



Analysis of
E-business Models
and Business Process Simulation
for Internet Banking

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INTRODUCTION

In the new millennium, the single most dominant event which has completely changed the world is the birth of Internet. It has changed the outlook of whole set of industries and markets and has already had a great impact on consumers and is all set to have a very exciting future. It has helped companies improve services, reduce costs, open new channels and transform the competitive landscape. The arrival of internet is revolutionizing the way business is carried out and is having a tremendous impact on all industries- the way they work and how they provide services to the customers. The internet and the technology enabling have helped companies to create an altogether new channel of business, collectively called e-Business. e-Business is primarily any kind of transaction done partly or completely over a network. However, it is not only buying and selling of goods and services over the internet, but also servicing customers, collaborating with business partners so as to create new markets. e-Business has changed the way many companies do business. To them, e-Business is no longer an alternative but an imperative. However, many companies are struggling with the most basic problem of identifying the best approach for establishing and doing business in the digital economy. Some companies are transforming their businesses entirely to the web. Some are establishing subsidiaries, and then spinning them off as separate online business. Others are investing in or merging with online startups. The bottom line is that there is no simple prescription and almost no such thing as an established e-Business model for companies even within the same industry.

The opening of Indian economy in 1990's brought in its wake forces of market competition in small measures in the economy and all sectors including Banking sector were exposed to such forces for the first time. IT is playing an active role in improving the productivity in banking industry. Perhaps no other sector has been affected as much as banking and financial services. It has become the most important factor for dealing with the intensifying competition and the rapid proliferation of financial innovations. The liberalization in the banking sector in 1991 necessitated the need for bringing measures to cut down cost, to increase efficiency, to provide better, value added, customized and cost effective services to the customers. In this study the banking sector has been chosen for study because of its unique potential to be a very large user of e-Business and given the kind of changes banking industry in India is experiencing, a thorough study on IB and a framework to analyze the critical success factors and strategic issues involved in e-business transaction was felt appropriate.



SCOPE OF THE STUDY

The aim of the work is to analyze and compare various e-Business models so as to identify appropriate metrics for assessing the particular business model. It is proposed to

take up the case study of Indian Banking sector and identify factors which contribute to the improved performance of the Internet banking operations. With almost all the major banks in India migrating (or in the process of migration) to full fledged Internet banking, Computer simulation studies are planned to study the factors which may enable a successful migration of traditional banking business to e-Business.



OBJECTIVES OF THE STUDY

- ♦ To study, analyze and compare various e-Business models and identify appropriate metrics for assessing business models.
- ♦ To analyze the profitability and productivity of Internet Banking in India.
- ♦ To investigate the factors for the successful reengineering of various banking processes and process simulation for the migration of traditional business to an e-Business.



RESEARCH METHODOLOGY

- ♦ Since the research focuses on more than one aspect of Internet banking, the objectives are multiple and varied. Subsequently, the research

methodologies adopted are a mix of various statistical and econometric tools including mathematical modelling, econometric toolkits, TSP, univariate analysis, questionnaires, interviews etc.

- ♦ The study focuses on analyzing the productivity and profitability aspect of Internet banking. For which a thorough study on IB has been done with respect to performance, cost efficiency, and other characteristics. The search was executed to collect information from the Internet using a combination of knowledge of banks web sites by using Uni variate statistical analysis. Further to analyze the productivity of banks a Cobb-Douglas production function approach is employed. The methodology adopted for analyzing the Banking Sector is primarily based on secondary data available from various sources including annual report of Reserve Bank of India (RBI) on banking, annual report of various private sector banks, web sites of major banks, other economic and banking reports, journals and newspapers, sites on the net related with banking like Indian Banking Association, National Institute of Bank Management, bankersindia.com etc.
- ♦ To analyze the use of business model in Indian banking sector major components derived from the literature review of the research has been taken and is evaluated using Likert's scale. A series of interviews were conducted that aimed at investigating the relevance of business model research and exploring possible uses of the business model concept in various banks.
- ♦ Further to investigate and analyze the factors for reengineering of various processes followed at banks a

simulation tool (iGrafx) has been used which can generate reports regarding the duration of each transaction, costs, resource utilization, etc. This tool was used in many BPR projects for simulation as it plays a vital role to analyze the existing business processes, to develop a new one removing the unnecessary cardinalities, and to make qualitative and quantitative estimations that would help to decide whether to implement the process or not. In this different banking processes like account opening, loan process in general and car loan process has been studied. For the purpose of re-engineering, the AS IS model is critically analyzed to know the pros and cons of the activities. After considering the AS IS model as a base model, efforts are also made to re-engineer the necessary activities so that the cost related to the activity gets reduced and on the other hand the benefits for the customer and the bank increases. This reengineered model is referred as "TO BE model".



CONCLUSIONS

If we look back to the objectives behind the present study, the primary aim was to analyze the various e-Business models and evaluate the performance of Internet banks in India with a special emphasis on new generation private sector banks in the post liberalization era and through a study of the e-business investments and other technology initiative in the

field of banking, suggest an ideal e-Banking model, which will find it competitive in the New Millennium. Internet banking in India has completed more than four years and it was an opportune time to test the efficacy of these initiatives by Indian banks.

1. The review of literature in E-Business provides business models with diverse components and parameters which are not sufficient to conduct effective and successful e-Business practices in the current business environment as there is no standardization of a business model definition and its components.
2. The Private, Public and some foreign banks in India started offering or are likely to offer various financial services to the customers through Internet banking because it is a cheaper and quicker mode.
3. The increased IT investment and e-initiatives in Indian banking system is not only enabling the banking system in the country to increase their productivity but also to gain competitive advantage and earn higher profits than they would have otherwise made.
4. Reengineering and migration from traditional form of business to Internet business is helping banks to save cost, time, human and other resources.

REFERENCES

1. Afuah, A. and Tucci, C. (2001) *Internet Business Models and Strategies*, McGraw-Hill International Editions, New York.
2. Afuah, A. and Tucci C. (2003). *Internet Business Models and Strategies*, Boston, McGraw Hill International Editions, New York.
3. Aveling, T. [1989] "How the Banks Fell from Grace: Deregulation and the ancient customer" *JASSA*, September, pp.6-9.
4. Alt, R. and Zimmermann, H. (2001) Introduction to Special Section – Business Models, *ElectronicMarkets*, 11,1, pp. 3–9.
5. Amit, R. and Zott, C. (2001) Value Creation in e-business, *Strategic Management Journal*, 22, pp. 493-520.
6. Andriani, P. (2001). "Diversity, Knowledge and Complexity Theory: Some Introductory Issues."
7. Applegate, L. M. (2001) E-business Models: Making sense of the Internet business landscape, In G. Dickson, W. Gary, and G. DeSanctis (Eds.), *Information Technology and the future enterprise: New models for managers*, Upper Saddle River, N.J.: Prentice Hall.
8. Auer, C. and Follack, M. (2002) Using Action Research for Gaining Competitive Advantage out of the Internet's Impact on Existing Business Models, In the Proceedings of the 15th Bled Electronic Commerce Conference – eReality: Constructing the eEconomy, Bled, Slovenia, June 17 – 19, 2002, pp. 767-784.
9. Booz-Allen and Hamilton (1997). *Corporate Internet Banking: A Global Study of Potential Impact of Remote Channels*.
10. http://www.bah.com/viewpoints/insights/bank_brickless.htm;
11. Betz, F. *Strategic Business Models*. Engineering Management Journal March 2002.
12. Coase, R. H. (1937). "The Nature of the Firm." *Economica* N.S. 4: 386-405.
13. Crede, A. [1995] "Electronic Commerce and the Banking Industry: The Requirement and Opportunities for New Payment Systems Using the Internet", *JCMC*, vol. 1, no.3, December
14. Dover, P.A. Winter 199k3, "Why Home Banking Bombed in Britain," *Journal of Retail Banking* (15:4), pp.30-38.
15. Elliot, S. (Ed.) (2002) *Electronic Commerce: B2C strategies and models* Chichester, UK: John Wiley.
16. Elliot. *Electronic Commerce: B2C Strategies and Models*. Chichester: Prentice-Hall; 2002.
17. Eisenmann, Thomas R. *Internet business models, text and cases*. New York: McGraw-Hill Irwin; 2002.
18. Friedman, A. L. and S. Miles (2002). "Developing stakeholder theory." *Journal of Management Studies* 39(1): 1-21.
19. Gordijn, J., J. M. Akkermans, et al. (2000), *Business Modelling is not Process Modelling*, ECOMO 2000, Salt Lake City, USA, Springer.
20. Kalakota, R. and Winston, A. [1997] "Electronic Commerce, a Manager's Guide", *Addison-Wesley, Massachusetts*.
21. Kalakota, R. and Robinson, M. *e-Business Roadmap for Success*. Reading: Addison Wesley Longan, Inc; 1999.
22. Kaplan, R. S. and D. P. Norton (1992). "The balanced scorecard--measures that drive performance." *Harvard Business Review* 70(1).
23. Report on Trend and Progress of Banking in India, 2001-2002, 2002-2003
24. Reserve Bank of India, *The Report on Currency and Finance (1999-00 and 2000-01, 2001-2002, 2003)*
25. Reserve Bank of India, *Annual Report for the years 1999-2004*.