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Identifying the Components of Complementary Insurance Service Packages in Iran

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Abstract

The provision of medical services to patients has become so widespread that it is not economically viable to provide all of these services in the form of health insurance. Global experience shows that in many countries, supplementary health insurance is utilized to cover these services. In this study, the components of Iran supplementary insurance service package are identified. The scientific model of this research is based on a qualitative interview with experts and managers of the insurance organization and experts in the health system in 2020 and the sampling method is both targeted and snowball. Finally, referring to the experts, 16 qualitative interviews were conducted, and by using the grounded theory technique the components of service packages were identified. The necessity of each of the components of the extracted model for complementary insurance service packages was investigated in Iran. The research was analyzed by the coding method in three stages: open, axial, and selective. The results showed that the total number of nodes was 131 non-repetition codes based on the conceptual similarities of the composition and 131 nodes (common codes) were extracted based on the researchers' intuition and understanding of the subject and according to their commonalities in six main components and seven sub-components were classified in the form of tree nodes. In addition, the main and secondary components constitute the following: the main component, health services coverage, including sub-components (general population coverage, manpower, and health system structure) financial resources (supply indicators financial-economic resources) organizational structure (structural indicators) willingness to pay (insured satisfaction) management principles (management index) and supervisory policies (supervision and control).

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Introduction and statement of the problem

In recent years, despite the development of societies and the promotion of human knowledge, fear of disease, accidents, and their lack of funding, have caused concern for human beings, which has led to the invention of a new method that helps people have mental security in case of the mentioned problems (Niazi et al., 2016: 56). It should be noted that today countries are faced with the fact that despite the unlimited human needs, resources are limited (Dolan, 2013: 708). The health sector like other sectors faces this limitation (Wang, 2015: 7). The result of resource constraints leads to making a selection. As the gap between the need for health care and the amount of available resources widens, difficult decisions must be made (Homayi et al., 2017: 43).

Moreover, protecting people from the costs of disease, ensuring justice in financial participation in these costs is one of the main goals of the health system (Sheikhan, 2013: 70). In many developing countries, only a part of the people is protected against the financial risk arising from the need for health services (Jafari et al., 2007: 24) for which the most important reason is the lack of commitment on the part of the government and lack of financial resources to cover the entire population. For these reasons, only some developing countries such as Thailand, South Korea, Turkey, and Mexico have been able to provide uniform coverage of health services in their country (Saravi, 2015: 8).

In 2000, the World Health Organization ranked Iran 93rd out of 191 countries in the world in terms of health status and 112th in terms of equity in the provision of financial resources. The results of other studies also show that, in general, annually, 29% of people who use inpatient services in hospitals suffer from financial bankruptcy or fall into poverty due to hospitalization (Vafaie, 2006: 51). Furthermore, the World Health Organization report in 2006 indicates that 50% of health expenditures in the country are paid out of patients' pockets (Marnani, 2012: 69). Although currently providing appropriate health care services for all members of society is one of the main programs of governments in all countries, including Iran, a preliminary study of the conditions of the health system in Iran shows that this system is facing many problems (Salibi et al., 2008: 81)

Health care, as one of the basic and vital needs has several dimensions consisting of patients, health care providers, and insurance organizations (Clark, 2015: 120).These three components are essential for evaluating, planning and policymaking of any action thus they must be considered together. In the meantime, insurance organizations are of great importance due to their role as intermediaries between health care providers and patients, which requires special attention.

In the health care system of developed countries, health insurance is always one of the main cases of social insurance (Grigonon, 2009). Health insurance is the most appropriate option that, through its independent nature, provides the required financial resources via public participation of healthy people (Daqiqi et al., 2009: 53) without being affected by economic incentives. Health insurance is a wide range of insurance programs that cover the costs of illness, accidents, and disabilities (Abbasi, 2011: 56). Research studies show that overcoming

the slope of the health care expenditure graph compared to the gross domestic product (GDP) growth graph, on the one hand, the impossibility of the insured to use most medical facilities and unequal coverage of some medical services in basic health insurance, indicate the need for a new approach to health insurance as one of the ways to improve the health system (Ackman, 2004). In recent decades, with the advancement of medical knowledge and technology and the inability of primary health care providers, insurers have entered the field of health insurance to address the concerns of families and provide supplementary (optional) health insurance. (Regidor, 2008: 183). Health insurance is a supplement to the main branches of personal insurance. In this type of insurance, the insurer, in return for receiving the prescribed insurance premium, undertakes that if the insured becomes ill during the contract period or as an injury or damage is done to his body and health, the health insurance will pay the maximum amount of medical expenses pledged in the contract (Liu, 2002: 76)

On the other hand, the scope of providing medical services to the patient has become so wide that it is not possible to provide these services in the form of health insurance in terms of health economics. No institution can provide all services by receiving per capita and fixed health insurance. In many countries, supplemental health insurance is used to cover these services, most of which are owned by the private sector (Niazi et al., 2016: 63).

In Iran, basic health insurance and supplementary health insurance are the main administrators of people's confidence in terms of health in the country. The basic health insurance sector is the part of insurance that according to Article 21 of the Constitution of the Islamic Republic of Iran, the government is obliged to provide it for individuals from public revenues and revenues from public participation, which includes the minimum level of health services whose lacking threatens the community (regardless of the cost limit). This section is provided by the Health Insurance Organizations, the Social Security Organization, and the Armed Forces Medical Services Organization in the country. With the increasing costs of treatment on the one hand and the impossibility of proper coverage of all basic services, on the other hand, the need for complementary health insurance is inevitable. Therefore, with the establishment of supplementary health insurance, it is possible for the insured to use the services provided by the public / private sector and the service and liability gap of the basic health insurance sector is filled since basic health insurance is unable to cover all essential treatment services and its high costs. Complementary health insurance is optional and is offered as a group and can be extended until the end of life if individuals wish (Nosratnejad et al., 2013: 78)

There are many studies on the effects of health insurance on the use of medical care, but less attention has been paid to the decision to purchase health insurance and supplementary insurance. Studies show that high income is the main determinant of the decision to purchase supplemental health insurance (Hoffman, 2013: 80). On the other hand, studies usually mention the only advantage of using supplementary insurance in reducing out of pocket payments, since there is no difference considering access to services. But for patients with certain diseases, it is much more vital to use supplementary insurance. The study of the structure of insurance in Iran shows two classes of insured persons, including the first group of general insurance policyholders who usually do not see the need to purchase

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complementary health insurance services before suffering from specific and serious diseases, and the second group of supplementary insurance selectors considering the small and daily costs of treatment such as dentistry and childbirth pay less attention to serious diseases and disabilities. The first criticism of the above insurance system is that in case of any problems in public insurance, a significant number of community is suddenly uninsured and their health services are severely disrupted. The second issue is the lack of attention to serious diseases and disabilities in both groups. Researchers in developed countries believe that this insurance culture lacks the necessary foresight and can seriously endanger the health of society (Hoffman, 2013: 81). In general, the purpose of creating complementary health insurance is to enable insured people to use the medical facilities of the non-governmental sector, to fill the gap of basic health insurance services, to create conditions for innovation, diversity, and competition in the field of health insurance based on individuals participating in the process of financing (Shororzi, 2015: 127).

Given the foregoing, it can be said that firstly the behavior of people and governments regarding the provision of supplementary insurance is different; second, the type and extent of supplementary insurance benefits vary between governments and individuals. Therefore, it is necessary to conduct research that helps us identify and describe the issues and problems of complementary insurance in our country. Doing this step can lead to the development of a structure that will help us to develop the content of complementary health insurance in the country. Therefore, the present study seeks to identify the current situation and provide a model for the country.

Theoretical Foundations

Supplementary insurance in the health system covers surplus medical services that are not covered by basic insurance (Weaver, 2016: 116). Article 6 of the Universal Health Insurance Act, passed in 1994, states that all insurance companies are allowed to cooperate, participate and operate in different groups according to the criteria of this law and in compliance with the approved per capita right in health services insurance. And as a note, in addition to operating in health care insurance, all insurance companies are allowed to cooperate, participate and operate in the affairs of double (supplementary) insurance according to their legal criteria by making supplementary (special) contracts and under this law (Nazari et al., 2016: 57)

Health insurance

Iran Health Insurance in 2012, according to Article 38 of the Fifth Development Plan Law, was formed by merging health insurance with different parts of insurance, and from October of the same year began to provide medical services and all health insurance affairs. Health insurance came under the supervision of the Ministry of Welfare after the formation of the Ministry of Welfare and Social Security. On January 6, 2017, with the approval of the members of the Islamic Consultative Assembly, the Health Insurance Organization was separated from the Ministry of Cooperatives, Labor, and Social Welfare and now is managed by the Ministry of Health, Treatment, and Medical Education with legal personality and financial independence. Public health insurance is one of the most important insurances in the

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country for low-income groups and those who have not yet benefited from insurance benefits (Nazari et al., 2016: 14)

Social Security Insurance

In a general services division, insurance is divided into two categories: social insurance and commercial insurance. Social insurance is mainly compulsory and statutory insurance and is characterized by the fact that another person (such as an employer) contributes a large part of the premium. In social insurance, the insurance premium is determined as a percentage of wages, while in commercial insurance, the insurance premium is determined in proportion to the risk (Baradaran et al., 2016: 31). In Iran, the Social Security Organization in accordance with Article 3 of the Social Security Obligation Law Approved by the Islamic Council, is obliged to provide its medical obligations by using the facilities of its real estate and rental health care units, the public sector or, if necessary, the private sector and to pay the related expenses from the share of treatment subject to Article 29 of the Social Security Insurance Law (9% of the calculation source premium) or other resources specified in the law. Medical services to the insured of the organization are provided in two ways: direct treatment and indirect treatment. In the direct treatment sector, medical services are provided by clinics and hospitals belonging to social security, and in the indirect treatment sector, these services are provided by purchasing services and making contracts with private and charitable hospitals and medical centers, charities, government, universities, etc. By the end of 2018, about 43 million people were covered by social security insurance (Nael et al., 2013: 31).

Table 1: Complementary health insurance models from the perspective of the organizational structure of the health system

	England	Netherlands	Germany	Malaysia	America	Iran
Macro structure of health insurance system trustees	NHS, NGO	Ministry of Health, Welfare and Sports, Parliament	United Federal Assembly and Assembly, Federal Ministry of Health, Ministry of Labor and Social Security	Ministry of Health, NGO	Public Sector, Medicare and Medicaid	Ministry of Health, Supreme Insurance Council
Organizational structure	National	Regional	State under central government	National	State under the Deputy Minister	National
Implementation of supplementary health insurance plans	Decentralized	Decentralized	Decentralized	Decentralized	Decentralized	Mixed
Organizational structure of organizations providing supplementary health insurance	Governmental and charity	Private	Private	Governmental	Private	Governmental and private
National centers	NGOs and	NGO,	Private non-	Governmenta	Governmenta	Governmenta

for interaction with the public sector in the story of the supplementary health insurance fund	trusts	Intensive Care Insurance Organization, ZFW	profit funds (self-governing) SHI	l	l	l
Participation of other organizations in the structure of complementary health insurance	Governmental, private, charitable	Private, charity	Public and non-governmental aid	Public and government assistance	Public and non-governmental aid	Public and government assistance
Control of services at the national level	Centralized	Centralized	Decentralized	Centralized	Decentralized	Centralized

Table 1 Continued

Control by centers at the national level	Trusts, NHS	Health Insurance Commission	Governmental	Governmental	Medicaid Control Center	Central Insurance of Iran, Ministry of Health
Control of government aid	All levels	All levels	All levels	All levels	Medicare and Medicaid program	All levels

According to the above-mentioned statements, the research studies have been conducted as follows: Kavousi et al. (2018) examined the determinants of effective factors on the organizations supporting the supplementary health insurance system in Iran in 2018. Based on 51% of their results, it was found that the Ministry of Health and Medical Education has played a significant role in how to finance insurance coverage and supporting organizations in the optimal use of complementary health insurance and improve patient satisfaction and ultimately improve the health of the community. Maftoon et al. (2018) in a study investigated the level of satisfaction of the community covered by the supplementary insurance of Iran in the Martyr and Veterans Foundation of insurance services in the second phase. Based on their study, it has been shown that satisfaction with health services on the level of mental well-being veterans are impressive. Of course, in studies of other countries, the quality of health services for altruists, which are referred to as "veterans", is also very important, so that often the quality of health services to this group of society is higher than the quality of services to other people. It seems that attention and focus on the quality of services and its promotion is one of the main axes of supporting the altruists and their families. Mousavi et al. (2017) examined the satisfaction of disabled veterans covered by supplementary insurance and their families. Considering that the frequency of outpatient visit satisfaction in all groups is very desirable and is about 94%, it seems that the next step is to maintain this situation and prevent its decline. On the other hand, regarding the frequency of satisfaction with the process of receiving the cost of an outpatient visit is not desirable and undoubtedly improving the

process of receiving the cost is one of the important measures in this regard. Accommodation place and altruist groups were relevant factors in terms of satisfaction with the distance of service. In 2019, Kanika Kapoor in Ireland evaluated the information of insurance companies during the period 2017-2019 in order to identify the factors influencing the selection of individuals to private insurance and changes in the characteristics of individuals covered. The results showed that older and severely sick people are more inclined to use private insurance. Patients living in Ireland appear to be more likely to have private health insurance. Carly et al. (2019) performed a study that systematically examined insurance coverage studies in the United States focusing on a type of cosmetic surgery (Diastasis Recti), which is performed to improve the quality of life of individuals. Fifty-four US insurance companies and Medicare were surveyed to determine coverage policies, which were compared with the American Plastic Surgery Association guidelines and the current guidelines. The results indicated that the insurance company's policy for DR surgery is neither specified nor well-known. Boone (2018) in a study examined access to health care and the cost-effectiveness role of basic insurance compared to supplementary insurance whose results showed that when patients are exposed to budget constraints, some treatments are not acceptable without health insurance, a careful assessment should be made as to which treatments should be covered by global basic insurance and voluntary private insurance. In the current study, it was argued that in addition to cost-effectiveness, considering the disease outbreak is a very important factor. If the government is to maximize the welfare benefits of its health budget, it should pay special attention to coverage for treatments that are mainly used by high-risk, low-income individuals.

Methodology

Discovering and extracting the effect of the concepts of the supplementary insurance service package model in Iran requires the use of a precise method regarding the subject. A qualitative method is the most appropriate way to achieve this goal. To study the desired phenomenon in-depth, we reviewed the research theoretical foundations and utilized in-depth and semi-structured interviews. In this way, after studying the research literature and identifying and extracting components and markers, interview questions were designed based on the guidance of supervisors and consultants. In the next stage, in line with the research community and considering that the researchers in this study sought to identify the components of the supplementary insurance service package model in Iran, the results can be utilized in the target community after the work is processed. Therefore, this research in terms of purpose is practical. Also, due to the nature of the data, the grounded theory method has been used. The participants of this study are experts and managers of the insurance organization and experts in the health system in 2020 and sampling has continued in both targeted manner and snowballs and to the point of theoretical saturation. Theoretical saturation is an approach used in qualitative research to determine the adequacy of sampling. In this study, the data saturation point continued to the point that the researchers asking frequent questions found that the new data did not provide new insight. Finally, after 16 interviews, whose average duration per interview was 45 to 60 min, data saturation was achieved. In the present study, semi-structured interview tools have been used and initially, by

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asking about the features of complementary insurance service packages, the discussion has started, and then the internal and external factors have been questioned.

In order to encode the data obtained from the interview, Auerbach and Silverstein (2003) used six steps. This technique includes the following steps:

1- Careful reading of the interview text: In this stage, in order to get acquainted with the thought line of the interviewee, the text is carefully read several times.

2- Identifying important and related sections: In this stage, by carefully studying the text of the interview and focusing on the research issue, relevant and important sections are identified, for example, in question such as *"considering future research approach, what are the key factors for complementary insurance service packages?"* important and related sections include complementary insurance service packages, creating a platform in Iran to institutionalize insurance in all fields, including higher education through information and development of cultural mechanisms, and -helping policy-makers to develop standards in complementary insurance from an external perspective.

3- Identifying duplicate ideas: Duplicate ideas are the sentences or phrases of the interviewees that are expressed with the same or similar words and are semantically related to each other, for example, in the sentences given above, the interviewees state that due to the importance of this subject, the direct effect of indicators considering the internal and external components identified in Table 2 will promote the insurance industry now and in the future.

4- Theme building: Here we put repetitive ideas that are somehow related or have commonalities in a category. In the present study, the above repetitive ideas along with other similar repetitive ideas in a group are categorized under the heading of internal and external components of execution processes.

5- Formulation of theoretical structures: Just as duplicate ideas are categorized in themes, themes fall into larger and more abstract categories, namely theoretical structures.

6- Theoretical narration: Finally, the theoretical structures are expressed in the form of a narration. Here, the story related to the participants is told.

Finally, by putting together the components obtained through interviews and documentary studies, and by examining several steps that were conducted on the concepts, by eliminating duplicate cases and merging the same and close concepts, considering the approach of service packages, complementary insurance service packages were developed. Supplements were developed to increase the validity of the research. After completing the interviewees' explanations, the researcher expressed his / her perception of the interviewee's words and statements during the interview to ensure the accuracy of the statements with the interviewee's confirmation. Also, during the interview process, in order to remove ambiguity and enhance clarity some follow-up questions such as *"what do you mean by ...? Or please explain more in this regard"?* were used. Furthermore, to check the accuracy of the findings, the review method was used by the members. To this end, the final report and the obtained themes were returned to several participants to confirm and evaluate the results and they were asked to

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comment at the appropriate time. The agreement between the two coders was used to determine the reliability of the reliability method.

Research Findings

Qualitative data analysis

In the qualitative section, data analysis was performed based on grounded theory. First, the key points related to each semi-structured interview were recorded by listening to the recorded interview and studying the notes taken during the interview, then the points were marked. Afterward, the key and basic points were extracted from the interview. Then, by classifying the key points in the form of professional terms, the necessary labeling was done and then the labeled terms of each interviewee were organized in the form of a table based on their relationship and appropriateness. They were categorized in terms of dimensions and components.

The results showed that the total number of nodes was 131 non-repetition codes that were combined based on conceptual similarities and 131 nodes (common codes) were extracted based on researchers' intuitions and perceptions of the subject and according to their commonalities in the form of six main components and seven sub-components were classified in the form of tree nodes (Table 2). The following are the main and sub-components that make up the complementary insurance service packages of Iran.

Table 1: Identification of components of Iran complementary insurance service packages

The main component	Sub-components
Population coverage	Health service coverage
	Manpower and the structure of the health system
Economic resources	Financial resources and financing indicators
Structural indicators	Organizational structure
Insured satisfaction	Willingness to pay
Management index	Principles of management
Monitoring and control	Supervisory policies

Component 1: Population Coverage

This component refers to the mechanisms that directly affect Iran's supplementary insurance packages. In this component, after analyzing the interview, based on the conceptual similarity, they formed 68 common codes.

Sub-component One: Health Services Coverage

This component is based on the direct effect of health service coverage indicators. In this component, after analyzing the interviews, the following were identified: 23 codes for creating a system for identifying vulnerable and low-income groups, the use of modern family planning equipment, the optional supplementary health insurance, creating individual supplementary health insurance, and forming a group to receive insurance, determining the number of insured, compulsory membership of the covered population, the existence of a coordinated comprehensive information system of the insured, group classification of the covered population, knowledge and behavioral information of supplementary insurance

among the population, full implementation of supplementary insurance file, determining the accurate percentage of households facing high costs, incidence of low birth weight infants at birth, existence of a center for matching statistics of organizations covered by supplementary insurance, determining a single organization for issuing supplementary insurance smart card, accurate determination of percentage of households for access to safe water , pregnant women care coverage, delivery rate performed by the trainee, determining the exact percentage of households to access safe sewage, determining the exact percentage of households to access healthy air, determining the exact percentage of adolescent fertility, establishing a monitoring mechanism and reviewing patients' complaints, and determining the exact size of the population.

The second sub-component: manpower and the structure of the health system

This component is based on the direct effect of the structural index of supplementary insurance in Iran. In this component, after analyzing the interviews, 15 percent of health expenditure codes of GDP, inefficiency of the macro-structure of supplementary insurance in the health sector in relation to the challenges ahead, percentage of out-of-pocket payments in health in the public sector, inability to attract and retain efficient workers, extreme weakness of information system in the field of supplementary insurance, high burden of diseases, lack of institution to think and analyze the performance of programs, number of health personnel in the population, unregulated appointment of managers, level of service satisfaction, determination of percentage of people spending higher than 60% of their living expenses on health, lack of in-service training and retraining, lack of manpower with the necessary knowledge and experience in policy making, programming, as well as monitoring and evaluation of supplementary insurance, wear and tear of medical equipment and lack of equipment, regular maintenance work and replacement, and health expenditure percentage of Gross Domestic Product (GDP).

Table 3: The summary of the other five main components

Categories (main components)	Sub-components	Concepts
Economic resources	Financial resources and financing indicators	Payment mechanism to service providers
		Existence of real supplementary insurance tariff system in the service sector
		Equality and justice in the payment of government obligations to supplementary insurance organizations
		Full control of economic factors affecting the supplementary insurance market
		Unification of supplementary insurance premiums for community units
		Elimination of the problem of loss of supplementary health insurance
		Type of per capita insurance premium
		Less participation of people with less financial ability in health expenses and vice versa) financing
		Use of government support obligations
		Using scientific methods to calculate supplementary insurance premiums
	Organizational	Use of up-to-date systems to provide supplemental insurance
		Existence of a supplementary insurance organization in the Supreme Insurance Council
		Putting a comprehensive law in the supplementary insurance system
		Transparency of the role of government in supplementary insurance
		Creating an organizational structure in a decentralized manner in implementation and

	Structure	centralized in policy-making and macro-planning in order to involve the non-governmental sector
		The homogeneity of the nature of the merged funds
		Full implementation of the family doctor plan and referral system in order to access supplementary insurance
Insured satisfaction	Willingness to pay	Price transparency
		Responding to customers
		Create a relative price
		Suitability of the physical environment
		Consistency of price to quality ratio
		Simplicity and speed of compensation
		Price reliability
		Price assurance
		Simplicity and speed of issuance
		Staff knowledge
		Provide appropriate information to the customer (damages)
		Complaints handling
		Financial satisfaction (amount of damages received)
Management index	Principles of management	Establishment of a single insurance organization to provide complementary insurance services
		Focus on general policies and provisions of supplementary insurance contracts
		Follow up and review requests for issuance, renewal, and replacement of employee insurance booklets by the manager
		Referral and coordination with relevant units, organizations, and institutions to perform insurance affairs for employees
		Performing administrative and administrative affairs of supplementary insurance services for employees
		Obtaining government consent to the supplementary insurance market
		Changing the approach of government insurance from services to business
		Consider some political and governmental considerations in supplementary insurance organizations
Monitoring and control	Supervisory policies	Supervision of the institutions that are parties to the supplementary insurance contract
		Efforts to create security and tranquility in the supplement insurance industry
		Supervision of central insurance in large cases on supplementary insurance
		Supervision and control over the activities of supplementary insurance medical centers
		Supervision and control at the level of covered medical centers in accordance with the relevant laws and regulations and instructions of supplementary insurance
		Supervision and control over the activities of spending and discharge units in the covered medical centers in terms of proper implementation of laws and regulations related to supplementary insurance.
		Supervising the proper implementation of approvals and instructions related to supplementary insurance
		Supervising the interaction of subsidiaries with complementary insurance companies
		Supervising supplementary insurance for the fulfillment of obligations
		Adequate oversight of contracting institutions

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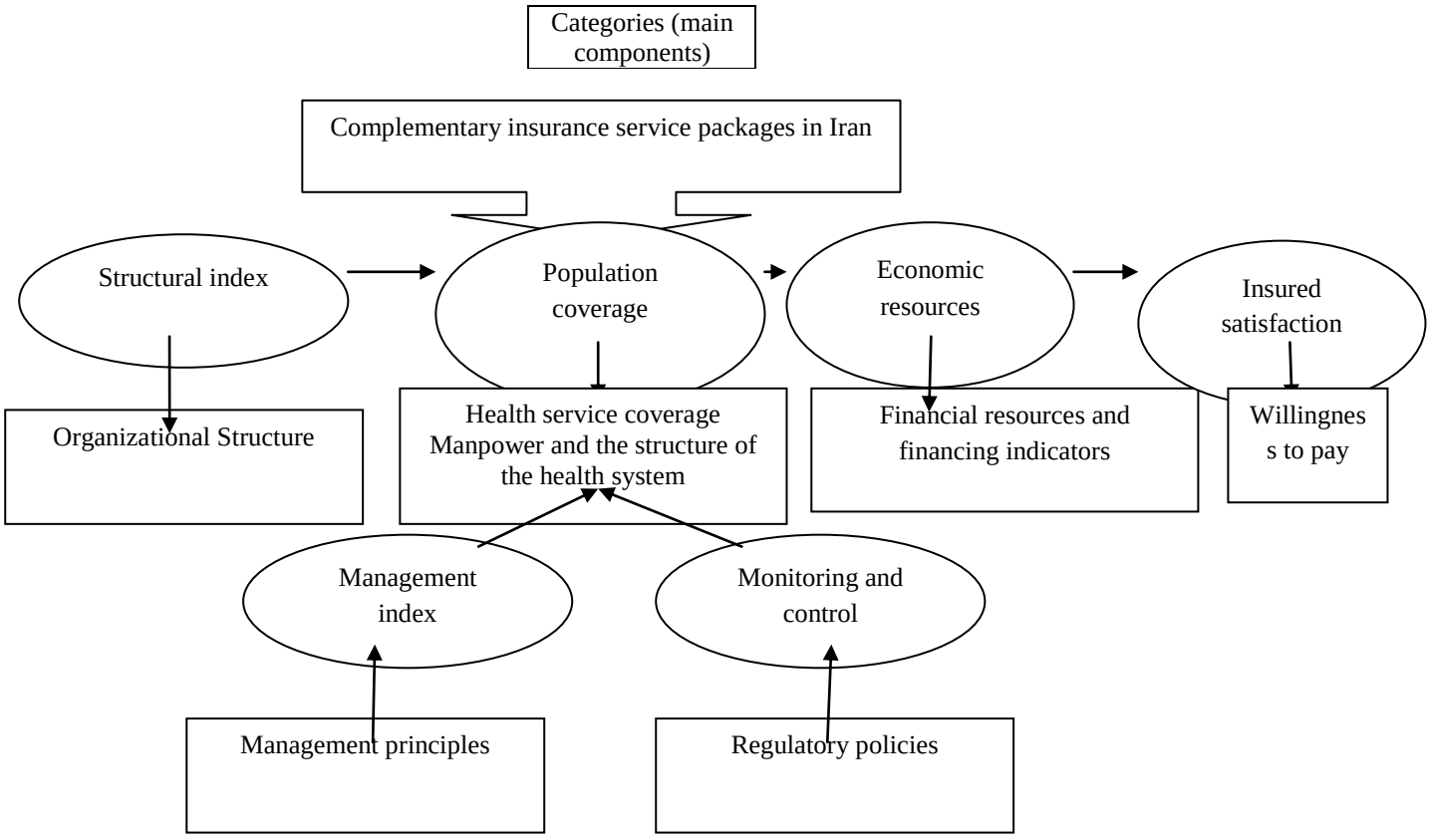

Figure 1: Qualitative model of complementary insurance service packages in Iran

Research results

In response to the current condition, and according to Table 2, supplementary insurance service packages have been reported relatively favorable. The research results show that people expect special supplementary health insurance. The satisfaction of people covered by supplementary insurance and expecting to receive high-quality services and increase the costs of the health sector are among the reasons for the tendency towards complementary insurance in society. An important factor to improve the existing conditions is to pay attention to the managerial and organizational structure and create the necessary and appropriate conditions for this work. Utilizing insurance in the form of public and private complementary health insurance and creating competition between them can play a significant role in improving the quality of health insurance services, raising the level of consumer satisfaction, and ultimately improving public health.

The results showed that increasing age and education, the marriage of the head of the household, having children and the elderly in the family and private home, the number of breadwinners, increasing income, and per capita health expenditures have a positive effect on the likelihood of purchasing health insurance. Meanwhile, being literate, married, and increasing the education of the head of the household, increasing health and medical expenses, increasing income and educational expenses have a positive effect on the choice of supplementary health insurance. The influential variables are population coverage, economic

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resources, structural indicators, insured satisfaction, management index, supervision, and control, respectively.

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References:

1. Abbasi E, Taghi Abadi M. The effect of economic factors on the demand for supplementary treatment insurance. Insurance Journal. 2011;26(4):57-80.
2. Clarke T, Black L, Stussman B, Barnes P, Nahin R. Trends in the use of complementary health approaches among adults: the United States, 2002–2012. National health statistics reports. 2015;3(79):120-9.
3. Dolan P, Kavetsos G. Tsuchiya A. Sick but satisfied: the impact of life and health satisfaction on the choice between health scenarios. J Health Econ. 2013;32(4):708-14.
4. Daghighi Asli A, Faghih Nasiri M, Aghasi Kermani S. Estimation of demand function of complementary health insurance in the country's insurance industry. Industrial Insurance Journal. 2009;25(3):119-43.
5. Ekman B. Community-based health insurance in low-income countries: a systematic review of the evidence. Health Policy Plan. 2004;19(5):249-70.
6. Grignon M, Kambia-Chopin B. Income and the demand for complementary health insurance in France: Institut de recherche et documentation en économie de la santé; 2009.
7. Homaie Rad E, Kavosi Z, Moghadamnia M, Arefnezhad M, Arefnezhad M, Felezi Nasiri B. Complementary health insurance, out-of-pocket expenditures, and health services utilization: A population-based survey. Med J Islam Repub Iran. 2017;31(1):339-43.
8. Hofmann A, Browne M. One-sided commitment in dynamic insurance contracts: Evidence from private health insurance in Germany. Journal of Risk and Uncertainty. 2013;46(1):112-81.
9. Jafari H, Esmaeeli R, Nasiri E, Haydari J, Mohammadpour R, Mahmmodi G. Assessment of Satisfaction Rate Among the Working Staff of Mazandaran University of Supplemental Insurance Company in 2005. J Mazandaran Univ Med Sci. 2007; 17(58): 117-24 [In Persian].
10. Liu T, Chen C. An analysis of private health insurance purchasing decisions with national health insurance in Taiwan. Soc Sci Med. 2002;55(5):755-74.
11. Niazi S, Jahani M, Mahmoodi G. Evaluation of human resources in the hospitals affiliated to Babol university of medical sciences and social security of Qaemshahr city based on the standards of the Iranian ministry of health. J Babol Univ Med Sci. 2016; 18(2): 56-63 [In Persian].
12. Nosratnejad S, Purreza A, Moieni M, Heydari H. Factors Affecting the demand for private health insurance in Tehran. Journal of Hospital. 2013;13(2):37-44.
13. Marnani A, Teymourzadeh E, Bahadori M, Ravangard R, Pour J. Challenges of a large health insurance organization in Iran: A Qualitative Study. Int J Collab Res Intern Med Public Health. 2012;4(6):1050-62.
14. Regidor E, Martinez D, Calle M, Astasio P, Ortega P, Dominguez V. Socioeconomic patterns in the use of public and private health services and equity in health care. BMC Health Serv Res. 2008;8(1):183.
15. Shororzi M, Khalili M, Soleimani H, Forootan O. Relationship between corporate governance and company performance based on fuzzy regression. Financial Accounting and Audit Research. 2015;7(25):127-45 [In Persian].
16. Sheikhan N. Health Complementary Insurance in Iran. Social Welfare. 2013;13(48):247-70.
17. Saravi N, Zaboli R, Hassanzadeh A, Najafipour F, Rezapour A ,Rezai-Rad M, et al. Developing criteria for complementary health insurance (CHI) benefit packages for a medical service insurance organization in Iran: a qualitative content analysis. Int J Travel Med Glob Health. 2015;3(4):171-8.
18. Saliba B, Ventelou B. Complementary health insurance in France. Who pays? Why? Who will suffer from public disengagement? Health Policy. 2007;81(3-2):166-82.

19. Vafaee Najar A, Karimi I, Sadaghiyani E. The information system package information package of complementary health insurance services in selected countries and providing a template for Iran. Health Information Management. 2006;3(1):51-62 [In Persian].
20. Wang Z, Zhang Y, Xiong F, Li H, Ding Y, Gao Y, et al. Association between medical insurance type and survival in patients undergoing peritoneal dialysis. BMC Nephrol. 2015;16(33):1-7.

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