

A Survey on the E-Government Business Model Regarding Value Creation Approach

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Abstract

Internet development, business success, and internet affairs and on the other hand, increase in complexity of traditional governments processes, and costly affairs have had governments move toward being an e-government. To this aim, application of business models can be a solution in order to implement a more successful e-government. Value creation has always been considered important beside business models. In this paper, a framework has been introduced which measures value creation in business models as well as e-governments. At first, by categorizing the E-government Business Models in Iran, an E-government Business Models frame is provided for the country. Then value creation for two stakeholders of citizen and government is evaluated. The first presented model is based on Public Service Value Model and regression logistic as a data mining technique. To calculate the value of citizens for the government, Citizen Lifetime value is presented. At the end of the thesis, in order to show the functionality of the models, they are applied to citizen interaction history of a service of Tehran.ir. The results show that this service is created more values for citizen in the second time period than the first one. Then by calculating the present and future values of the citizens, they categorized into four segments and some strategies to increase the economic value of them are proposed.

Keywords

E-government, Business Models, Value creation, Citizen Lifetime Value

1. Introduction

Complexity and expensive traditional governmental interactions, problems ahead of cooperation between government and internal and internal capabilities upgrading world position of countries, inability to render services when administrations are closed, etc. are all reasons which lead governments to e-governments. There are many countries that have moved toward this change but due to rush in implementing this goal, government have not experienced enough positive results. On the other hand, public sector and private sector have enough experience to use internet to make more income: there are many successful countries that have employed internet businesses. One of the reasons why governments move toward e-marketing is the successful experience of private sector. One of the barriers ahead of implementing e-governments is the interest of governments to be online, meaning that most government would like to be internet based and present some traditional services without any change on the internet. What we emphasize are business models of e-governments as a proper solution in order to implement e-governments. What business models of e-governments mean or what they are composed of is still not clear in literature. Beside business models, the subject of value has always been considered important. Value is a kind of concept which has no exact definition and according to different political, cultural, and environment, it is different and is very hard to measure it because there are no precise it is tried to calculate value quantitatively. Though it is not possible to calculate public value easily, the suggested model in this research is a new method to assess I; comparing it in various time periods, it is possible to measure value creation.

2. Methodology

The main aim of the present research is to investigate business models of e-government with a value creation approach since stakeholders include government and citizens and activities are web-based; So, value creation for citizens and government has been considered and to get the objective, first of all, sites have been classified and then, a model would be used to measure the value for citizens and economic value of government and then quantitative information was collected.

In this research, service number 137 of Tehran municipality has been studied. In this service, citizens, complaints are collected and registered on-line and off-line.

The collected data derived from questionnaire regarding 137 qualities of services on Tehran municipality site has been utilized; in this questionnaire, some 1803 people participated. The items of this questionnaire included gender, age, marital status, region, internet service and whether they will use internet services in future or not? The data this questionnaire divided into six month T1 and T2.

The set costs for each user from 1 equation are as follows:

$$Acpu = \text{total costs} * [\text{operation expenses} + \text{capital cost}] / \text{population} \quad (1)$$

Also, to calculate this probability that how much this service has been used, a government business model was utilized. By the use of the following equations we can understand the extent that customers don't use government online service proposed by Lawrence (2005):

$$Pu[EGBM_{ijk}] = 1 - Pc(EGBM_{IJK}) \quad (2)$$

$Pu[EGBM_{ijk}]$: probable use by customer in business model

$Pc(EGBM_{IJK})$: when it is probable for the customer not to use the business model

$$EGBM = \sum_{j=0}^n CEEGBM_{JK} \quad (3)$$

Finally, using logistic regression, examining, *K square*, and predication technique, the calculation was done.

3. Results

To examine performance of government, simulation was used to create value for customers. The average of the costs for each service and each customer was calculated; measurement of portal value creation in T1, T2 time periods was exercised:

Table 1: The set costs for service 1, 2

	ACPU1	ACPU2
T1	10000	11000
T2	7500	9000

To calculate probability, use of service by customers, data process was employed as the useful technique. First of all, SPSS software is required to measure whether customer will use services 1, 2 services using equation (2) Pu was calculated.

Figure 1 shows the effective costs of all customer of service 1,2 in T1; figure 2 costs of government in T2. According to the figure in Apcpu, cost of service 1 in T1 has increased while in service2 it this service with equation 3, efficiency of service1 is $T1=0.50352446$, $T2=0.2986$.

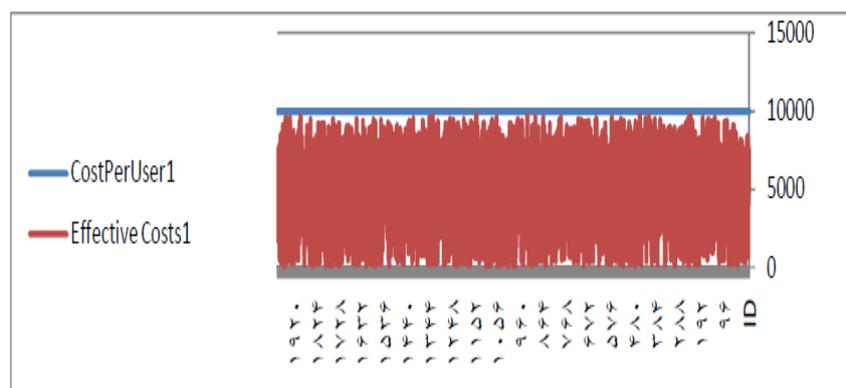


Figure 1: The effective costs

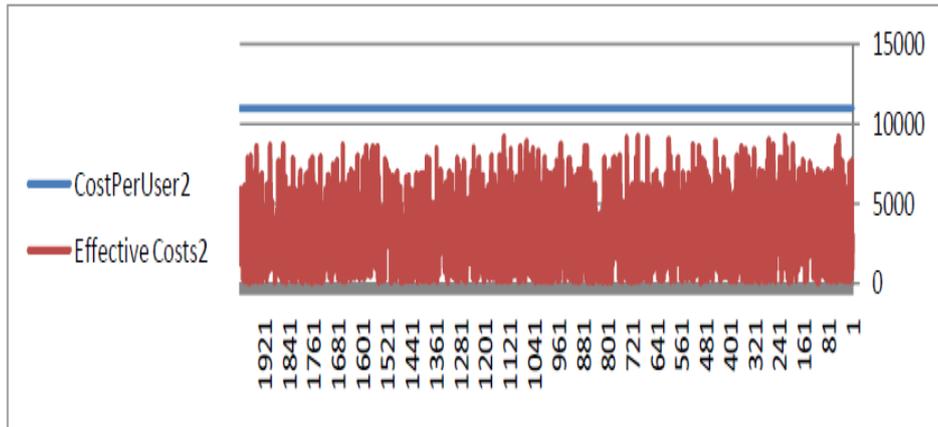


Figure 2: costs of government in T2

Figure 3 shows these amounts for two T1, T2 time periods. So, in T2 the government has had more costs regarding customer.

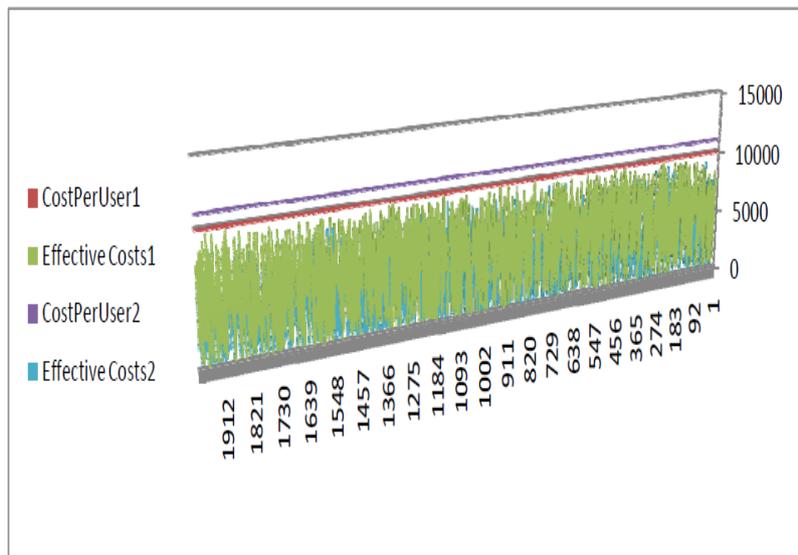


Figure 3: shows these amounts for two T1, T2

But has not meet its favorite results and customers would like to use other alternatives such as online services.

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