslin, Next-Product-to-Buy Models for Cross-Selling Applications, working paper, Dartmouth College. (2002) 21.Kristensen, K., A. Martensen, and L. Gronholdt, Customer satisfaction measurement at Post Denmark: Results of Application of the European Customer Satisfaction Index Methodology, Total Quality Management. (2000) 22.Lee, M. and L. F. Cunningham, 2001, A cost/benefit approach to understanding service loyalty, Journal of services Marketing, Vol. 15, No.2, pp113-130. (2001) 23.Maslow, A. Motivation and personality. New York: Harper & Row. (1954). 24.Maddala ,G.S., Limited-dependent and Qualitative Variables in Econometrics, (1983) 25.Nash, D. and A. Sterna-Karwat , " An Application of DEA to measure Branch Cross Selling Efficiency, " Computers Operations Reserch, pp.385-392. (2001) 26.Peltier, J. W. and J. E. Westfall, Dissecting the HMO-Benefits Managers Relationship: What to Measure and Why, Marketing Health Services, 20(2), pp.4-13. (2000) 27.Prus, A. and D. R. Brandt, Understanding Your Customers, Marketing Tools, pp.10-14 .Jul-Aug (1995) 28.Rust, R. T., A. J. Zahorik, and T. L. Keiningham, Return on quality (ROQ): Making Service Quality Financially Accountable, Journal of Marketing, 59(2), pp.58-70. (1995) 29.Selnes, F., An examination of the Effect of Product Performance on Brand Reputation Satisfaction and Loyalty, Journal European of Marketing, Vol. 27, pp. 19-35. , (1993) 30.Shibo Li, Baohong Sun and Ronald T. Wilcox, Cross-Selling Sequentially Ordered Products: An Application to Consumer Banking Services. (2002) 31.Sirohi, N., E. W. McLaughlin and D. R. Wittink, A Model of consumer Perceptions and Store Loyalty Intentions for a Supermarket Retailer, Journal of Retailing, 74(2), pp.223-245. (1998) 32.Stum, D. L. and A. Thiry, Building Customer Loyalty, Training and Development Journal, pp.34-367.April (1991)