

Identifying and Prioritizing the Influential Factors on Life Insurance Demands: The Case of a Province in Iran

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Abstract

In this study influential factors on life insurance demands in Iran were studied. Firstly, by using previous study results and interviewing with experts different factors were identified and classified under main groups. The required information and Data were gathered by two questionnaires. First questionnaire was filled by managers and sellers in Iran insurance agencies in Semnan Province and data were analyzed by statistical test. Then in order to prioritize the factors another questionnaire (pairwise comparison questionnaires) was provided and filled by experts and after drawing the decision tree factors were prioritized by AHP method. These results illustrate that life insurance identity, structural, administrative, personal and cultural factors are respectively the most influential factors on life insurance demand in Semnan province agencies of Iran insurance. At last, in addition to prioritizing all the main factor categories, suggestions in order to increase demand and to develop insurance in Iran were presented.

Key words: Insurance, life insurance, life insurance demand, Data sequential analysis, Iran insurance

1. Introduction

All of us need security in order to stay healthy and to live healthy. Security is the major need of mankind that can influence other needs, but in nature and life environment there are dangers or accident that may occur and cause damages to people. These threats and dangers might be diseases or accidents that cause damages to human beings and endanger their health, cause disablement and even death or they might be dangers which damage environment or properties. Insurance is a service which helps to compensate damages caused by accidents. Insurance brings a sense of security.

It is clear that insurance services are the cause of trustworthy and stability in mankind activities and is influential in decreasing the intensity and size of the dangers. Despite these factors Iran's share in world insurance is around 0.07 percent and with per capita insurance premium around 26 Dollars in proportion to the world insurance premium average which is 387 Dollars is very insignificant. Insurance penetration rate in our country is around 1.3 percent that life insurance's share is less than 6.5 percent of the whole insurance market which means life insurance penetration rate is around 0.1 percent. Also, per capita insurance premium in world is around 370 Dollar which in our country is less than 4 Dollar (Industrial Insurance website, 2011).

On one hand insurance is considered as an industry and has an effect on National Income in a way that insurance in Iran's economy is very crucial and its effectiveness is higher than other industries average of effectiveness (Matlabi, 2003). Individual insurance is one of the

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important factors in measuring welfare rate. Life insurance is an important economical mean which has various uses (Sautre and Colleagues, 2010). Life insurance plays a key role in providing and guaranteeing family future which is its most tangible aspect. Nowadays people in developed countries with the help of life insurance have reached the desired situation in case of fatal danger of family's *superintendent* and financial difficulties related also problems related to ageing and retiredness (Aziz Zade, Niari, 2008). In Japan each family has 4.8 percent of life insurance; which means every family signs 5 contracts of life insurance with five different insurance companies.

The amount of world's life insurance demand is higher than Iran's GNP. For instance, Per capita life insurance demand in England is 5.582 Dollar, in Denmark 3.689 Dollar and in Japan is 2.869; but life insurance demand in Iran is only 4 Dollar. World's average in Per capita life insurance demand is 172 Dollar that this amount in Iran is world's one- nineties (World of Economy, 2012). Life insurance development as a voluntary insurance, reduces the compulsory responsibility of the government and assigns some of pensions and retirement expenditures to the individuals and insurance companies. Life insurances are considered as one of the large capital sources and insurance companies function as one of investing sources of the world. Although, life insurance has developed largely in Iran but it is still far from the desired position. So it is necessary to analyze and study more accurately the obstacles, challenges and generally all the influential factors on development of life insurance industry in Iran. Therefore, in this research systematically and generally cultural influential factors on life insurance demand have been identified and analyzed and according the *appointed priorities suggestions in order to develop* life insurance were presented.

2. Review of the Literature

Most of the researches carried out in the field of life insurance demand consider Yarri's studies as their starting point. Family's *superintendent* demand for life insurance depends on the number of family members. (Mehrara and Rajabian, 2006)

Every person is subject to various economical choices. He should decide how to use his capital in order to reach the highest satisfaction. He can buy risk stock in exchange market or invest in bank that its interest rate is guaranteed no risk will be incurred on it. He can also devote an amount of his income to buy annuity or life insurance. In brief, every individual devotes his income to various consumptions or investments and an amount of it will remain as inheritance. Naturally he will face different uncertainties. Two obvious uncertainties that an economical person will face are uncertainties related to the risk capital returns and uncertainties in gaining income due to unexpected death. The existing solution is that families can face the uncertainty resulting from inability to have an income by buying life insurance and guarantee family's welfare and consumption even after the *superintendent's* death. Life insurance is utilised to cover the risk resulting from the breadwinner's death that puts the survivors life into financial difficulties (Mahdavi 2009).

A lot of theoretical researches in the the field of investor's behaviour in life insurance and in other types of investment were carried out. The first theoretical research in this field was done by Yarri. He studied uncertain lifetime and life insurance under the expected utility theory. In his model he optimized the expected utility toward the saving accumulation process constraint. Then he extracted the consumption's optimum route, saving's optimum route in Hankonson's methode in a dynamic discrete programming model and saving and optimum consumption under a risk condition. Hankson's work can be counted on as a complement to Yarri's work (1965) since he entered random variables into his model.

Stanley Fisher with the help of time discrete model extracted time optimum consumption patterns, saving and life insurance demand with emphasis on the life insurance's function dynamism. According to Lewis prespective life insurance demand is only to provide the

survivors needs. It is natural that Lewis's model doesn't include inheriting motivations to the survivors, since these motivations in addition to life insurance demand are to fulfill the survivor's demands. Choma in an study, "Purposeful inheritance motivations, saving and life insurance" tries to achieve a scientific method to measure inheriting motivations and their effect on saving and life insurance demand.

After studying previous researches and experts opinions the following factors are identified as the most influential factors on life insurance demand.

Table 1 the most influential factors on life insurance demand

Scholar	Indices
Moradi and colleagues, 2011	Quality of tangible and intangible services
Tofighi, 2009	Inflation, rate of interest, literacy rate and per capita national income
Mahdavi, 2009	Paid claims, national income and literacy level, life expectancy
Sautre and colleagues	Tax
Lee, 2008	Education and risk bearing
Kapfer, 2007	Occupation and sex
Lin, Grace 2005	Age and Income
Brown and Kim, 1993	come, dependency burden, anticipated inflation and literacy In rate
Hammond and colleagues, 2008	Dependency burden
Personal factors	Age, sex, race, family
Administrative factors	Place and time service provision, reduction of office formality, skilled work force
legal factors	sales network wage, reduction of paying insurance premium, various discounts available
Cultural factors	Instructing the customer by the insurer, awarding prizes and publicity

The following table shows the researches alike.

Table 2 Some of the literature review

No.	Researcher	year	Conclusion
1	Baseri and colleagues	2011	In this article, influential factors on life insurance demand have been studied. The research results showed that a probability of buying life insurance among women is more than men and individual's health has an inverse relation.
2	Moradi and colleagues	2011	In this article a model for showing the level of satisfaction of customer from insurance company was presented. In this research influential factors on customer's satisfaction and demand for the insurance were studied.
3	Sehat and Parizadi	2009	Sehat and Parizadi in their article presented a type of algorithmic method based on network analysis process which can perform task well even when there is a dependency between SWOT factors,
4	Tofighi	2009	Life insurance demand has a negative relation with inflation and the

			actual interest rate and has a positive relation with literacy rate and per capita national income.
5.	Mahdavi	2009	Paid claims, national income and literacy level have a direct and positive effect and life expectancy has an inverse relation on life insurance demand.
6	Sautre and colleagues	2010	In their research they showed a positive relation between life insurance demand with inheritance and marginal tax rate.
7	Lee	2008	In his article he surveyed life insurance demand in lump sum payment and time life insurance and the results represented that families who didn't buy any insurance has a low education and were risk bearers and had no motivation to leave inheritance.
8.	Kapfer	2007	The probability of buying life insurance by unemployed people, house wives and low income people is less.
9.	Lin and Grace	2005	Life insurance demand is highly related to the financial vulnerability and elasticity of life insurance demand decreases with aging.
10	Brown and Kim	1993	In an article by the name of "International analysis of life insurance demand" the influential factors on life insurance demand in addition to income were dependency burden, expected inflation and literacy level. He found the relation between dependency burden, income and education with life insurance demand as positive and expected inflation with life insurance demand as a negative relation.
11.	Aziz Zade and Niazi	1999	In his M.A thesis he recognized and analyzed the most influential factors on life insurance demand in Iran and a new pattern in this field.
12.	Hammond and Colleagues	1967	In the" specifying family's life insurance premium expenditure, an empirical research" he showed in an empirical method that dependency burden has a positive relation with life insurances demand.
13.	Yarri	1965	This study is one of the first studies in life insurance field and Yarri expresses in an article, "Life uncertainty, life insurance and consumer theory", that life insurance demand should be surveyed from consumer's resource allocation and within life rotation model.

3. Methodology

The current research is practical in purpose, descriptive in data collection method and was done in survey form. This research is performed in two steps; First step: All the influential factors on life insurance demand were identified by interviewing and library and field studies and were classified in several main groups and by defining the hypotheses and using questionnaire and analyzed by statistical test and SPSS software.

Second step: Then based on the AHP pair wise comparison questionnaires factors were prioritized and finally the administrative strategies were suggested.

In order to analyze first questionnaire data and to survey hypotheses (Finalizing factors) Statistical test and SPSS software have been used. The verified factors in the next step will be prioritized in order of importance by pair wise comparison questionnaire and filling them by experts and by using AHP method and Expert Choice.

3-1 Research Hypotheses

First hypotheses: There is a meaningful relation between personal factors and amount of Life insurance demand.

Second Hypotheses: There is a meaningful relation between cultural factors and amount of Life insurance demand.

Third Hypotheses: There is a meaningful relation between life insurance identity and amount of Life insurance demand.

Fourth hypotheses: There is a meaningful relation between administrative factors and amount of Life insurance demand.

Fifth hypotheses: There is a meaningful relation between structural factors and amount of Life insurance demand.

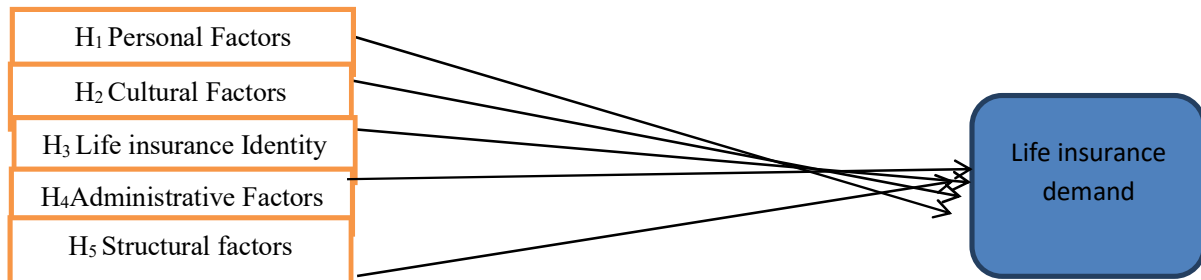


Fig 1. Conceptual research model

3-2 population and Sample

The statistical population in this research is all the Iran insurance agents in Semnan province who are 86 persons and all of them were chosen as sample and first questionnaire was sent and filled by the agents. Semnan province agency information is presented in the following table.

Table 3 Population and sample

City	Number	Frequency
Semnan	32	37%
Damghan	14	16%
Shahrud	31	36%
Garmsar	9	11%
Total	86	100%

3.3- Validity and Reliability

The questionnaire's reliability has used the Cronbach's Alpha method which was measured by using SPSS software. And it was measured 0.82 and since it is higher than 0.7 therefore it has a high durability.

Table 4 Measuring Cronbach's alpha

%	Volume	
100.0	86	Valid
	sample	
0.0	0	Excluded
100.0	86	total
Reliability Statistics		
No. of questions	22	Cronbach's Alpha .82

Regarding to the fact that the concepts and determinants in the presented model are taken from the world's researches and used in different researches so it shows the high validity and also the designed questionnaire was confirmed by the experts. In addition with a clear definition of structures and with the help of 5 experts (people who in addition to great experience have academic education) this questionnaire before distribution was edited and revised and the required reforms in order to increase justifiability took place.

4. Data analysis

4.1- Responders descriptive statistics

Responder's descriptive analysis is presented in the table below:

Table 5 Education variable frequency

Description/ proportional frequency	
Education	Diploma 0.14- BA 0.72-M.A 0.1238- Ph.D. 0.0162
Experience	Under 5 years 0.33- 5 to 15 years 0.57- more than 15 years 0.10
A	Below 30 years 0.20 – from 30 to 50 years 0.68 – above 50 years 0.12
Sex	Male 0.62 – Female 0.38

4.2- Surveying Research hypotheses (questionnaire related to finalization of factors)

By using Pearson's correlation ratio the numerous amount was measured and the meaningfulness of this ratio in a: 0.05 meaningfulness level was surveyed.

$$\left\{ \begin{array}{l} H_0: P=0 \\ H_1: P \neq 0 \end{array} \right. \quad \text{there is a meaningful relation}$$

Pearson correlation ratio (r) shows the intensity and type of the relation and is measured by the following formula:

$$r = \frac{\sum x_1 y_1 - n \bar{x} \bar{y}}{\sqrt{(\sum x_1^2 - n \bar{x}^2)(\sum y_1^2 - n \bar{y}^2)}}$$

First hypotheses: there is meaningful relation between the personal factors and life insurance demand

The result of the correlation test in the first hypotheses is shown in the table below.

Table 6 correlation test results of the first hypotheses Correlations

		Personal factors	Life insurance demand
Personal factors	Pearson's correlation ratio	1	0.686
	Test 's level of meaningfulness		0.000
	Sample volume	86	86
Life insurance demand	Pearson's correlation ratio	0.686	1
	Test 's level of meaningfulness	0.000	
	Sample volume	86	86

As shown in the presented results, $r=0.62$ and level of meaningfulness equals 0.000 which is less than 0.05. So in the level of 0.05 meaningfulness the H_0 hypotheses is rejected. This means there is a meaningful relation between personal factors and life insurance demand. Therefore personal factors are one of influential factors on life insurance demand and are finalized and will participate in next level's prioritization. In the same way correlation ratio results for other hypotheses was surveyed and each five hypotheses was confirmed.

4.3- Prioritizing the influential factors on life insurance demand

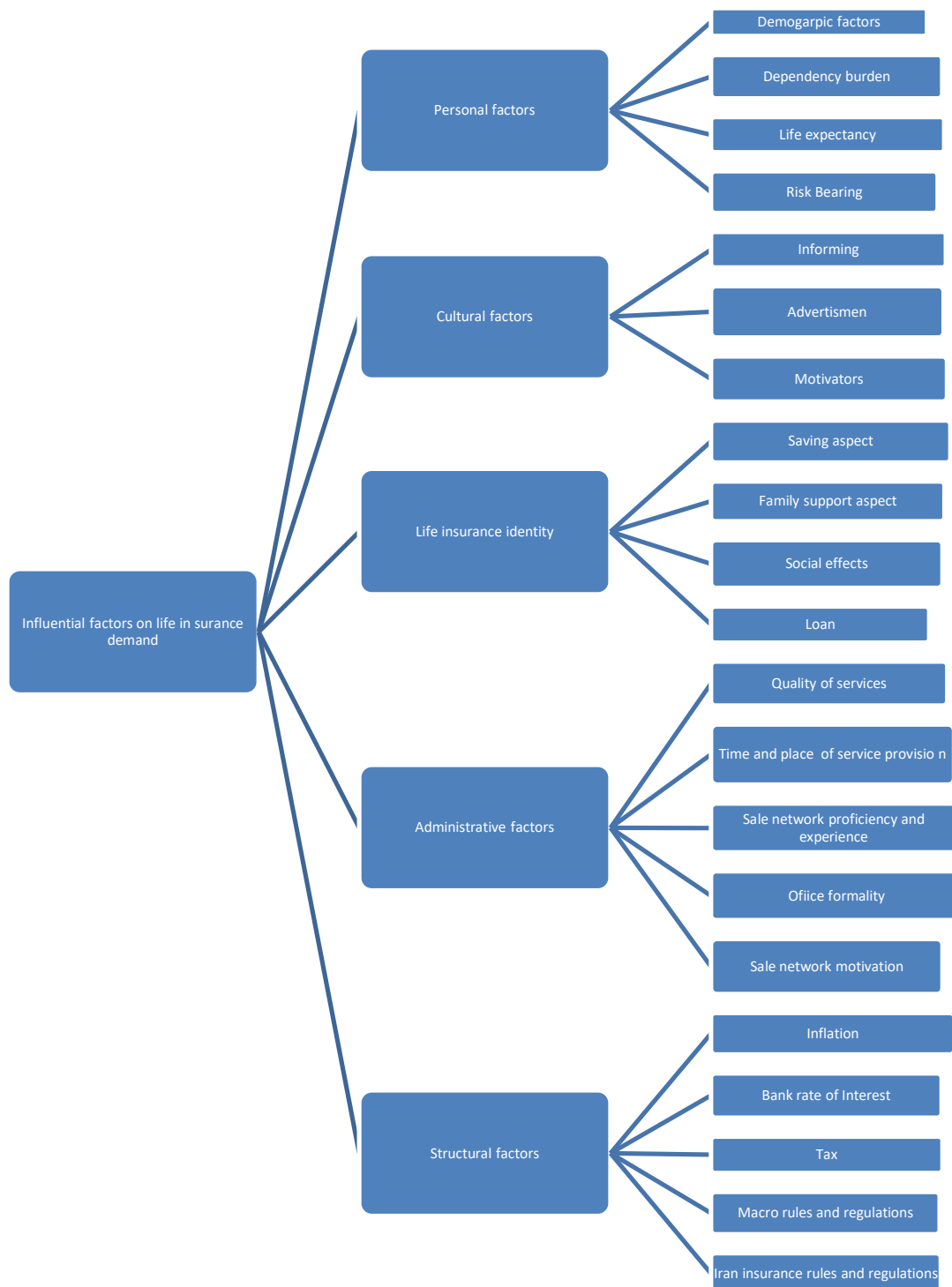


Fig2. AHP decision tree

4.3.2- Prioritizing the factors

The table below shows prioritizing main influential factors on life insurance demand in Iran insurance.

Table 7 normalized Matrix of integrated pair wise comparisons of influential factors on life insurance demand

	Life insurance identity	Structural factors	Administrative factors	Personal factors	Cultural factors	Weight	wsv	cv
Life insurance identity	0.313	0.301	0.285	0.291	0.317	0.30	3.14	4.21
Structural factors	0.202	0.187	0.293	0.265	0.246	0.241	1.295	4.13
Administrative factors	0.202	0.236	0.178	0.218	0.184	0.201	0.335	4.055
Personal factors	0.125	0.106	0.075	0.09	0.12	0.109	0.222	4.05
Cultural factors	0.151	0.084	0.175	0.215	0.125	0.149	0.577	4.015
Max= 4.48		CI= 0.094				CR=0.079		

The above table results shows that life insurance identity with 0.30 weight is the most influential factor on life insurance demand and structural factors with weight of 0.241, Administrative factors with weight of 0.201, cultural factors with the weight of 0.149 and personal factors with weight of 0.109 are the next influential factors.

After calculating the prioritization of factors we reached the following results.

Figure 8 Final rating of main factors based on AHP

Rate	determinants	Weight
1	Life insurance identity	0.30
2	Structural factors	0.241
3	Administrative factors	0.201
4	Cultural factors	0.149
5	Personal factors	0.109
Total weight		1.00

The above table shows the final rating of the most influential factors on life insurance demand.

Table 9- final rating of all the factors based on AHP

Rate	determinants	Weight
1	Saving aspect of life insurance	0.132
2	Bank rate of interest	0.092
3	Sales staff proficiency and experience	0.082
4	Sales network motivation	0.0787
5	Inflation	0.0717
6	Life insurance interest	0.063

7	Informing	0.62
8	Support aspect of life insurance	0.058
9	Advertisement	0.054
10	Macro rules and regulations	0.0407
11	Life expectancy	0.0406
12	Dependency burden	0.0342
13	Motivators	0.032
14	Loan	0.0258
15	Quality of services	0.020
16	Risk bearing	0.0198
17	Social effects	0.0198
18	Tax	0.019
19	Iran insurance rules and regulations	0.016
20	Demographic factors	0.014
21	Time and place of service provision	0.011
22	Office formality	0.0059
Total weight		1

The table above shows the final rating of all related determinants to the influential factors on life insurance demand with their final weights. As it is shown in the saving aspect of life insurance, banks rate of interest, sales network staff efficiency and experience and sales network motivation are the most influential factors on life insurance demand in Semnan 's Iran insurance. Other determinants with their weights are shown in the table above.

5. Conclusion

The aim of this research being carried out is to identify the influential factors on life insurance demand in Semnan's Iran Insurance agencies and to prioritize them according to analytical hierarchy process. Other researches carried out in this field, each have a certain perspective in surveying the subject and some elements were signified. The current study has tried to identify the main and most influential factors on life insurance demand in addition to categorizing them into 4 main groups, they are presented in order of importance. The information were gathered in the fourth chapter in form of tables and diagrams and with related statistical test the hypotheses were surveyed that based on the examinees opinion and analysis of the questionnaire's data by SPSS software each four presented hypotheses were confirmed. This means that all the factors are rightly chosen as the influential factors on life insurance demand and then the factors were finalized. By analyzing the second questionnaires data (pair wise comparison questionnaire) which are filled by 18 experts, prioritizing the factors was done.

As mentioned before, various domestic and foreign researches in the field of life insurance has been carried out and now the current study results will be compared with them. Baseri and colleagues (2011) showed in their research that the chance of buying the life insurance is more among women than men and in the current study the sex factor which is a demographic factor has an influence on life insurance demand but has less importance than other factors. Tofghi (2009) showed in his research that inflation and rate of interest are influential factors on life insurance demand and it is proven in the current study that Bank rate of interest is the second and inflation the is fifth influential factor on life insurance demand. Lee (2008) concluded that risk bearing has a high influence on buying life insurance and similarly current study illustrated that risk bearing factor which is a personal factor has an influence on

life insurance demand. Brown and Kim (1993) considered that dependency burden, literacy rate and expected inflation are the most influential factors on life insurance demand while in the current study inflation has a high importance but dependency burden and literacy rate that are demographic factors has less importance.

Practical Suggestions

The researcher based on the achieved results presents the following results:

- Selling benefits instead of features: selling an intangible product can be simple, for example explaining and calculating the mathematical aspects of life insurance is very complicated and any effort to explain them to the customer may lead to disappoint him from buying it because of its complexity, but in contrast by explaining how life insurance can benefit the customer, like its saving and profitability aspect that are very important in current study gives a positive feeling to the customer and makes him eager to purchase.
- Specializing: As shown in the results, sales network proficiency and experience is of the important factors in life insurance demand therefor agencies should try to focus on life insurance instead of giving services in variety of insurances thus agencies specialize in a certain field. Since companies and big customers prefer to cooperate with experts in a certain field when they want to provide services for their personnel such as having a saving after retirement. So the chance specialized agencies in (life) insurance is much more than other agencies who provide services in all fields but are specialized in none.
- Being notified: Iran insurance agencies should try to socialized and interact with people more often. This aids to receiving more customers and informing about life insurance.
- Advertisement: Publicity and giving free advertising awards makes the customers remember our name more easily than other competitors. While in this field they should try that society becomes aware of the life insurance benefits and advantages doubtlessly and try to encourage them to buy them.
- Increasing sales network motivation: since Iran insurance wage for Iran insurance agencies is less compared to efforts to sell life insurance, so many agencies are willing to be active in other types that have a higher wage and their sale is easier (third party insurance). Therefore by applying policies like increasing wages they can increase the sales network motivation in this field.

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