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RESEARCH ARTICLE

THE STUDY OF MODELS AND METHODS IN SUITABLE DISTRIBUTION OF INSURANCE RESOURCES

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ABSTRACT

The occurrence of some events as development of global competition, progress of IT and access to cheap information systems in recent years and the attempt of economic unit to achieve the global rank and entering the international markets and the customer satisfaction attitude has made the activities of management necessary. Indeed, the success of continuance of the activity in new competitive environment required using new methods of putting business in the global rank. One of the most important competitive tools in this regard is the price and determining the fixed price for the services and products. The correct and real fixed price is of great importance in some aspects. The fixed price is effective in sale pricing decisions, determining the profit and loss, control and reduction of the production costs or eliminating a product or presenting a service and other activities. The identification of the suitable basics for pricing the products or services as correctly is necessary (Arab Mazar and Naseri, 2003). In industrial accounting systems, two approaches are required to compute the fixed price of the services: Traditional and common approach and new approach. In traditional approach, to compute the fixed price of the services, the information of its constituent elements such as materials, wage and surcharge are collected.

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INTRODUCTION

Mostly in traditional systems, the fixed price for a circle, production or service is computed without considering the required activities for production and distribution and is with some costs centers for costs allocation in the company or a circle. One basis or at most some bases are applied for division of the surcharge costs. If such system can cause logical and correct decisions in some cases due to the uses of assumptions, losing their relevance over time cannot lead to the access to good information. In new systems, it is attempted to eliminate the weaknesses of traditional approach (sharing common costs based on ignorable cost factors) and increase the accuracy of the calculations of the fixed price. One of the tools that can be used in new system of costing of products and services is Activity Based Costing (ABC). This method is one of the most important new phenomena leading to revolution in fixed price calculation of the products and services (Namazi, 2008). Insurances and financial institutions widely rely on information systems that are designed to present the external organizational financial statements as the only information source. The profit and loss statement provides the fixed price of the insurance activities on combined bases but doesn't provide any relevant

information about the fixed price of the special activities or fixed price of each of the services and products (Rezvani, 2005, ac cited in Namazi, 2008).

In other words, accounting systems of insurance management are focused on inside the organization and are designed with the goal of evaluating the performance of people and sectors. The accounting systems of responsibility evaluation are adequate for performance evaluation but little relevant information is provided about the fixed price of the activities. These systems cannot relate costs' stimulants (e.g. doing the activity) with product delivery or presenting services requiring doing these activities (Rahmani and Mohtadi, 2007). The insurance in Iran couldn't establish the fixed price system that can provide adequate information regarding the costs structure and insurance products. Thus, government claims that despite the reduction of rates, the insurances are profitable and the insurances claim that they are at loss. The continuance of such condition reduces the decision-making based on acceptable information to a minimum (Rahmani and Mohtadi, 2007). Thus, presenting a model to establish an efficient fixed price system that is based on the latest changes in accordance with the conditions of financial services such as insurances is necessary. Decision-making in presenting the insurance services can be based on receiving exact and relevant information of fixed price of the products and insurance

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services. It is necessary that a person be sure of the establishment of suitable fixed price before decision making regarding the important measurements as analysis of profitability, pricing the services, determining the accuracy and credit of insurance costs and more efficiency in performance evaluation of the centers and optimized management of the existing resources and available capacity. Activity Based Costing (ABC) attempts to track the costs of services and products via the activities. Transparent reporting and detailed information to users of financial statements are necessary based on the existing competitive conditions between the state and private insurances and delegating the state insurances in the past year via stock exchange market to people.

Costs structure, customers, services and different probable procedures in insurance make the calculation of the fixed price difficult based on various activities but it should be considered that the process and activities of all insurances are similar and establishment of a system based on activity fixe priced paved the way for improving financial reporting of the insurance in terms of external and internal factors of organization.

Insurance costs nature

The nature of insurance costs is as followings

1. Varied transactions: A major part of insurance costs is dedicated to employees and equipments that are directly or indirectly applied in insurance affairs processes. But the daily capacity of insurance transactions is fluctuated and it is possible that it includes once a week to the next week, from one month to the next month and from one season to another.
2. Predictability: The predictability of the number of the checks and their fluctuations made most of the insurances reduce their wage in accordance with the prediction of the capacity of the activities and by part-time employees.
3. The costs being traced: Insurance costs are directly related to one activity of providing the insurance resources, using insurance resources (facilities) or other insurance activities. Thus, an insurance has some logical reasons to reduce its costs. For example, the cashiers and employees in checks sector and officers are directly related with insurance deposits. The computer services center is related to these activities based on their duties in special activities.

Using Activity Based Costing (ABC) in insurances

Based on historical background, service units dedicate a few costs and time to create costing system. The accounting of more fixed price for manufacturing units is considered. It seems that service units are not placed in traditional costing form. Few researches have been performed in non-manufacturing sector in the framework of management accounting issues. Most of the non-manufacturing companies are not aware of Activity Based Costing (ABC) and have no direct need to change the traditional methods (Mirzaii, 2006). Service units as hospitals, insurances and airline companies are active based on the state rules and approved prices. This issue was common in 1970,1980 decades and gradually these service

units include privatization and releasing their tariffs. At that time, government determine fee of health costs for the hospitals and the insurances from the state institutions were included in the rules regarding marketing the non-insured products, mutual funds and derivative instruments. Now, most of the units are under the pressure to reduce their costs after privatization and by the emergence of new competitors. It seems that ABC provides a system for collecting data of important activities of an organization. In this case, organizations should trace the costs to the products or services by causal relations. Thus, the attention is given to the activities creating the costs. ABC is used in different stages to guarantee its success. Successful application of ABC in a circle provides a model for other circles. Using ABC in selected circles require attention. The researches showed that most of the insurances don't know the cost of each transaction to convert a check to cash. They also do not have exact information of processing cost of transactions of ATM. In 1980, insurance industry was faced with major changes in technology, market structure, supervision system, access to required capital, and marketing. The insurance was mostly supervised by public opinion and it had social dimensions. Insurance system transferred any change in their policies to all the economy of society (Lotfi and Asadian , 1995, as cited in Sadat Razeghi, 2006).

Although most of the papers are about the abilities and values of ABC in manufacturing sector, based on the reduction of wage costs in these departments, using ABC for allocating this type of costs in manufacturing companies is less important. In service organizations, wage cost is the major part of the cots and ABC can be a basis for optimized allocation of the costs.

Insurance problems

In service units, there are special problems in allocating the costs to the activities. Service units have some problems in defining their various outputs. In insurance industry, the costs are mostly based on creation of value. In any cost (e.g. opening account or transferring the insurance drafts), it is expected that value is created against it. In insurances, some costs don't create value for customers but they are a part of value that is shown during presentation to the customer. To present service to the customers, support activities pave the way for presenting required services to the customers. For example, it can be referred to IT and the costs for presenting service to the customers' for e-shopping. Thus, these costs are a part of value. Determining the services' price is one of the most important strategies of insurance managers. Indeed, it has considerable effect on net profit in insurance industry. The factors determining the price of insurance services include the fixed price, customers, and competition level.

The fixed price of the services includes various elements, some with direct behavior and others with indirect nature. It is possible that some of them are fixed and others are varied. Finding the fixed price is necessary for pricing the products and services. Determining the fixed price of the products leads to determining which of the services are profitable and the in this way insurances can receive money from their customers based on the fixed price of the services. This issue namely is most applied in separating the services, privatization process in

the insurance, and increasing the efficiency level in competition field (Namazi, 2008). The evident difference between costing in manufacturing and financial institutions is that manufacturing companies need the raw materials to sell the made goods but in financial services institutions, raw materials are cash flow of the loan obtained from the customers and other resources. Both financial and manufacturing services apply labor force, equipments and physical facilities but financial institutions don't produce identical products. The products and services presented by financial institutions to the customers can be giving loan, deposit, product insurance, etc. There are other features in financial institutions in which costing is different from that of manufacturing companies. For example, it can refer to the speed of providing services and products due to the time value of money and presenting services to the customer that affect the costs and profitability (Sadat Razeghi, 2006). Most of the differences (in manufacturing and service units as insurance) are dedicated to the intangibility of the products and insurance services. The manufacturing companies can weight their products, measure and touch. But it is not so in financial institutions. The account book, insurance bill and ATM cards are a few samples of physical products of insurance but these goals are not considered services. Thus, most of the insurances don't have correct and clear understanding of product or services beyond its marketing approach.

The nature of the raw materials in insurance is completely different. The raw materials of insurance are money and specially money costs. There is no activity in making the goods for valuation and except money cost, there is no bill showing the value, size, and costs of materials. The major costs of insurance are divided into operating and non-operating costs. Operating costs include profit and fees paid for the deposits that can be traced easily. But non-manufacturing costs (non-interest) are focused on some costs as wage and benefits, administrative costs, depreciation, doubtful claims, water, electricity, telephone, requirements, etc.

Insurance nature needs doing the activities in a short period of time. It is possible that an activity is done within some seconds, minutes or hour. Thus, insurance resources are consumed in a short time. This increases the pressure on accounting system to calculate the fixed price of the services (being done rapidly) (Anvari Rostami and Esmat, 2007). The life cycle of the products and insurance services and relation with customers are varied and it is possible to take from very short time (barter services) to very long (e.g. decision makings in upper level of insurance). This means that determining the cost of a product or customer requires allocation or tracing the costs in different time periods and this issue makes the relationship between the resources, products and customers complex. The insurances are unique because of costing for their raw materials (money) via presenting services. The services include protection of the customers' money, transferring money based on the order of customers, paying the checks and other services. The insurances are similar in some aspects to manufacturing companies. Both of them invested considerably in equipment, requirements, and buildings and they have high volume and repeatable activities.

The main business of insurance is selling and buying money. Insurance buys money as deposit and sell it in the form of giving loan. Although, it is more emphasized on services and income, the most important source of insurance profitability is guaranteed profit of the loans and financial income of the investments. Absorbing deposit as the major source of money for profitability is considered via giving loan and investment. To be successful, insurance should update its information of the deposit and loans. ABC helps insurance in this regard. Insurances include four characteristics affecting the features of their costs considerably (Anvari Rostami and Rezayat, 2007):

- Insurance transactions are dispersed in a definite period. The number of transactions and insurance volume is more in the world on Monday and Friday more in Iran on Thursday and Saturday than other days in the week.
- A major part of fixed price of non-interest of insurance is not changed in accordance with the volume of the facilities (services).
- The fixed price in insurance is predictable as the working day model and the case of holiday affecting the activities is predictable.
- Fixed price in insurance is traced as a considerable part of fixed price and is dedicated to administrative and office items that can be traced to facilities and other income generating activities.

Based on the above items, the insurances try to create reliable information based on ABC but they have some problems. For example, although the insurances allocated their costs to cost factors, the amount of consumed resources is measured rarely based on the customers. Another sample is that allocating the costs to products includes profit centers or customers and the amount of unused resources. Finally, most of the cost allocations are based on the guesses that are not a significant criteria in evaluation of the profitability based on customers, markets, products, communicative channels, and services pricing. To do this, determining the required time for doing special activities by employees and in relation to product process is necessary. The time units should be determined based on analysis, based on analytical observations and information analysis of the activities. It is better that this work is not done based on management estimations of the time taken by the employees. Thus, time evaluation and work evaluation of operating activities in the branches are necessary. As it was said, in ABC, the activities are classified into product unit, product class, product level, and factory level (economic enterprise). In insurance, the four hierarchy levels of costs accumulated levels are defined (Mirzaii, 2006).

Product componets include the activities or groups of the activities as the unseperated part of the process or required duties for sale and giving service to the customers. The product component is the highest level of unit costs being kept in maintenance system (e.g. opening account).

2- Products include some items as insurance facilities that insurance gives to the customers and receives fee. The products are the lowest level of profit and loss (e.g. giving insurance facilities)

3- Product lines; including a summary of the products related to customers. Product lines show the middle level in providing profit and loss statement (e.g. non-profit loans).

4-Product groups; include a summary of relevant product lines; the product group level is the highest level of product lines being provided for profit and loss statement. Like all credit services (giving all insurance loans).

Insurances as great economic unit are divided into various organizational units. Insurance branches as queue units are the main organizational sectors and evaluation of their performance is the most important goal of top managers of insurance. The insurance branches in terms of responsibility centers are investment centers. Besides achieving income and costs by the branches, some resources are given to them that are maximizing the insurance wealth and investment. Branches chiefs should be responsive in their efficient application. Most of the insurances in Iran have similar organizational structure. This organizational structure is consisting of central offices, management, and branches. In some cases, management is under the supervision of a region and a member of board of directors manages each region beside some of the central offices. All the central offices and managements are considered staff unit. Some of the central offices dedicate a major part of their activities to giving service to the branches (e.g. computer, supervision and branches, credit, and claims receiving sector) (Mirzayi, 2006). Insurance products are divided into three main groups: 1- Different kinds of deposits, 2- different types of loans and facilities, 3- different kinds of non-monetary services as accounts information. Practically, insurance processes are classified into four types:

- 1- Management and supporting activities as determining the policies of insurance,
- 2- Purchasing cash including deposit absorbing,
- 3- Selling cash (e.g. giving Rial and Foreign exchange loans),
- 4- Presenting the services including varied sections as clear operation, issuing ATM cards, E-insurance, sending the drafts, etc (Anvari Rostami and Rezayat, 2007).

- The information persuades the insurances that the price can be fixed in the product or customers. In this case, the books of insurance provide information for analysis and presenting information from the main office to ABC is changed. Table (1) shows an example of difference in presenting two traditional systems and ABC.

As can be said, by changing the attitude from main office accounts to the activities of a organization such as insurance, the method of presenting the information changes. The gradual increase of the costs in insurance due to the increase of variety of the products and services, variety in communication channels and customers and increasing the processes via automation and new technology and new methods doubled the importance of allocation of the costs. As insurance is consisting of different types of loans (car, housing and other loans), the first question is the profitability of each of the insurance products?

Determining the fixed price of insurance services by stage costing is suitable. For example, loan-giving process includes some stages as filling out application form, investigation of the application form, approval, providing the required documents, providing the loan, etc. In this case, all the processes are in relation with costs and car loan factor.

In practice, allocating the costs based on the number of products and services leads to real computations when the followings are considered (Anvari Rostami and Rezayat, 2007).

- Few products and few identical services
- Low surcharge costs
- Homogenous conversion process, a similar trend is repeated for each of the services and products.
- Homogenous communication channels, homogenous demand of customers and homogenous customers
- Low shared costs
- High noticeable profit

Main office Attitude based on the list of accounts				ABC information insurance Attitude based on the list of activities	
Explanation	Real	Planned	Deviation	Explanation	Real
Wage	621.400	600.000	21.400)	Open current account	31.500
Systems and technology	161.200	150000	11.200)	Transaction processing	121.000
Marketing and advertisement costs	58.000	60.000	2.000	Open long-term accounts	32.500
Requirements costs	43.900	40.000	3.900)	Draft services	101.500
Other costs	30.000	30.000	0	Giving non-profit loan to the customers	83.400
				Guarantee and insurance services	119.000
				Giving installment sale loan	45.500
				Correspondence	77.100
				Issuing bill	158.000
Total	914.500	880.000	34.500	Total	914.500

Insurances communicate via various channels with their customers: These channels are classified as following (Mirzaii, 2006).

- Traditional communicative channel acts as the cashier of electronic communication channel that is possible via four forms of Internet, card, telephone, and other automatic channels.

This may not happen in practice. The insurances have various services consisting of more than one hundred services. The main motivation of introducing ABC is providing exact information regarding pricing the products and services, profit analysis, better attitude about costs stimulants, exact analysis of product profitability, reducing the costs, improving the process, product combination strategy, improving and measuring the

performance and modeling the costs (Anvari Rostami and Rezayat, 2007).

ABC Model in insurance

The first section is done in strategic and upper section of management of insurance and most of the sensitive decision-makings as determining the insurance policy, presenting the services and determining and pricing loan and received deposits are in the priority of top managers. Purchase or obtaining the resources of achieving the required resources of insurance is done via the customers, other insurances or central insurance. Here, all the activities leading to achieving insurance resources as open accounts, loan from other resources and paying the fee and insurance profit are considered. Selling or giving loans is the third part of insurance services and it is giving received resources from various resources to customers. Giving loans in the form of Islamic contracts as installment sale, Mozarebe, Joale, purchasing debt, the like are in this part. The fourth part of the insurance services includes other services. Receiving cashes as trustee like bills, consulting and evaluation, supervision and assurance, sale agency of participation papers and the like are other services of insurance.

communicative channels and products/services compensate it. In practice, the most important section in this process is selecting the resources stimulants and activity stimulants to do the costing accurately. After determining the four activities, a list of sub-activities of each section is provided. Also, we should look for the required stimulant for doing the activities. For example, planning section in insurance top level is separated to other activities such as determining the policies, giving loans and pricing products/ services of insurance. Thus, the relevant sub-activities are reported.

The barriers of implementation of ABS system in insurance

Normally, in most of the service organizations and insurances, employees do various activities. Thus, when separating the dedicated time of an employee to a special activity is impossible, implementation of ABC system is very difficult. Also, using the mean of activity costs in estimating the fixed price of the services in case of high fluctuation of the time of activities doesn't lead to a good result. In this case, sampling method is used in insurance. Due to the considerable personnel costs, the insurances prefer to select as sample of their employees and by work evaluation and method evaluation

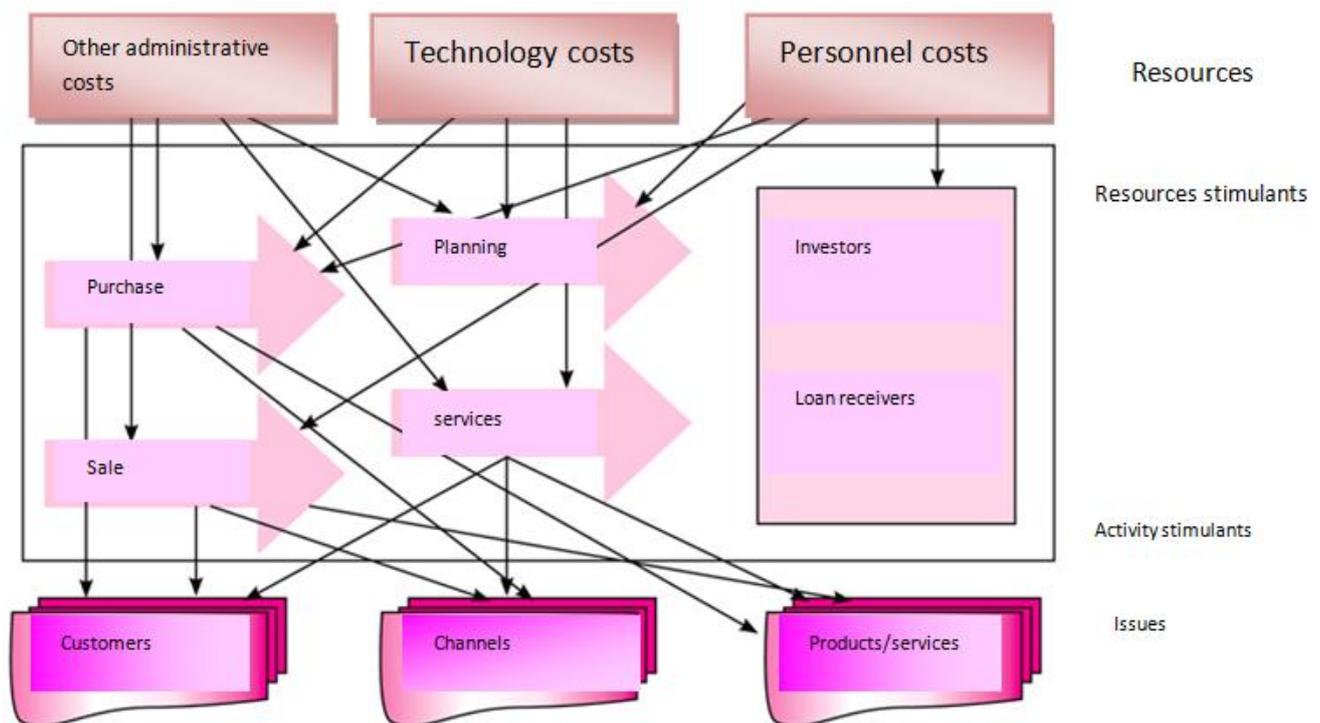


Chart 1- The costs allocation view in ABC system (Smith and Harper, 2001)

Based on the allocation of indirect costs in ABC system, it is assumed that all the costs of these services are indirect and important. To find the suitable stimulant for non-operating costs allocation, a stimulant should be used that is repeatable and manageable. In chart 1, a general view of insurance activities level for doing four services is shown. As shown in Chart 1, insurance costs such as costs of employees, administrative and technology costs should be dedicated to four activities. In the next stage, costs issues including customers,

evaluate the standard time for each activity. But this is time-consuming and the standard time for various branches of insurance with different efficiency degrees is not similar. Also, the possibility of evaluating the unused capacity via work and time evaluation is difficult due to differences of surrounding environment of the branches. For example, the branch that is close to the main market of a city has many clients and the branch that is in an organization or office is not having considerable activities and abilities of human resources are

different. One activity by two people needs different times. This issue in insurance support units involves great problems such as their service unit is not in direct relation with the customers and mostly present services to operating units as branches indirectly. If all the conditions are established, updating the standard times faces great difficulties. Another problem in insurances in Iran is that other factors are involved in decision-making process and they are given more importance than financial information. For example, although the costs of doubtful claims costs are the major costs in insurance, implementation of employment creation policies from the government persuades the insurance to give more loans despite the increase of these costs.

Conclusion

Based on the necessity of determining the fixed price of insurance services and due to the lack of a comprehensive system, the present study attempted to present a model based on insurance activities besides introducing the issues of determining the fixed price in insurance services industry. ABC system provides the suitable determination of fixed price of services and products of insurance by identifying the processes and activities of insurance. Although this is faced with many barriers and problems and the issue of establishment of fixed price system is postponed, presenting a model to introduce the calculation method of fixed price of insurance services paves the way for its implementation.

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