Chapter 12
Citizen Lifetime Value in E-Government

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ABSTRACT

Customer Lifetime Value (CLV) is one of the most important measures of valuing the customers in private sector. CLV calculates customer contribution in the profits of organization. In this paper Citizen Lifetime Value (CzLV) is introduced to measure the financial value of citizens for the government. CzLV evaluates citizen contribution in cost reduction of the organization. This measure can be calculated based on past behavior of citizens in using the service and cost reduction of using online services rather than offline ones. Logistic regression is employed as a data mining technique to predict future use of online services by citizens. A service of Tehran.ir called "137," one of the most important portals of Iran's E-government, is considered as a case study. CzLV for the citizens of this service is calculated and four citizen segments are specified. Then each segment is evaluated based on different characteristic of citizens, and suitable strategies are presented to build more financial values for the organization.

1. INTRODUCTION

In the past two decades, companies tended to focus on either cost management or revenue growth. When a firm adopts one of these approaches it loses out on the other (Rust, Lemon, & Zeithaml, 2004). Assessing the value of individual custom-ers and employing customer level strategies based on customers' worth to the firm. Many customer oriented firms realize that the customers are valued more than the profit they bring in every transaction. Customers' value has to be based on their contribution to the firm across the duration of their relationship with the firm. In simple terms, the value of a customer is the value the customer brings to the firm over his/her lifetime (Kumar, 2006).

Valuing customers is a central issue of any commercial activity. The value of an individual customer is important for the detection of the most valuable ones, which deserve to be closely followed, and for the detection of the less valuable ones, to which the company should pay less attention. At the aggregated level, a marketing campaign targeting a group of customers can be budgeted more efficiently when the value of this group is known. Customers are an important asset, and as such, have to be precisely valuated (Tarokh & Sekhavat, 2006).

Customer Lifetime Value (CLV) plays a major role in customer valuation, in particular Churn analysis and retention campaign management. In the context of churn analysis, the CLV of a customer or a segment is important complementary information to their churn probability, as it gives a sense of how much is really being lost due to churn and how much effort should be concentrated on this segment (Rosset et al., 2003).

Governments all over the world are developing electronic services because they found out the importance and benefits of e-government and its applications for citizens, businesses and governmental agencies. Because of vast networks of interacting organizations, responding to complex problems of societies and providing solutions and improvement of private sector in e-business, the traditional model of government is not working any longer. In fact, governments realized the vital necessity of improvement in order to sustain their position in the global and local competition (Sharifi & Zarei, 2004).

Because of the improvements in online services of businesses, citizens expect the governments to develop their websites so that they can do their task online. Most of the governments just have a "web presence", that means they are just present in web and they just have a static website and don't offer any valuable services. But some of them are moving to more interactive portals instead of a "web presence". They are developing E-government business models to utilize the successful experiences of private sector in Internet. Businesses are using online business models for more than two decades, but in e-government, business models are relatively new (Janssen et al., 2008). Janssen, Kuk, and Wagenaar (2008) believe that business models in e-commerce and e-government is the way of doing business, mostly the way of revenue generation, but in e-government, business models help to use Internet a value generation source in areas ranging from service delivery to political involvement.

Like business models, Customer Lifetime Value is a useful concept in the private sector, but in the public sector it is new. Customers of the businesses in the public sector are called citizens. So instead of Customer Lifetime Value (CLV), Citizen Lifetime Value (CzLV) is used here. Customer Lifetime Value is a way of recognizing more profitable customers. Unlike the businesses, governmental agencies don't want to recognize and select the most profitable customers, because revenue generation is not their goal, but reduction of their costs is important for them. One of the main features of e-government is cost reduction. All of the involved stakeholders in e-government can receive their desirable services but the costs of these services are lower than offline services.

To calculate CLV, a company can calculate the present and future profits of each customer. But to calculate CzLV a public organization doesn't consider the profitability of customers, instead of that, it can evaluate the contribution of each customer in the reduction of costs of the organization. This cost reduction occurs when a customer switches from offline to online services.

This paper at first reviews the literature of Customer Lifetime Value and its modeling approaches. Then E-government, and its definitions and models are described. The importance of Citizen Lifetime Value (CzLV), its calculating method and the reasons of using this method are mentioned later in the paper. At the end of the paper, a practical example shows the application of CzLV for a public organization.

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