Factors that Affect Customers Readiness for Internet-based BI Services

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ABSTRACT

The banking industry is a strong leader in the use of Internet technologies for revolutionizing customer services. This study explores demographic and financial factors that may affect the use of Internet-Banking (IB) services provided by a large bank. The study analyzed certain IB activities for a large sample of the bank’s customers. The analysis highlights some usage characteristics and patterns that have evolved around the more traditional IB services, such as account-status inquiries and fund transfers. However, with a newly-developed Business-Intelligence (BI) application, such patterns have not evolved yet. This can be explained by the different nature of this novel BI application, and by the time required for end-users to assimilate and adopt such an innovative application. The findings can help understanding customers’ IB needs, detecting customer-segments that use the IB services differently, and help developing and personalizing advanced IB services, such as the online BI tool.

Keywords: Business Intelligence, Information-Systems Usage, Internet Banking

INTRODUCTION

The Internet has revolutionized the distribution and consumption of products and services in many different business contexts. This study deals with some key questions, which often become a major concern for the development of new internet-based services: Would end-users take advantage of a newly-introduced service and adopt it? What would be the pace and the magnitude of their adoption? Can certain usage and adoption patterns be detected and explained, or even predicted? Answering such questions, can help the service provider understanding customers’ needs, direct
customization and personalization of services to better meet those needs, and possibly promote further development of advanced web-based services and capabilities.

This study explores these questions in the context of Internet-Banking (IB) services. The banking industry is considered a strong leader within the revolution of Internet-based services. Most banks worldwide have established IB websites, which offer a variety of services: account-status inquiries, fiscal transfers, credit reports, and others. The growing use of IB has increased the demand for services that meet the needs of the more sophisticated customers. A service as such, named the “Personal Finance Management” (PFM) tool (Figure 1), has been introduced recently by the bank studied in this research – a large bank, with a customer-base of nearly two million accounts. The PFM is an innovative web-based Business-Intelligence (BI) utility, which lets customers view and analyze their own incomes, investments and expenses. Today the bank offers the same version of the PFM to all its customers. Generally, the same can be said on most IB services offered by the bank – other than a few proprietary tools, most of the other IB services are offered to all customers at identical versions. However, as the population of customers is growing in size and diversity, the bank managers debate whether or not to proceed with this current “one size fits all” policy. A possible alternative would be to segment the customers along their information and IB-service needs, and offer customized and personalized versions of the PFM and the other IB solutions accordingly.

We see the data analysis done in this study as a step toward better understanding IB needs and usage patterns. The analysis was performed with a large sample (66,555 records) of customer accounts, and their associated IB activity. The analysis examines how certain user demographics (age, gender, and region of residence) and financial characteristics (income, expenses, and credit-card activity), affect the usage of IB. The study compared three forms of IB usage. Two forms – “passive” account inquiries, and “active” banking transactions (e.g., money transfers, investment-portfolio rebalancing) - are perceived as more “traditional”, as the bank started offering those services long before the study was conducted. The latter form, the PFM utility described above, is considered more novel and innovative. Offering BI utilities to a broad customer-base is not a common practice - neither in today’s banking industry, nor in commercial websites in general. The analysis highlights a major difference between the more traditional IB services, versus the more novel PFM service, in terms of usage characteristics and patterns. This can be explained by the different nature of the application, and by the time required for end-user to assimilate and adopt an innovative application, which they are not accustomed to yet.

This study makes a few contributions – first, it helps understanding the adoption of IB services, through exploration of real-world data that reflects actual usage, whereas most prior
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