POLITECNICO DI TORINO
Repository ISTITUZIONALE

Sharing Economy Risks: Opportunities or Threats for Insurance Companies? A Case Study on the Iranian Insurance Industry

Original
Sharing Economy Risks: Opportunities or Threats for Insurance Companies? A Case Study on the Iranian Insurance Industry / Ranjbari, Meisam; Shams Esfandabadi, Zahra; Scagnelli, Simone Domenico - In: The Future of Risk Management / De Vincentiis, Paola; Culasso, Francesca; Cerrato, Stefano A.. - ELETTRONICO. - Cham : Palgrave Macmillan, 2019. - ISBN 9783030165253. - pp. 343-360 [10.1007/978-3-030-16526-0_14]

Availability:
This version is available at: 11583/2846778 since: 2020-09-27T11:33:17Z

Publisher:
Palgrave Macmillan

Published
DOI:10.1007/978-3-030-16526-0_14

Terms of use:

This article is made available under terms and conditions as specified in the corresponding bibliographic description in the repository

Publisher copyright

(Article begins on next page)

12 October 2024

Sharing Economy Risks: Opportunities or Threats for Insurance Companies? A Case Study on the Iranian Insurance Industry

Meisam Ranjbari[1], Zahra Shams Esfandabadi[2], Simone Domenico Scagnelli[3]

Abstract

Insurance companies work by accepting the transfer of risk from different business and personal sectors and therefore, become exposed to various types of risks. Changes in the environment and the entrance of new types of organizations can drive insurance companies to face new types of risks or increase the amount of risk they accept. Sharing economy can be an example of a new phenomenon that has brought new challenges for the insurance industry all around the world. However, if managed well, such challenges can be transformed into good opportunities for the insurance industry and if not, they can bring serious threats for the insurance market. No matter what it is the "shared" sector, or the country, sharing economy requires a legal and operational shift from the past. For instance, recent activities of a few sharing economy transportation companies in Iran are creating serious challenges for the insurance industry. Therefore, we develop a case study based on the activities of sharing economy companies in the Iran transportation, with regard to their impact on the insurance market. The case adopts a PESTLE analysis perspective focused on analyzing the influence on the political, economic, socio-cultural, technological, legal and environmental aspects for the Iranian insurance industry. Then, considering such internal and external business environment factors, the discussion of the current context of the sharing economy activities in Iran and their effects on the insurance activities are presented by developing causal-loop diagrams. Finally, suggestions regarding more effective strategic planning and management in the insurance industry are provided to grasp the potential opportunities created by the new business environment changes.

Keyword: Risk; Sharing Economy; Transportation industry, Iranian Insurance Companies; PESTLE Analysis; Causal-loop Diagram.

[1] Department of Organization Engineering, Business Administration and Statistics, Escuela Técnica Superior de Ingenieros Industriales, Universidad Politécnica de Madrid, 28006 Madrid, Spain (meisam.ranjbari@alumnos.upm.es); *Corresponding Author*

[2] Department of Industrial Engineering and Management Systems, Amirkabir University of Technology (Tehran Polytechnic), Tehran, Iran (z.shams@aut.ac.ir)

[3] School of Business and Law, Edith Cowan University, Perth, Australia and Department of Management, University of Turin, Turin, Italy (simone.scagnelli@unito.it)

1. Introduction

In recent years, sharing economy has attracted the attention of many scholars, and in the real world, has driven strong competition among companies in different fields of activity. Airbnb in accommodation sector, Blabla car, Uber and Lyft in transportation sector and Funding Circle, LendingClub, Prosper and TransferWise in finance or banking sector are a few examples, which have disrupted the businesses of traditional capitalist companies in hoteling, mobility and banking industry, respectively.

Sharing economy companies have an innovative business model, using online platforms to connect an under-utilized resource of a consumer to a demander. Through the mobile applications (apps) designed, transactions in such systems take place easily and with a lower cost compared with traditional transactions. In fact, the business model of these type of companies strongly rely on the active use of information technology and trust between users and allow for new and more effective cost structures, which bring about lower prices for customers. Therefore, it has become very attractive for the consumers worldwide.

Lack of ownership, temporary access and redistribution of tangible and intangible assets are among the characteristics of sharing economy (Kathan et al., 2016), which also affects the operations of other companies in the same field of activity and increases the competition between sharing economy companies and the traditional capitalist ones. Besides, the characteristics of sharing economy activities leads to increase in the new and unforeseen risks for the insurance companies, which deal with the acceptance of risks from their customers. They can, in fact, impose challenges for the risk assessment process in the insurance companies and hence, affect the whole process of risk management and financial management in this companies, because assets traditionally insured under personal lines policies are being used for business purposes to generate income on a part-time, and often full-time basis. Therefore, significant risks are imposed to the insurance industry due to these collaborative consumption services, and the insurance companies must be very cautious about such changes.

In Iran, only two sharing economy companies have recently become active and both of them are in the field of transportation. Given the fact that the activities of the sharing economy companies have not yet been expanded, most of the insurance companies have not realized the risks which can be imposed on them by such activities. However, in the very near future, with the expansion of the sharing economy sector and the increase in the number of companies involved, insurance companies would face many legal, financial and administrative challenges in their automobile line of business, which would affect the satisfaction level of their customers.

In this paper, considering the business environment of insurance companies in Iran, the risks of sharing economy activities in the field of transportation in this country is investigated and analyzed. Therefore, the remaining parts of the paper are as follows. After reviewing the literature on sharing economy in the next section and introducing the sharing economy companies in Iran as our case study, we provide a brief introduction on the insurance industry in Iran, with a focus on the automobile insurance portfolio. PESTLE analysis for the business environment of the insurance activities considering the sharing economy is then provided, followed by the discussion and results containing causal-loop diagrams for the clarification

of the analysis. Finally, conclusions are derived and suggestions for future research are provided.

2. Research Background

2.1. Sharing Economy

The term "sharing economy" was added to the Oxford Dictionaries in 2015. Since the publication of a book by Botsman & Rogers (2010) on the rise of collaborative consumption, sharing economy has become a popular buzz word in public media (Hern, 2015; The Economist, 2013). In sharing economy, information technology is utilized to make connections between dispersed groups of people and companies and provide them the opportunity to share access instead of ownership, so that they can make better use of goods, skills, services, capital and spaces. In fact, this environment is characterized by non-ownership, temporary access, and redistribution of material goods or less tangible assets (Kathan, et al., 2016), and technology is considered to be the primary cause of sharing services (Scagnelli et al. 2018, Montezemolo, 2014-2015). According to the statements of sharing economy supporters, the companies and the platforms they offer use technology not only to offer savings and convenience to consumers, but also to make more efficient use of resources and to expand income opportunities for service providers (Marshall, 2017). Therefore, the technology, the community, the environmental awareness and the recent crisis are named as the drivers of the sharing economy in the literature (Montezemolo, 2014-2015).

However, there is no common agreement on what activities comprise the 'sharing economy' (Codagnone & Martens, 2016) and it is extremely challenging to offer a definition for it, since this term is used in many different ways in practice due to different meanings being assigned to the word 'sharing' (Martin, 2016). Besides, the term "sharing economy" may be interpreted under different labels. Collaborative consumption, collaborative economy, on-demand economy, peer-to-peer (P2P) economy, zero-marginal cost economy, and crowd-based capitalism are only some examples of the different interpretations which are currently interconnected to the notion of sharing economy (Selloni, 2017).

In this paper, we consider the definition provided by Ranjbari et al. (2018), in which sharing economy is defined as "an economic system, whose intermediary companies utilize online platforms to facilitate and lower the cost of the for-profit transactions of giving temporary access—without the transfer of ownership—to idle resources of consumers in the peer-to-peer networks that it has created, because of the trust built among its members, who may be individuals or businesses". According to this definition, only two sharing economy companies, namely Snapp and Tap30, are active in Iran, both of which are in the field of transportation. These companies provide platforms to make a peer-to-peer connection for car sharing and ride sharing activities.

Considering the popularity of sharing economy among scholars, over the last few years, many studies have focused on the various dimensions and opportunities and challenges of sharing economy. Nadler (2014) analyzed the characteristics of sharing economy, and Richardson (2015) focused on society, access, and sharing as its performance requirements. Roh (2016) distinguished the sharing economy into three main types of service product systems, redistributive markets and cooperative life style, and analysed each of them. In addition, Bocker and Meelen (2016), Scholdan and Straaten (2015) and Hamari et al. (2016) investigated the motivations

of individuals to participate in the sharing economy, and Trunkfield (2015) and Atkinson (2016) introduced four main pillars for the sharing economy as "digital platforms that connect spare capacity and demand", "transactions that offer access over ownership", "more collaborative and trust-based forms of consumption" and "branded experiences that drive emotional connection". Wang and Nicolau (2017) identified 25 factors affecting the proposed price of accommodation in a sharing economy company, and Heo (2016) and Fang et al. (2016) examined the tourist market, which was influenced by the activities of the sharing economy companies.

The effect of the emergence and growth of sharing economy companies in the market on the activities of the insurance companies are not much considered by the researchers from the business management and business models point of view. However, legal aspects of this change have been investigated in many articles. Among the documents that we could found regarding the sharing economy and insurance activities were a paper containing interviews with a group of experts, which is published by the Casualty Actuarial Society (Oryzak & Verma, 2015) and a short report provided by Cognizant Business Consulting (Francis, et al., 2016).

In preparing Oryzak & Verma (2015), 12 executives from major players in the sharing economy and the insurance industry were interviewed and their opinion regarding the interaction between sharing economy and the insurance company was reflected. What can be concluded from the sum of these interviews is that the changes being made by the sharing economy in the business environment, can be both opportunity and treat, depending on the interaction of the insurance companies to them.

Francis, et al. (2016) highlighted the new types of business models and risks imposed by the sharing economy activities, which insurance industry was not facing before (such as applying personal property for commercial purposes at certain times, high-frequency transactions and low premium amounts due to the short period of insurances, less control over how assets are used in each transactions and problems for risk pooling), and then, pointed out unwillingness of the traditional insurance companies to provide coverage for these type of customers, which leads them to approach excess and surplus lines carriers and risk syndicates.

Of course, as stated before, there are several articles that analyse and examined the sharing economy and the insurance activities together, but not necessarily from the management and business perspective. Their main viewpoint is the legal aspects associated with the sharing economy activities. Articles that concentrate on the legal aspects of asset sharing and the impact of this behaviour on insurance companies, also indirectly emphasize the importance of making changes and innovations in the business model of insurance companies. Rassman (2014) considers the liability of insurance companies in terms of the sharing economy activities in the field of transportation and the complexities that it creates for insurance companies over time. The problem noticed in this article and showed in a real case is insurance "gap", which points out the situation that a driver has turned on his application on the cell phone and is waiting for a request from a customer. At this time, we cannot clarify if the driver is working with the automobile to make money (doing a business activity that is not covered by the personal insurance coverages) or he is using his automobile as a private car. Therefore, the insurance company faces this challenge that if an accident takes place in this period and a loss or injury is happened, it should not be covered by the insurance policy, as the driver had been offering a commercial service at that moment. McPeak (2016), Sachs

(2016) and Loucks (2015) also discuss controversial business issues in controversy over litigation and its related laws when it comes to exploiting personal insurance coverage. Dupuy (2017) states that the governments are waiting for the emergence of new companies in the transportation network, and they are moving towards implementing widespread laws for companies in this area. Then, he reviews the laws of such companies and points to the insurance "gap". Also, Davis (2015) discusses the insufficiency of insurance coverage for drivers, who work in sharing economy companies active in the transportation field.

In general, the challenges that the sharing economy creates for the insurance industry seems to have been more attractive to researchers in the field of law than thinkers in the field of management and commerce. However, the legal dimensions of insurance contracts are very important, and the terms and conditions governing insurance policies can have a significant impact on the risk management of insurance companies. Studies show that sharing economy companies in the field of transportation have attracted more attention in this regard, compared with sharing economy companies in accommodation or other fields of activity.

2.1.1. Sharing Economy in Iran

Snapp and Tap30 (to be read Tapsi in the local language) are two sharing economy companies based in Iran in the field of transportation. These companies work on the peer-to-peer basis, connecting the regular drivers owning a personal car with the passengers who require a transportation service. Therefore, these companies do not own any automobile by themselves. Both ride sharing and ride hailing services are provided by these companies. You download an application on your phone, request a driver, and go. Users can request a ride via the iOS or Android app, by indicating their location and destination and the price of the trip is set beforehand, to eliminate haggling. Snapp and Tap30 hire drivers upon completing a background check and showing a valid driver’s license and automobile insurance policy. The payment by the passengers can be made via the application or through direct cash payment to the drivers, because Iran is still a cash-based society.

Currently, Snapp and Tap30 operate in Tehran (a city of approximately 8.7 million residents), Isfahan (a city of approximately 2.3 million residents) and Karaj (a city of approximately 2 million residents) cities. However, they are looking to expand to new cities and may even seek to expand internationally.

2.1. Iranian Insurance Industry

At the moment, there are 31 Iranian private insurance and reinsurance companies in Iran. Asia, Alborz, Dana, Parsian, Karafarin, Razi, Tose’e, Sina, Mellat, Hafez, Omid, Day, Saman, Novin, Pasargad, Moallem, Iran Moein, Mihan, Kosar, Ma, Arman, Ta’avon, Sarmad, Asmari, Hekmat Saba, Tejarat nou, Middle East Life Insurance, Kish P&I Club and QITA P&I Club (Qeshm) are the insurance companies and Amin Re and Iranian Re are the major reinsurance companies. There is only one governmental insurance company, known as Iran Insurance Company in this country.

Based on the latest figures published by the Central Insurance of Iran in its annual report, the volume of the total direct premiums for the insurance market in the year 1395 of the Iranian calendar -which covers the 21st of March 2016 to the 20th of

March 2017- amounted to 280,176 billion Rials (Iranian currency), signifying a growth rate of 22.6% compared with the previous year.

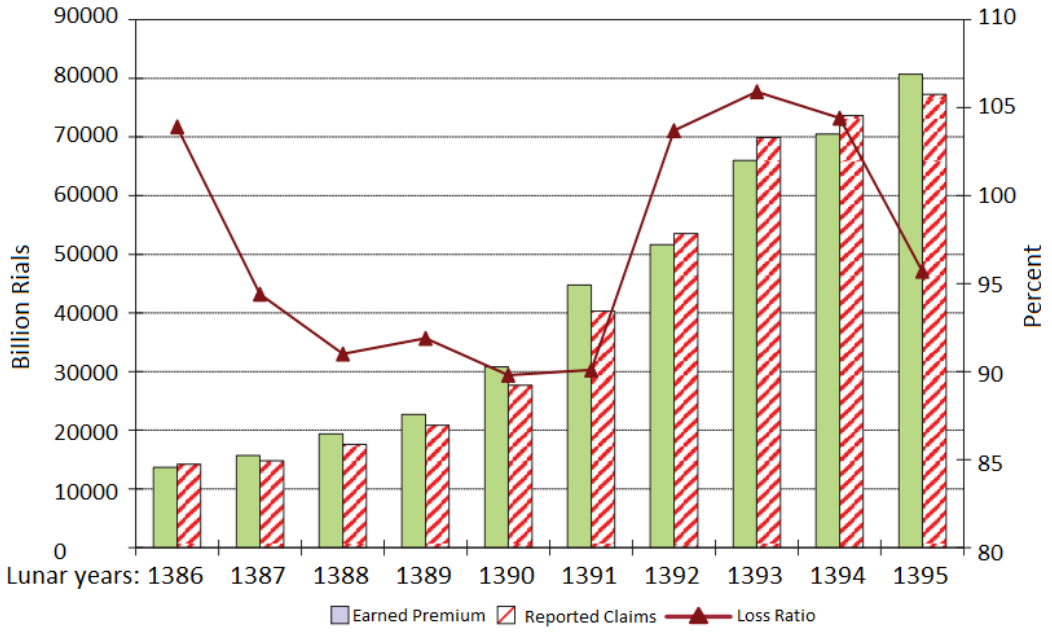
Automobile insurance in Iran, consists of 3 main parts: (1) Automobile Third Party Liability insurance (TPL) that provided coverage for financial damages and death, bodily injuries and disability caused to third parties, (2) Driver's accident insurance, that covers death, bodily injuries and medical expenses happened to the driver of the insured vehicle, and (3) Automobile Hull insurance, which provides coverage for damages to the insured vehicle.

According to the provisions of Article One of the Law of Compulsory TPL in Iran, automobile TPL and driver's accident insurance are provided to all owners of land transport motor vehicles as a single combinatory compulsory insurance policy. On the other hand, purchasing hull insurance policy is not compulsory for vehicle owners. Therefore, two main motor insurance policies are considered in Iran: automobile TPL, which covers third parties and the driver, and hull insurance that provides cover for the insured vehicle.

Since the TPL policies constitute a significant share of the insurance companies' portfolio in Iran, their prudent management is of great importance. According to the most recent statistical yearbook of the Central Insurance of Iran (CII), out of 54,410,867 non-life insurance policies issued in the Iranian year 1395 (21st of March 2016 to 20th of March 2017), 20,087,815 and 3,144,507 were TPL and automobile hull insurance policies, respectively. Therefore, a premium of 80,682.2 billion Rials were earned from the TPL policies in the mentioned year, while the share of automobile hull insurance policies was 13,947.3 billion Rials. In addition, out of 34,703,254 non-life claims paid in this year, 944,069 and 408,518 claims referred to TPL and hull insurance policies, respectively, leading to loss ratios equal to 95.7% and 69.6% for these policies. (Statistical Yearbook of the Insurance Industry, 2016-2017)

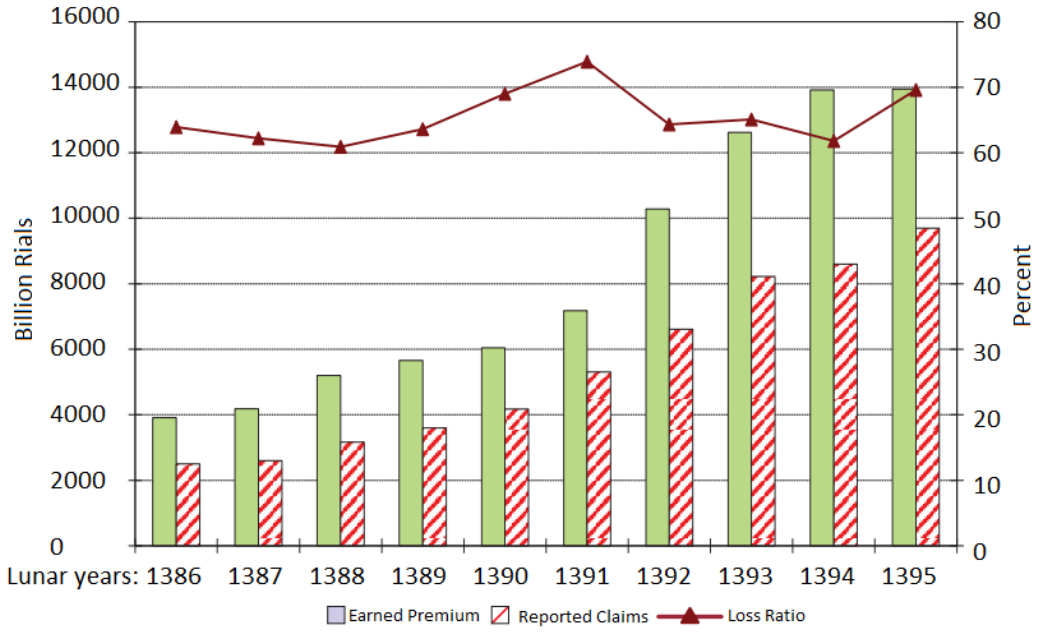
Earned premium, reported claims and loss ratio of the TPL and automobile hull insurance policies during the Iranian years 1386-1395 (21st of March 2007 to 20th of March 2017) are illustrated in figures 1 and 2, respectively.

Figure 1: *Earned premium, reported claims and loss ratio of the TPL insurance policies during the years 1386- 1395 (21st of March 2007 to 20th of March 2017)*



Source: Statistical Yearbook of the Insurance Industry (2016-2017)

Figure 2: *Earned premium, reported claims and loss ratio of the automobile hull insurance policies during the years 1386- 1395 (21st of March 2007 to 20th of March 2017)*



Source: Statistical Yearbook of the Insurance Industry (2016-2017)

Considering the significant market share of automobile insurance in the portfolio of the Iranian insurance companies and bearing in mind the activities of two sharing economy companies in some of the metropolitan areas of Iran, this paper examines the effects of sharing economy activities in transportation field on the Insurance industry in this country.

3. PESTLE Analysis and Sharing Economy Challenges for the Insurance Companies

PESTLE is a tool for business analysis, which deals with tracking the environment that a company or industry is operating in it. This analysis considers the political, economic, socio-cultural, technological, legal and environmental aspects of the business environment and helps to provide a comprehensive analysis of the environmental factors that affect the activities of a specific company or industry.

In this research, PESTLE analysis has been conducted for the insurance industry in Iran. In this regard, for the political analysis, factors such as political stability and investment security, sanctions and the activities of international insurance companies in Iran are considered. Economic factors that are analyzed consists of indicators such as GDP, per capita income, the country's economic growth rate, inflation, domestic and foreign investment, monetary and financial factors, the country's economic infrastructure, credit and the status of the banking system. Legal factors include rules and regulations for the insurance companies and tax regulations, while environmental factors mainly cover the energy consumption and environmental issues. However, to shorten the text and to avoid regular analysis, we mainly focus on the changes that the entrance of sharing economy companies would bring about for the insurance companies. Therefore, socio-cultural and technological changes are discussed briefly in the following paragraphs.

Population growth, unemployment rate, people’s attitude towards investment, urbanism, tourism, natural disasters and knowledge of insurance are among the socio-cultural factors in the business environment of the insurance companies. However, when focusing on the transportation activities and the emergence of sharing economy companies, other aspects become apparent. When analyzing the socio-cultural dimension of the business environment, what is added to the regular analysis for the changes made by the sharing economy activities is the change in the behaviour of the consumers of the goods or service that is being shared. This is more prominent about the companies offering accommodation services, because someone who lends an accommodation temporarily to another person, may face a bad guest and have his property damaged. This will increase the frequency and severity of losses and rise the amount to be paid by the insurance companies. In terms of sharing economy in transportation filed in Iran, this is a very rare happening, as the automobile is not driven by the passengers, but the car owner drives it and provide this service for the passengers. However, it is very rare but probable that the passenger makes damages to the car during the trip if he is a bad customer.

The development of sharing economy activities in the transportation field has been speeded up in Iran due to its significant lower cost compared with taxi services, its higher comfort and its capability of more effective time management compared with public transportation, escaping the driving in traffic jams and the requirement of a high investment to buy a private automobile by the people. It also is a means for money making for the drivers. Therefore, both parties to the shared vehicle enjoy from the benefit of sharing, and this leads to an increase in the number of drivers and passengers joining the sharing economy activities. However, from the viewpoint of the insurance companies, beside the insurance “gap” that we referred to in section 2.1, there would be a problem regarding risk increase due to more time spent for driving by the drivers. The longer the driving period, the higher

the accident risk. This risk is more important for the insurance companies in the TPL than hull insurance, as it is a compulsory insurance policy and also the amount of losses in this policy is usually higher than hull insurance policies (a huge portion of TPL losses is linked with the compensation for third party death, which is called the blood money and is a very high amount in Iran). In addition, due to the economic status of the Iranian households and a high inflation rate specifically regarding automobile prices, most of the families prefer not to buy or use their own cars and use the sharing economy services, instead. This would increase the demand for sharing economy services and therefore, leading to more risk because of more shared automobiles in the street or more driving time by each of the shared automobiles.

Technological development is also considered as one of the environmental factors affecting the activities of each industry in various analyses. Therefore, technology change rate and the growth of electronic-based and ICT-based activities also affect the technological aspects of the business environment of the insurance companies. However, what is significant about active companies in the sharing economy is the growth of these companies using an Internet platform that provides instant access to their services for anyone using a smartphone and a SIM card. These platforms also provide rating systems to identify bad and high-risk drivers, which can be helpful in the risk management to some extent. In addition, in many countries, ride sharing and car sharing services are provided by using autonomous cars, which mostly use green sources of energy. In case these technologies are applied in Iran, the insurance companies would face new types of risks, even in terms of environmental issues.

Currently, these is no specific rule or regulation set by the Iranian legislators for the insurance companies to encounter sharing economy activities. However, if such rules and regulations are set, depending on their context, they can have positive or negative impacts on the activities and profit making of the insurance companies. So, the sharing economy activities would either become an opportunity or a threat for the Iranian insurance companies.

4. Discussion and Results

The activities of Iranian sharing economy companies in the field of transportation in a few large cities, which are offering lower prices compared with the comparable public or private taxi service companies, has attracted the attention of many passengers. This has even resulted in leaving the market by many of the regular transportation companies in such a competitive environment. The more the number of sharing economy passengers, the more interested drivers join the sharing economy companies.

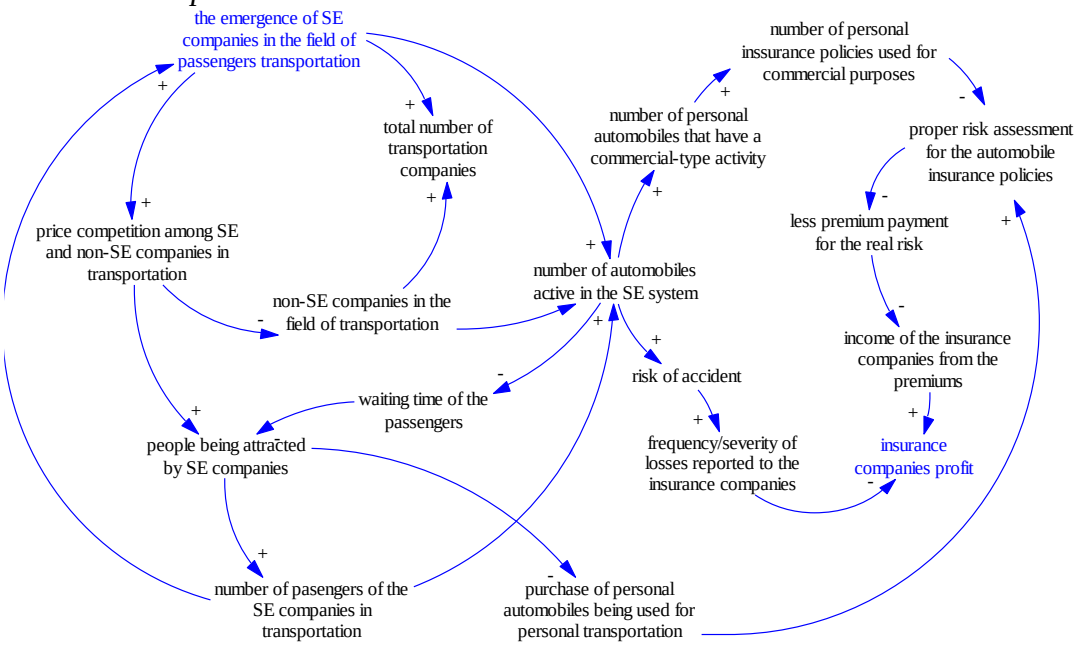
The key point in this change is the growth of the number of private cars that transport passengers without being registered as a shared automobile and without paying for additional insurance coverages or for the increased risks. Since the number of such automobiles are very significant, the extra amount of premium that should be paid to the insurance companies – but is not- becomes a large amount. In addition, when a driver joins a sharing economy company to spend his spare time or even his whole day in the street for transportation purposes, the risk of accidents increases. Therefore, the risks for both automobile hull and TPL insurance goes up.

According to the above explanations, risk increases in one hand, and paying lower premiums than required from the other hand results in a serious challenge for the

insurance companies. Because these companies cannot effectively manage their financial resources for the loss payments; and this may lower their profitability.

To have a better understanding of the provided explanations, causal-loop diagram is used to show the causal relationships between the variables in the whole system. Figure 3 presents this causal-loop diagram, making a connection between the emergence of sharing economy companies in transportation field and the profitability of insurance companies as financial institutions that are alive by receiving the insurance premiums. It is worth mentioning that to simplify the figure and focus on the main challenge, only the near causes and main reasons are shown in this figure, and the farther away factors that were analysed in the PESTLE analysis, such as population growth, economic infrastructure, inflation and unemployment rate, are being ignored.

Figure 3: *The causal-loop diagram illustrating the impact of the activities of sharing economy companies in the field of transportation on the profitability of insurance companies in Iran*



Source: Authors (2018)

As illustrated in Figure 3, the interconnections shown at the left-hand side of the figure, clarify the competition between the sharing and non-sharing transportation companies on attracting the customers. The more the sharing economy companies grow by size or number, the more automobiles with lack of required insurance coverage enter the streets. This, as shown in the right-hand side of the figure, results in higher loss frequency/severity and not adequate premium payment, which affects the profitability of the insurance companies negatively.

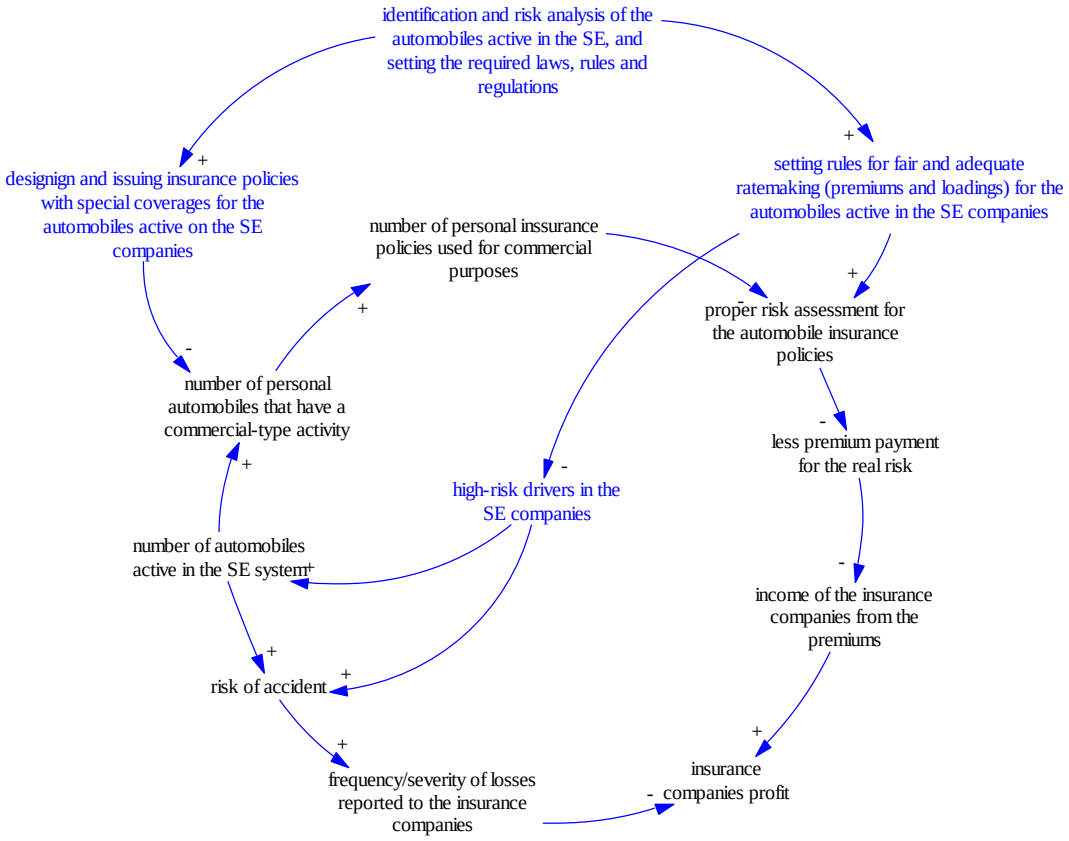
However, as illustrated in figure 4, the key to help the insurance companies survive in such an environment is providing new rules and regulations and also, innovation in designing insurance products. Referring to section 2.1 of the paper, as TPL insurance policies are compulsory to be purchased by all the automobile owners- while automobile hull insurance policies are not obligatory- there are more strict laws, rules and regulations for the TPL policies. However, insurance companies can more freely decide on the design of automobile hull insurance policies. Therefore, the main solution for the insurance companies in terms of TPL

policies should be supplied by the relevant legislative authorities, because of the legal aspects of the insurance contracts and the special rules and regulations which are set for the insurance activities in Iran, specifically for the TPL policies. There exist some laws regarding the TPL insurance policy that are set by the Iranian parliament and should be obeyed by all the insurance companies. Therefore, it is very vital that the legislative authorities for the insurance industry consisting of the Iranian parliament, the high council of insurance and the Central Insurance of Iran (CII) pay an urgent attention to the growing sharing economy activities in Iran and set the required laws, bylaws and instructions to better manage the insurance activities.

Besides, the insurance companies must be innovative in designing new insurance policies suitable for the automobiles in the sharing economy companies, weather for the TPL section or hull. Although they must wait for the new regulations regarding TPL to be able to design new insurance products, they are allowed to design new automobile hull insurance products. It is important to note that management solutions are also required for detecting the automobiles that are active in the sharing economy companies, as people may deny mentioning their activities in the sharing economy to avoid paying more premium. Hence, the intervention of the relevant authorities is also required to control the required information for issuing the TPL or hull insurance policies.

It is worth mentioning that to clarify the new risks for the legislative authorities, it is necessary that the insurance companies take part in the process of risk identification and they suggest some potential regulatory solutions. Therefore, as shown in figure 4 in blue colour, this can result in both effective and fair ratemaking and designing new policies or insurance coverages for the automobiles active in the sharing economy system.

Figure 4: *The causal-loop diagram showing the solution for the problem of low profitability of insurance companies when encountering the activities of sharing economy companies in the field of transportation in Iran*



Source: Authors (2018)

5. Conclusion and Future Research

Insurance companies as risk-taking entities can both affect and be affected by various elements within their business environment. Changes in the environment and the introduction of a variety of new businesses to the market can bring new risks and challenges for the insurance industry. Accordingly, sharing economy as a new phenomenon is creating new challenges for all insurance companies all around the world.

If insurance companies want to survive in environments in which sharing economy companies are active, they have to pay serious attention to bringing innovation into their business models to meet the needs of customers in this type of emergent economy. This requires a prudent management in such companies. Besides, regulatory changes are required to support insurance companies in encountering the new changes.

Iranian insurance industry is considered as a case study in this paper, since two sharing economy companies in the field of transportation, namely “Snapp” and “Tap30”, have recently entered the market, and this would be the beginning of big changes and challenges for the insurance companies in terms of their risk assessment and product designs. In fact, The recent entrance of the first sharing economy companies to the Iranian Market has attracted our attention towards the Iranian insurance industry, because considering the current insurance market in Iran, the insurance companies need to take a deeper look into their business models to find innovative solutions in order to capture the revenue opportunities being entered into the Iranian market and avoid threats being imposed by the environment. However, the insurance companies cannot be successful in this regard without the necessary changes being made to the laws and regulations governing

the insurance activities. Besides, the interference of relevant authorities or designing effective data sets are required to prevent fraud in the insurance industry and to issue the suitable insurance policy for the right person.

Beside the need for changes in the motor TPL law set by the Iranian parliament, it is required that insurance companies be more cautious about their competitive ratemaking strategies for the automobile insurance policies, specifically the hull insurance policies. They should also be innovative in designing new insurance products for both automobile hull and the TPL, considering the probable announcement of new rules, regulations and datasets in future.

If effective management is brought within the insurance industry driven by innovation, the new challenges of sharing economy can turn into fruitful opportunities for the growth of the sector or otherwise, will result in serious threats for them.

Our study, which is focused on the effect of sharing economy transportation activities in on the Iranian insurance companies, is not free from limitations and can be improved and extended in different ways. For instance, by modeling the interconnections between the contextual variables by using System Dynamics and testing various scenarios for potential environment changes or new policies. This can also be conducted considering sharing economy activities in other fields rather than transportation, and also in different countries.

Bibliography

Statistical Yearbook of the Insurance Industry (2016-2017), Central Insurance of Iran (CII), Tehran, Iran.

Atkinson, J. (2016). Taking the Pulse of the Sharing Economy. Tourism Travel and Research Association: Advancing Tourism Research Globally. [Online] Available at: http://scholarworks.umass.edu/ttra/2015marketing/Proceedings/26 [Accessed May 5, 2017].

Bocker, L., & Meelen, T. (2016). Sharing for people, planet or profit? Analysing motivations for intended sharing economy participation. *Environmental Innovation and Societal Transitions*. http://doi.org/10.1016/j.eist.2016.09.004

Botsman, R. & Rogers, R. (2010). *What's Mine Is Yours: The Rise of Collaborative Consumption*. New York: Harper Business.

Codagnone, C. & Martens, B. (2016). Scoping the Sharing Economy: Origins, Definitions, Impact and Regulatory Issues, Institute for Prospective Technological Studies.

Davis, J. (2015). Drive at Your Own Risk: Uber's Misrepresentations to UberX Drivers About Insurance Coverage Violate California's Unfair Competition Law. *Boston College Law Review*, 56(3), 1097-1142.

Dupuy, D. (2017). The Regulation of Transportation Network Companies. *Agora (University of Michigan)*, 114-122.

Fang, B., Ye, Q., & Law, R. (2016). Effect of sharing economy on tourism industry employment. *Annals of Tourism Research*, 57 (January 2013), 264–267. http://doi.org/10.1016/j.annals.2015.11.018

Francis, A., Yamijala, R., Thangudu, J. & Adhikary, P. (2016). The Sharing Econmy: Implications for Property and Casualty Insurers. Cognizant Business Consulting, Cognizant's Insurance Business Unit.

Hamari, J., Sjöklint, M., & Ukkonen, A. (2016). The sharing economy: Why people participate in collaborative consumption. *Journal of the Association for Information Science and Technology*, 67(9), 2047-2059.

Heo, C. Y. (2016). Sharing economy and prospects in tourism research. *Research Notes and Reports/ Annals of Tourism Research*, 58, 156–170.

Hern, A. (2015). Why the Term 'Sharing Economy' Needs to Die, Retrieved February 8, 2016 from http://www.theguardian.com/technology/2015/oct/05/why-the-term-sharing-economy-needs-to-die

Kathan, W., Matzler, K., & Veider, V. (2016). The sharing economy: Your business model's friend or foe? *Business Horizons*: 663–672.

Loucks, T. G. (2015). Travelers Beware: Tort Liability in the Sharing Economy. *Wishington Journal of Law, Technology & Arts*, 10(4), 329-342.

Marshall, P. (2017). *The Sharing Economy*. SAGE Business Researcher.

Martin, C. J. (2016). The sharing economy: A pathway to sustainability or a nightmarish form of neoliberal capitalism?. *Ecological Economics*, 121, 149–159.

McPeak, A. (2016). Sharing Tort Liability in the New Sharing Economy. *Connecticut Law Review*, 49(1), 171-225.

Montezemolo, A.C.d. (2014-2015). *The future is sharing*, Rome, Italy: LUISS Guido Carli.

Nadler, S. (2014). The Sharing Economy: What is it and where is it going?, 1–65. Retrieved from http://dspace.mit.edu/handle/1721.1/90223

Oryzak, D. & Verma, A. (2015). Insuring the Sharing Economy and Sharing the Insurance Economy. *Casualty Actuarial Society E-Forum*.

Ranjbari, M., Morales-Alonso, G, & Carrasco-Gallego, R. (2018). Conceptualizing the Sharing Economy through Presenting a Comprehensive Framework. *Sustainability*, 10(7), 2336, doi:10.3390/su10072336

Roh, T. H. (2016). The Sharing Economy: Business Cases of Social Enterprises Using Collaborative Networks. *Procedia Computer Science*, 91, 502–511. http://doi.org/10.1016/j.procs.2016.07.129

Rassman , C. L. (2014). Regulating Rideshare Without Stifling Innovation: Examining the Drivers, the Insurance "Gap," and Why Pennsylvania Should Get on Board. *Journal of Technology Law & Policy*, 15, 81-100.

Richardson, L. (2015). Performing the sharing economy. *Geoforum*, 67, 121–129. http://doi.org/10.1016/j.geoforum.2015.11.004

Sachs, R. (2016). The Common Carrier Barrier: An Analysis of Standard of Care Requirements, Insurance Policies, and Liability Regulations for Ride-Sharing Companies. *DePaul Law Review*, 65(2), 873-905.

Scagnelli, S.D., Vasile, L, and Apostolov M. (2018) Survival Drivers of Post-Incubated Start-ups: The effect of Academic Governance, *International Journal of Innovation Management*.

Scholdan, A. L., and Straaten, N.V. (2015). What are the drivers of the sharing economy and how do they change the customer behaviour ?

Selloni, D. (2017). *New Forms of Economies: Sharing Economy, Collaborative Consumption, Peer-to-Peer Economy*. In CoDesign for Public-Interest Services. Springer International Publishing.

The Economist (2013). The Rise of the Sharing Economy, Retrieved October 28, 2016 from http://www.economist.com/news/leaders/21573104-internet-everything-hire-rise-sharing-economy

Trunkfield, D. (2015). The Travel Convention Power to the People. [Online] Available at: http://www.thetravelconvention.com/documents/DavidTrunkfieldTTC2015.pdf [Accessed March 4, 2017].

Wallsten, S., & Wallsten, S. (2015). The Competitive Effects of the Sharing Economy : How is Uber Changing Taxis ? The Competitive Effects of the Sharing Economy: How is Uber Changing Taxis?.

Wang, D. and Nicolau, J. L. (2017). Price determinants of sharing economy based accommodation rental: A study of listings from 33 cities on Airbnb.com. *International Journal of Hospitality Management*, 62, 120–131.