



Insurance Research Center (IRC)



BIMEH MARKAZI  
CENTRAL INSURANCE OF IRAN



# The Effects of Coronavirus pandemic on Iran's Economy

Insurance Research Center of Iran (IRC)  
Spring-2020



The intellectual property of this report belongs to the Insurance Research Center (affiliated to the Central Insurance of the Islamic Republic of Iran) and any withdrawal is unrestricted by mentioning the source.



<b>Research ID</b>	
<b>Title</b>	<b>The Effects of Coronavirus pandemic on Iran's Economy</b>
<b>Employer</b>	<b>Central Insurance of I.R.Iran</b>
<b>Executor</b>	<b>Insurance Research Center of Iran</b>
<b>Reports' Associates</b>	<p style="text-align: center;">Dr. Aziz Ahmadzadeh (Faculty Member and Consultant in IRC)</p> <p style="text-align: center;">Dr. Ali Souri (Faculty Member of Economics faculty, University of Tehran–Consultant in IRC)</p>
<b>Scientific Supervisor</b>	Dr. Hamid Kordbacheh (Head of Insurance Research Center of Iran)
<b>Date</b>	April 2020





## Table of Contents

---

Abstract .....	1
Introduction .....	1
<b>1- Analysis of the effects of coronavirus pandemic on economy of Iran.....</b>	<b>2</b>
1-1- The state of the economy before Corona.....	2
1-2- The direct effects of Corona on the economy .....	3
<b>2- Corona's effects on the country's insurance sector.....</b>	<b>18</b>
2-1- Insurance sector Value Added.....	18
2-2- Assessing the effect of corona outbreak on the insurance industry using input-output model.	19
<b>3- Conclusion .....</b>	<b>24</b>
References .....	26





## Abstract

Spreading Covid-19 around world has led to destructive impact on economy. These impacts are wary for various economic activities. The aim of this essay is to analysis the impact of Covid-19 on Iranian economy with focus on insurance industry. We analyzed macroeconomic measures in Iranian Economic context firstly. This laded to an approximation of infected sectors and activities of Iranian economy.

Results show that Because of continuous sanctions has leded low degree of openness, Iranian economy has less affected from international interactions with global economy in comparison with other economies. The main impact of covid-19 is through decrease of oil price (in result of economic global crisis) and direct impacts of Covid-19 (and preventive actions) on teamwork and labor-intensive activities. Accordingly, 60% of Iranian economy affected from covid-19. Then, we analyzed more accurately impacts on Iranian insurance industry using I-O approach. Results show that Covid-19 leads to approximately 15% decrease in issued insurance premium during a 3 month duration of spreading pandemic.

## Introduction

The concurrent economy, which owes much of its head blowing progress to teamwork and division of labor based on professionalism at its highest level, is now producing many products under various forms of international division of labor. It is now facing with the constraint of social distancing. Which has brought many activities that were used to be dealt with in the form of staff gatherings at a physical center to a halt. This stoppage of the first layer of production has caused disruption in-group and international division of labor due to its vast backward and forward linkages with the economy. In other words, Corona has not only removed the infected people from the production cycle but has also made it impossible for the healthy ones to aid the infected group and even has made them unable to carry out their daily activities.

Preliminary analysis of Corona's impact on the countries' economies were largely based on a presumed China's economic recession and its rate and pace of transmission to other countries. But with the fact that the rate of virus transmission across the countries was more than the rate of transmission within China's borders (or, as was later rumored, the risk and speed of transmission of the virus was more than what China had announced and claimed at first place), those economic analysis that based their study on the assumption that the Chinese economy is in crisis and that the crisis will transfer to global businesses linked to China quickly faded. So it became clear that the predictions and assumptions were not accurate. In contrast, it was the virus that took on the countries' economy, through channels of human and social interaction and not by mere economic relations and commercial transportations. Two distinct features of this pandemic are the very high rate of transmission and its various complications among individuals, as it is fatal for some and mild for others or even completely subtle and asymptomatic for some other people. Its third most important feature is the lack of vaccines and effective treatment up to this moment. Together, these features have made physical and social distancing to be considered as the best way to prevent the spread of



the disease. That said, although the death of human beings as one of the main factors of production (human capital) has a significant financial burden on the economy, but Corona's implications for the world economy mainly starts with the prescription of social distancing, which can be considered as a devastating disaster to all economic team works and activities that require close physical human interactions.

Having said that, the dynamism and viability of society, and economy, all governments, individuals and businesses are reacting to the disease in different ways. These reactions create a fundamental evolution and revolution in economic activities, which in turn will reduce the severity of the disease's impact on the economy.

## **1- Analysis of the effects of coronavirus pandemic on economy of Iran**

### **1-1- The state of the economy before Corona**

Iran's heavy reliance on oil revenues and its stark foreign policy of defending the deprived nations from the United States, has always been subject to sanctions and affected by oil price volatilities. In the last ten years of Mr. Ahmadinejad's presidency, the most prominent feature of the economy was the abundance of oil revenues due to rising oil prices leading to initiation of costly programs such as Mehr Housing plan followed by the tightening of sanctions and exchange rates hike in 1390. Then it was followed by a boom and bust. Later and with the beginning of Dr. Rouhani's presidency, the inaugurations resulting from the "Joint Comprehensive Plan of Action" agreement and optimism about it, led to a period of prosperity in 1395 and 1396. However, this period did not last long, and with the beginning of Trump's presidency and overthrowing of "Joint Comprehensive Plan of Action", Iran's sanctions resurfaced which along with money laundering disputes, Iran's economy weakened seriously plummeting to another recession. According to the Statistical Center of Iran, economic growth in 1397 was negative 4.9 percent (negative 2.4 percent without oil) and for the first nine months of 1398 was negative 7.6 percent (zero percent without oil). Naturally, the impact of intensification of sanctions on different sectors (and consequently the exchange rate shock) was not the same, where the industries and mining sector were hit the hardest with the negative growth of 16.6 percent in the first half of 1398, bearing the most damage from sanctions. On the other hand, the agricultural sector, with a positive growth of 3.2 percent, did not experience a tangible impact from sanctions. From monetary variables' perspective, in the years 1397 and 1398, the replacement of oil revenues with borrowing from the central bank of Iran as a way to finance the government budget deficit, has increased the growth of liquidity and inflation. Liquidity rose 23.1 percent and 28.2 percent, respectively in these two years, translating itself into 26.9 percent and 34.8 percent in inflation, respectively.<sup>1</sup>

The country's efforts to strengthen the economy against sanctions through the law of maximum use of the country's production capacity, which prohibited the import of similar foreign goods, along with some policies applied to manufacturing sector and replacing imported goods with domestic products, (Domestically made movement) put a brake on the declining trend of the economy. Owing to these policies and initiations, in the third quarter of

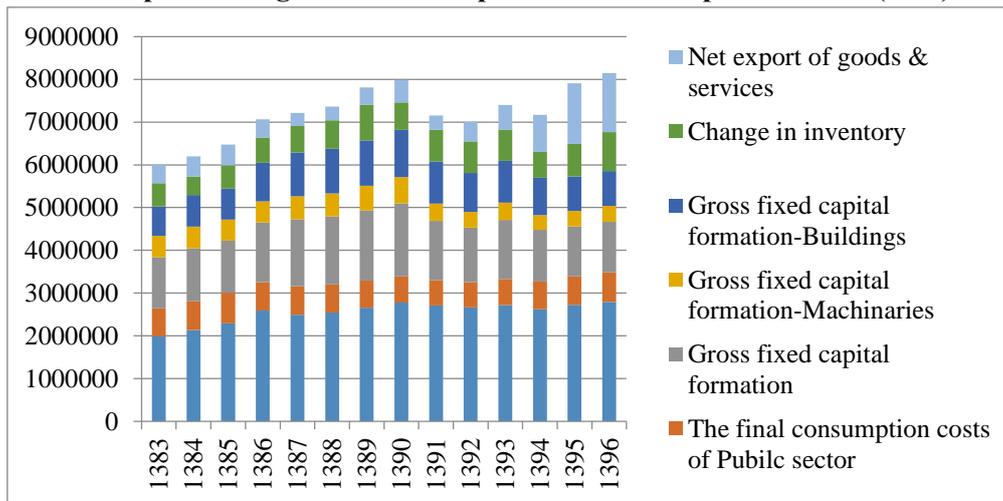
---

<sup>1</sup> The statistics of the year 1399 are for the first 9 months of the year.



1398 optimism was reshaping about returning to the positive growth for the year ahead. On the household side, the unemployment rate rose sharply due to the recession, and because of high inflation due to the exchange rate shock, the households' purchasing power has plummeted. On this basis, it can be said that Corona attacked the Iranian economy at a worst time as the economy had been severely weakened by previous structural problems, unprecedented sanctions and exchange rate shocks, imposing big toll on firms and households. The effects of these series of events on the gross national expenses are well illustrated in Figure 1 below. The components of this diagram will be used in next sections.

**Figure1- The Components of gross national expenses at constant prices in 1390 (2011)-Billion Rials**



Source: Central Bank of Iran, Time Series Database

## 1-2- The direct effects of Corona on the economy

Corona's direct effects are examined on treatment and mortality-related costs, the supply side, and on the demand side of the economy.

### A) Medical expenses

Coronavirus outbreak causes significant medical costs to the economy, including diagnostic costs (whether for experiments, radiology or CT Scans), home quarantine costs, hospitalization, ICUs, and the required undertaken treatment measures. As of May 12, 2020, 107603 corona-infected patients have been hospitalized, 6,640 deaths have been recorded and 100,000 nurses and 12,000 physicians have been providing services directly to the infected patients. Due to Covid-19, 50 percent of hospital beds have been dedicated for patients infected with the virus. An estimate of Corona's per capita medical expenses can provide the estimated financial burden of the Corona's damage to the economy.

Scattered statistics are provided mainly derived from the interviews with relevant authorities regarding Corona's medical expenses. Using these statistics and the inquiry from the Health Insurance Organization, the following table provides an approximate estimate of Corona's medical expenses.



Table 1. Medical costs of Corona on the Iran's economy (from the beginning until May 10, 2020)

Expense Components	Service Provider Sector	Expense Per Unit of Service (Rial)	Share of public and private sectors in providing the services	Number of hospitalization days per patient	Share of normal and intensive care beds from the total hospitalization	(hospitalized/patients) Number of service recipients (Till 2/21/1399)	Total costs incurred (Million Rials)
Diagnostic	Governmental	2050000	80%	-	-	586699	962186.4
	Private	4830000	٪20	-	-	586699	566751.2
Normal Hospitalization	Governmental	7250000	٪80	5.2	٪81	107603	2628698.2
	Private	12700000	٪20			107603	1151188.5
ICU Hospitalization	Governmental	12500000	٪80	7	٪19	107603	1431119.9
	Private	28200000	٪20			107603	807151.6
Medical protective equipment for each day in the normal hospitalization		2000000	-	5.2	٪81	107603	906447.7
The average cost of protective equipment for the medical team per day in the ICU for each patient		4000000	-	7	٪19	107603	572448.0
Total Expenses			٪100		٪100		9025991.5
Per capita cost for each hospitalized patient							83.882

Note: The numbers in the last column of each row are calculated by the multiplication of the other columns in the same row.

Source: Research Calculations

According to the table, it is observed that the Corona medical expenses in Iran have reached about 9,026 billion Rials so far. According to the number of hospitalized patients in Table 1, the average total cost of hospitalization and treatment of each hospitalized patient is about

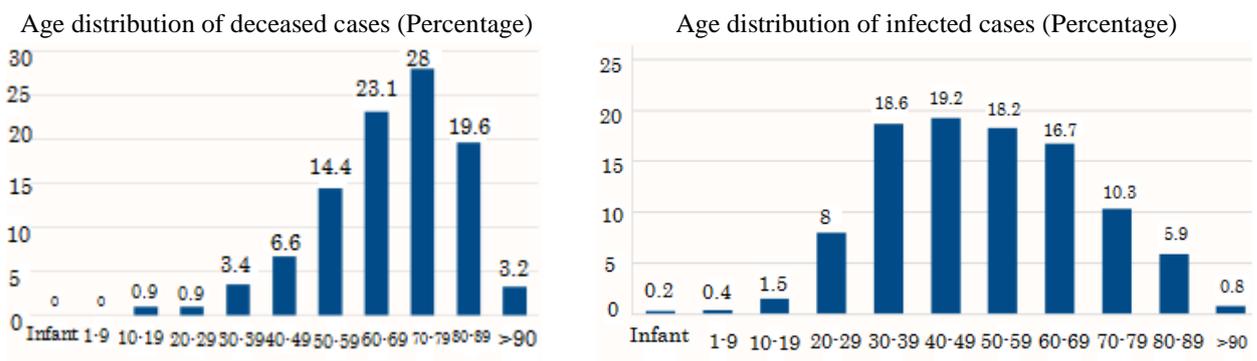


83.4 million Rials<sup>1</sup>. On this basis, and assuming the daily diagnostics of 1,500 new patients<sup>2</sup>, about 125,823 million rials as the medical damage per day is imposed on the country's economy.

It is worth nothing that these costs are only for the duration of less than three months (from the beginning of Corona so far) and various costs including recovery period, home quarantine related costs and unidentified patients and the costs of death and physical and social distancing are not included.

From the hospital management perspective, the extensive spread of coronavirus has diverted many hospital departments from their primary specialty. For example, the number of surgeries and other non-emergency medical care services (that are usually expensive services) have declined sharply. These capacities have been used to serve Corona's patients, which has also reduced hospital revenues. Therefore, there is a lot of pressure on the country's medical centers, and due to the rapid spread of the disease, if the preventive measures are not taken, and in the case of inability of the medical staff to provide more services, the mortality rate will be much higher.

**Figure 2 - Age distribution of the infected patients and the death from corona in hospitals covered by Tehran Medical Sciences University**



Source: Tehran University of Medical Sciences (1399)

According to Figure 2, the age distribution of patients in the jurisdiction of Tehran University of Medical Sciences indicates that the highest incidence is among people aged 30 to 60 years, an age range with the most efficient period of active life and economic productivity. Interestingly, the largest percentage of the country's population belongs to the most active and productive age groups of society, and therefore at higher risk of the contracting the disease. In contrast, the age distribution of fatalities is quite different, with the highest number of fatalities occurring in ages of 70 to 79 years category, and a declining trend of fatalities for

<sup>1</sup> As one out of five people who have had a positive corona test will need to be hospitalized, if the treatment costs are divided by the total number of positive-tested patients, the cost of treatment per capita will be 16.8 million rials, which means that for diagnosing each new patient, 16.8 million rials will be incurred only from the cost of treatment to the country's economy.

<sup>2</sup> According to the Ministry of Health definition, only those who need hospitalization and medical care are considered as patients.



younger and older age groups. Comparing these two charts shows that the distribution of the disease depends mainly on the individual's social relationships, but in fatal cases, age is a determining factor, as the higher the age the patient, the higher the probability of death would be.<sup>1</sup>

**Table 2 - Gender distribution of hospitalized patients and mortality of Covid-19 in jurisdiction covered by Tehran University of Medical Sciences**

	Men	Women	
Distribution of Covid-19 infected patients	56.1	43.9	Percentage
Mortality distribution due to Covid-19	61.2	38.8	Percentage

Source: Tehran University of Medical Sciences (1399)

In terms of gender distribution, both the number of patients and the number of deaths for men were higher than in women, implying that men were more vulnerable to Covid-19 and therefore with higher mortality rates. In addition, among those who infected with the virus or passed away, the most common medical history were patients with cardiovascular disease, diabetes, and other chronic diseases.

Besides, being sick and catching disease and death, in addition to its psychological and social effects, have a high opportunity cost for the economy. Sick people are not able to work, and the premature death of each person means the loss of human capital and therefore the loss of all future years that the person could work and create value for the economy.<sup>2</sup> One of the theoretical economic foundations in the context of formation of the medical and health centers is for the prevention and minimizing the side costs of people's disease and death. Therefore, in general, the direct effects of the disease on the country's economy can be analyzed in three categories: medical costs, loss of human capital costs, and the cost of reduced the quality of the patient's life and those of patient's family members. Although the total cost of treatment may not be large so far, adding other costs of the disease constitute a very high cost per capita, and the pace at which the disease spread can accelerate the per capita cost for the whole economy. This concern requires strong precautionary measures despite its severe economic cost and consequences.

With respect to the financial need to advance Corona's preventive and curative measures, a quick look at the government's budget with a focus on the financing source of this unexpected

<sup>1</sup> The reason for the lower number of fatalities in the age range above 79 years is the lower number of infected patients at this age, otherwise the ratio of fatalities to the patients has an increasing trend with the age.

<sup>2</sup> In the health economy, the damage that society suffers by losing its human capital as a result of premature death is estimated in the form of a measure called YLL (Years of Life lost), which is being studied by the World Health Organization in the study of the global burden of disease. It has been introduced as a function of the remaining years from his life to retirement, the level of specialization and productivity (in terms of annual salary) and some additional cases. Since there is no information on the economic status (and productivity) of corona-related death, it is not possible to accurately calculate this measure. Also, to account for the reduction of quality of life due to disease, various criteria such as QALIs and DALI are used, which are equivalent to equalizing the costs of pain and suffering caused by the disease and the inability due to organ failure (dismemberment) or Inactivity of organs (including the lungs). In these cases, unfortunately, due to the lack of required data, it is not possible to calculate or estimate the damage.



shock seems useful. Corona's first impact on the budget was the passage of the bill without discussing it in parliament, which may have had a negative impact on the budget's precision in optimizing the resource allocation. The growth of the total budget is relatively reasonable compared to the previous year, but the main discussion is about the budget components, especially the financing ones. As, in addition to the sharp decline of oil exports, the fall of international oil prices has become an aggravating factor in cutting off the country's oil revenues, and therefore the figures in the budget in the form of oil revenues (under the transfer of capital assets) seems unrealistic. Note 2 of the law, generally leaves the government free to sell the shares of state-owned companies and the rest of the state-owned shares in the assigned companies. Therefore, the transfer of state-owned companies' shares, as the main source of government financing, has replaced the oil revenues or borrowing from the central bank.<sup>1</sup>

In practice, it has been observed that the main focus of the government so far has been on the sale of government stocks (and even the stocks of the non-governmental public institutions such as SHASTA ) and to ensure the sale of these stocks, unprecedented supports of capital market have been put in place. Considering the deepening trend of the capital market over the past three months, it seems that financing from the capital market will be successful for the government, and therefore budget constraints will not be significant this year.

### **B) The effects on the supply side**

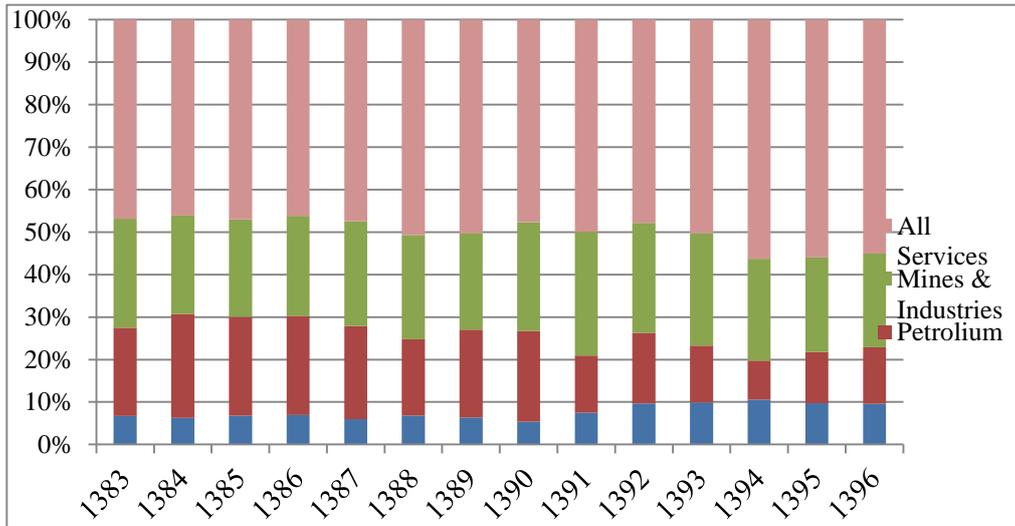
The country's production structure is such that more than 55% of the country's value added is created by the services sector (with a growing share in total), followed by the manufacturing, mining and oil sectors with the highest shares, respectively, and the agricultural sector with 10 percent share as it has always been the smallest economic sector in the country (Figure 3). On this basis, the main impact of the corona's distortion on the country's economy will be borne by the service sector. Then, small and medium-sized enterprises (SMEs) appear to be more vulnerable as they have a higher labor-to-capital ratio and therefore higher labor force concentrations, followed by large industries and the agricultural sector, as they are less vulnerable due to lower labor density and less reliance on staff gathering in one place.

---

<sup>1</sup> Borrowing from the central bank is unreasonable due to its severe inflationary consequences, given that inflation is now above 30 percent annually. This significantly controls the growth of liquidity compared to previous recession periods.



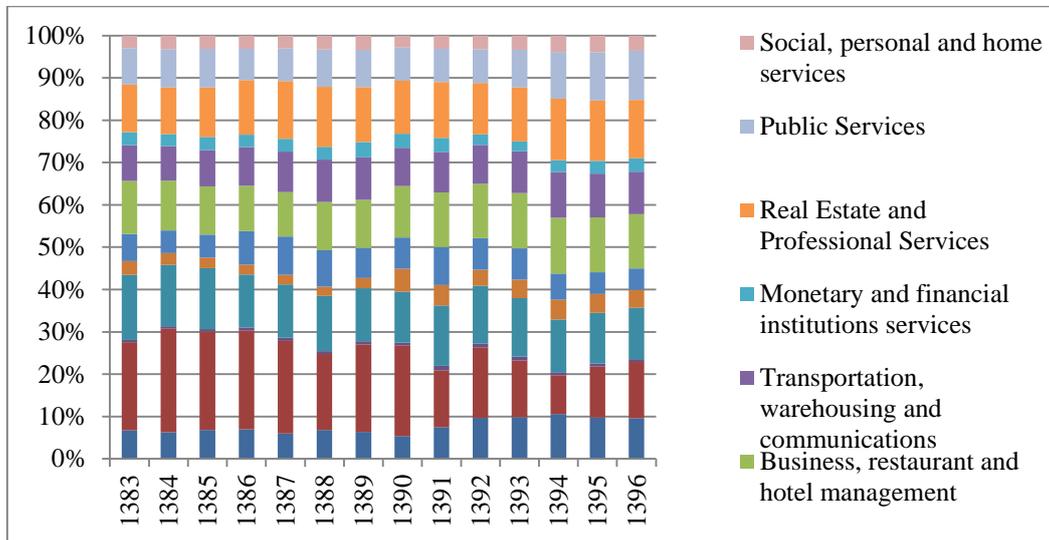
**Figure 3. The share of the main sectors of the country economy’s GDP (Value-Added)**



Source: Central Bank of Iran, Time Series Database

Service section itself is divided into social, personal and home services sub-sectors; Public services; Real estate services and Professional jobs; Financial monetary and insurance services; Transportation, Warehousing and communications; Business, Restaurant and hotel management, each of which has a share in GDP illustrated in Figure 4.

**Figure 4 - The share of different service sub-sectors of the country’s GDP (Value Added)**



Source: Central Bank of Iran, Time Series Database

According to Figure 3, those sectors that are more immune from the side effects of Corona, such as agriculture, oil, mining, industries, water and electricity, and gas, account for less than 40 percent of the country's economy. Therefore, with respect to the manufacture and supply sector, it can be said that 60% of the country's economy, including service sector and sub-sectors and the construction sector, are directly adversely affected by the corona virus.



Therefore, Corona significantly reduces the country's production, especially in the service sector. However, according to Figure 1, as the share of change in inventory in total demand has always been significant in Iran<sup>1</sup>, in practice both production and distribution units and households have relatively high commodity reserves. This has prevented the interruptions in production in certain sectors from stopping the supply of essential goods and also due to the good level of inventory of households the amount of high sudden rise in demand for health products and foodstuffs does not increase as much as other countries, and thus the impact of the Corona shock on trade of basic goods were less than the other countries, and less than the impacts on production and consumption.

In fact, what was covered in this section is calculated based on the production reduction due to the need to close businesses in order to prevent corona. However, this is not the only factor, and declining demand due to household undertaken preventive measures and the total demand of the sector will exacerbate this issue.

### **C) The Effects on the demand side**

According to Figure 1, the most important component of total demand is the consumption cost of the private sector. Private sector consumption, including household spending, with a share of 39 to 46 percent (and an average of 42.7 percent), has always accounted for the largest share of total spending in the country. Preventive advices on corona drive people and households to buy as many products as they need online or over the phone. Naturally, the essential goods needed by households are the first priority of purchases, and in first place are the goods that are still high demand. For the other goods, it can be said that not all of them can be purchased online and without being physically present. Among goods that can be purchased online, heterogeneous goods are less attractive to buy online due to the importance of matching the product to the buyer's tastes. Therefore, homogeneous goods (in addition to essential goods) have the greatest potential for online purchasing. For the other goods, it seems to be still preferable to do face-to-face purchase for direct assessment of the goods before purchase. This means that the consumer/buyer is procrastinating the purchase as much as possible.<sup>2</sup> In this regard, durable goods, along with non-essential goods were, of course, more likely to be postponed due to the high cost and sensitivity of the purchase in terms of the

---

<sup>1</sup> Uncertainty and high risk of shortage or jump in commodity prices due to double-digit inflation, along with the relatively small size of Iranian companies and the lack of acceptance of industrial clusters and vertical and horizontal mergers in the country's economy, has led to this fact that the volume of inventory in the optimal warehouse, determined much higher than the global standard, because of reassurance from continuity of production and digestion of possible failures in the supply of raw materials and intermediaries.

<sup>2</sup> Given that the end of the fiscal year for many companies in the country is the end of the solar year, so many overdue payments to employees and their contractors will be settled in March. In addition, the Eid night shopping market is a well-known part of Iran's economy, and the volume of goods purchased in March is usually much higher than in other months of the year. Therefore, the symmetry of the start of the business closure period and the recommendation to stay at home in the days of this periodic boom, caused us not to see such a boom in this year, and not only March 2017 did not experience an increase in sales compared to the previous month, but also it faced with stagnation.



details. Another important point is that due to the inflationary nature of the economy, the inventory/storage of Iranian household goods is higher than the global standard, and this enables Iranian households to postpone their purchases for a longer period. Therefore, logically, the decline in market demand for households, especially for durable and non-essential goods, is higher in Iran than other countries.

Of course, there are also goods whose demand has increased. These goods generally include detergents and sanitizers, disinfectants, alcohol, masks and gloves, and fruits and some food items. The reason for this rising demand is the increase in the need for health and fighting against the virus, as well as health advices to improve the quality of nutrition and strengthen the body and empowering it to fight the disease in the event of possible infection.

Services are more sensitive in comparison with goods and they generally will experience a greater reduction in their sales. As the purchase of a service is more in need of human physical interactions, then it is directly affected by the physical distancing of dealing with the corona. All kinds of tourism services, restaurants and hotels, transportation, health services (except for emergencies or related to Corona), house cleaning, haircut, laundry, car services and technical services, etc. have greatly reduced in the period of Corona peaks. The demand for many of these services tends to be zero as they deemed to be non-essential in nature. In contrast, the demand for services such as information technology and telecommunications have increased significantly.<sup>1</sup>

In this regard, a study has been conducted by the Institute of Business Studies and Research on 12/26/1398 with the aim of identifying vulnerable industries, which considers both the dimensions of supply (forced closure) and demand (reduction of people's purchases). According to the study, there are 2.7 million trade unions in the country that more than 48% of them are in distribution business, followed by manufacturing, technical services and service industries. According to the estimation of this report, more than 6.7 million people are working in these guilds.<sup>2</sup>

Considering the fact that the impact of Corona on all guilds has not been the same, the institute has carried out a step-by-step process to identify highly vulnerable industries. To do this, first, the factors affecting the vulnerability of the guilds have been identified and then the classification of the guilds were conducted. Subsequently, the guilds enjoying the growing demand for their products were moved out of the range of guilds and then the high-

---

<sup>1</sup> Of course, the demand for treatment of Qovid-19 has led to a decrease in the demand for non-emergency medical treatment, and due to the higher price of services whose demand has decreased, it has led to a decrease in the total income of medical centers. Therefore, increasing the demand for medical services in the conventional sense that it will lead to prosperity does not apply to specialized medical centers, especially hospitals.

<sup>2</sup> In terms of household size 3.3, according to the last census of 2016, if we assume that two-thirds of employees in the service industry are household breadwinners, then employment and income of about 4.5 million households, equivalent to fifteen million people, is directly dependent on the country's guilds.



vulnerability industries or guilds were determined by using linear weighted method.<sup>1</sup> The results of this study are the identification of the most important vulnerable guilds as follows:

- Service guilds: travel and pilgrimage agency services, hotel, guest house, beach and renting villas, ceremonial services, food preparation services, food delivery, etc., hairdressing, freight services (motor courier, etc.), Passenger transport services, car repair services, home-related services, carpet washing, laundry services, shoe and clothing related services;
- Production guilds: food production (all kinds of food and sweets), textile production, shoe and clothing production and handicrafts,;
- Distribution industries: grocery stores, restaurants, nuts and dried fruits, textiles productions, clothing and shoes.

In another study conducted by the Deputy Minister of Planning and Programming of the Ministry of Industry, Mines and Trade, the decline in the demand for various trading categories was estimated. The categories with the highest demand decline are very similar to the results of this study.

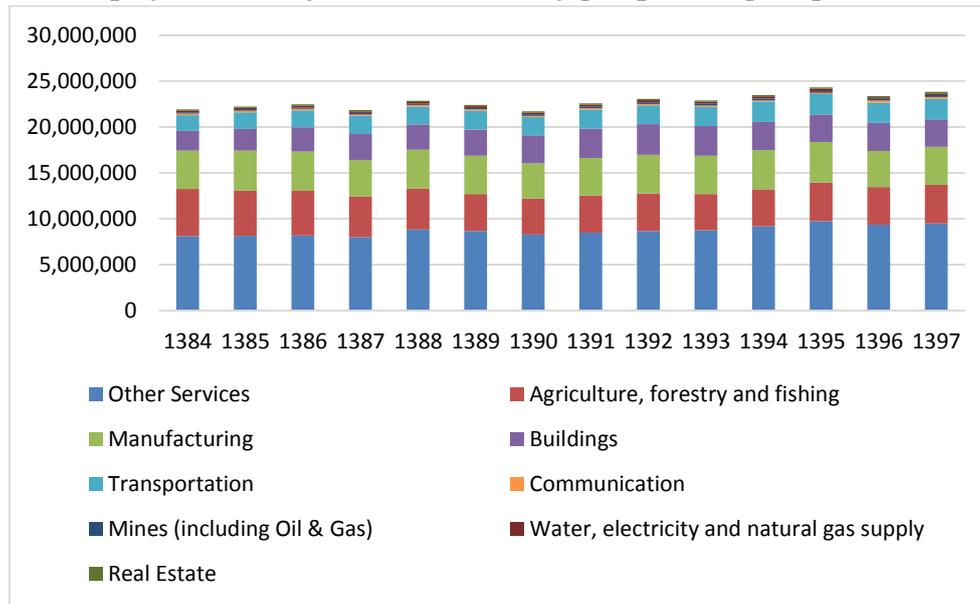
Another demand-determining factor is purchasing power. The per capita income of the country in 2016 at constant prices in 2011 was equal to 94.5 million rials. However, high inflationary pressures along with the economic recession in the last two years has led to a sharp decline in household purchasing power. Given that the livelihoods of a large part of the country's population are also dependent on daily work, the closure of businesses and the decline in people's demand will naturally cut their incomes, and without having enough savings to cover the expenses, they will not have sufficient funds to finance their needs and turn that into effective demand. From this perspective, it is appropriate to combine the previous analysis of Corona's impact on businesses with the share of each business in the country's employment to obtain an insight of its impact on household income.

---

<sup>1</sup> To examine the household demand pattern at the end of the year, the share of expenditure on 975 commodity codes, including 228 edible codes and 747 non-food commodity codes and services (based on the COICOP standard), was examined. Then, the guilds that faced with rising demand, have been identified. 2088 guilds (including 984 distribution, 641 production, 347 service and 116 technical and engineering services) were examined by linear weighted method. In a way based on the degree of vulnerability of each of the relevant channels, scores are determined and then based on the scores of each category, the vulnerability of that category is concluded.



**Figure 5- Employment of major economic activity groups during the period of 1397-1384**



Source: Labor Force Statistics Survey of Iran Statistics Center

According to Figure 5, it can be observed that the other services sector, with 40% of the country's employment (and 51% of employees in Tehran province) in 1397, had the largest share of employment, followed by agriculture (18%), Industry (17%), construction (13%) and transportation (9%), respectively.<sup>1</sup> on this basis, it can be said that the sectors impacted by Corona virus have affected about 63% (including 1% of employment in real estate) of the country's employees. In addition, a study of the previously unemployed population in the last 5 years<sup>2</sup> shows that the other services sector had the highest number of unemployed people (788,512 people, or 42% of total unemployment). With respect to share in the unemployed population for those who were employed before for the past five years, the construction, industry and transportation sectors, come in second to fourth place with an average of 26%, 16% and 6%, respectively. Once again, it can be observed that more than 70% of the unemployed population has previously had a job in one of the sub-sections of services, construction or transportation that were affected by Corona. Therefore, it seems that job competition in these sectors is high and that these sectors are more vulnerable to foreign shocks such as Corona. This issue is of high importance due to its impact on household income as well as the impacts imposed on government-provided unemployment insurance for those who have lost their jobs.<sup>3</sup>

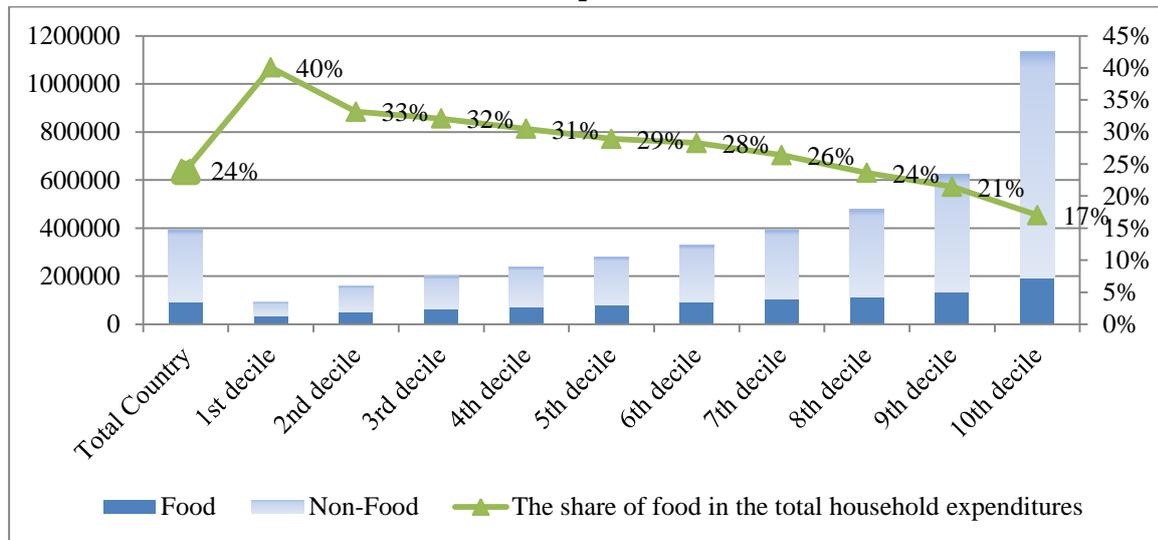
<sup>1</sup> Other sectors generally have a share about 1%, which does not have a decisive effect on household income.

<sup>2</sup> In 1397, there were a total of 1,896,219 unemployed people in the country who have been employed in the last 5 years.

<sup>3</sup> This analysis also has a policy application for the government and shows that the payment of contractors' arrears by the public and private sectors, through the transfer to employees and their colleagues, can lead to a wave of effective demand and play an important relief role. Prevent the sharp drop in demand.



**Figure 6. Average cost of a typical urban household by food<sup>1</sup>, non-food<sup>2</sup> expenditures and share of food in household expenditures for income deciles**



Source: Iran Statistics Center

According to Figure 6, 40% percent of household income for the first decile is spent on foods. This share is over 30% for the next three deciles. Considering the over 50% share of housing and home rents in the expenses of low-income households<sup>3</sup>, it seems that these groups spend more than 90 percent of their spending on the most basic necessities of life, food and housing. Therefore, in the case of losing the household incomes due to Corona, low-income households will not have much room to provide food from the declined sources of other consumptions. Given that wealth generally is a function of household income and savings, it is expected that the savings of these households will not be able to play a significant role in meeting household expenses. As the rate of food inflation is on average 6 percent higher than the rate of non-food inflation, this exacerbates the vulnerability of low-income deciles from declining income flows.

The high share of the unavoidable costs of households, along with Corona's high impact on employment and working income, especially for those households whose daily livelihoods depend on daily or weekly work, causes significant reduction in demand for low-income deciles. This fact itself has led to a decline in production, and more importantly, the need for the government to intervene actively and effectively for supporting the vulnerable population.

<sup>1</sup> Food and tobacco costs (food, beverages and tobacco) include 1) flour, noodles and grains 2) types of bread and biscuits 3) types of meat 4) milk and its products and bird eggs 5) oils and fats 6) fresh fruits 7) vegetables 8) Nuts and nuts 9) Legumes 10) Canned foods 11) Sugar and sugar 12) Sweets and jams 13) Spices, sauces and other food ingredients 14) Tea, coffee and cocoa 15) Beverages, juices and syrups 16) It is tobacco.

<sup>2</sup> Non-food expenses include 1) Clothing and footwear 2) Housing, water, electricity, gas and other fuels 3) Appliances, furniture and services used in the home 4) Health 5) Transportation 6) Communication 7) Entertainment and affairs Cultural 8) Study 9) Restaurant and Hotel 10) Miscellaneous goods and services.

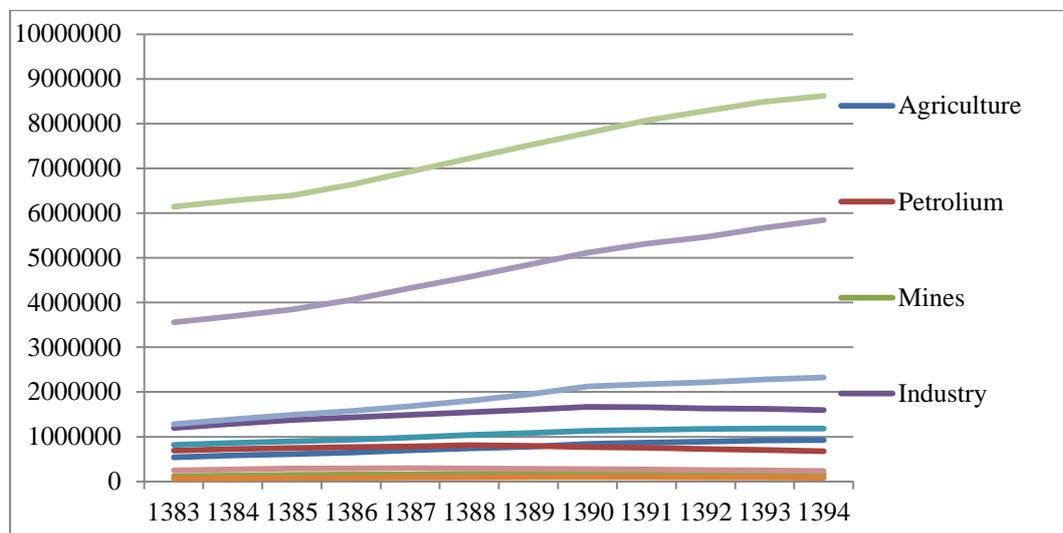
<sup>3</sup> The average share of housing in the cost of urban households in 1397 was equal to 45%.



The application and implication of this analysis for insurance industry can be in the form of the inability of a large part of the population to pay continuous premiums related to life or medical insurance, as well as deferring installments of other insurance policies that are sold in installments.

Another important part of total demand is the formation of gross fixed capital, or investment, which, according to Figure 1, accounts for about 23% of total demand. Due to the insignificant absorption of the foreign capital, the investment is mainly provided through social savings (including government and household savings).<sup>1</sup> Investment is important from two aspects of direct impacts from Corona as well as the accumulation of capital as the engine of growth for the future of the country's economy. At the same time, a large proportion of non-life insurance is capital-dependent rather than production-dependent.<sup>2</sup>

**Figure 7- Capital inventory trend of the country's economic sectors (at constant prices in 1390)**



Source: Time Series Database - Central Bank

<sup>1</sup> Now the country's population pyramid is at its best economic situation. Because more than 50 percent of the total population is in the working and social activity age and, they are considered as productive work forces. Such a demographic age composition can save a large part of its production and spend the accumulation of capital stock as another important factor in production. Therefore, if the country's economy would not able to develop and prosper with the current age pyramid, in the next thirty years, when the huge volume of today's productive workforce retires and becomes a mere consumer with increasing medical expenses, the economic and social situation will definitely get worse and in fact with the continuation of the current trend and the crisis of pension funds, we will see heavy crises in the next thirty years. This can be very important in terms of selling life insurance as well as predicting future losses. Of course, as we will see, the main problem in the current year will be the inability of the productive sectors of the economy to attract financial resources, and therefore the people's savings, which are the sources of capital supply, are not fully absorbed by the economy and the stock market and they bring bubbles for the capital market.

<sup>2</sup> The capital stock of various sectors can also be considered as an indicator for estimating the potential market size of the country's insurance indemnities, such as fire insurance, engineering and monetary losses insurance. Similarly, it can be helpful in analyzing the consequences of Corona on reducing demand or increasing losses in these sectors.



According to Figure 7, the real estate and other services sectors, with a share of about 35% and 25%, respectively, account for the largest portion of the country's capital stock with both having an increasing trend. The transportation and the industrial sectors are in the next ranks, and the share of other economic sectors in capital stock is much less than 20%. The share of sectors in fixed capital formation in subsequent years presents a similar trend. Therefore, it can be concluded that the sectors that suffer the minimum damage from corona (industry, water, electricity and gas, mining, oil, agriculture), have a small share of the country's capital under their control, and it is expected that main activities that attract investment in the country become two-way stagnant (both due to declining supply and also reduced demand), and therefore investment will decrease in those areas as well. The three-month trend of the country's financial markets also indicates that most of the country's capital has shifted to speculation in the capital market due to the lack of absorption in the real sectors of the economy. In fact, the working capital of many sectors affected by Corona has gone to the capital market, and on the contrary, the formation of fixed capital in listed companies is not as much as the capital offered in the stock market, leading to formation of price bubbles. Therefore, in addition to reducing the consumer demand, declining the total demand from the investment sources will be significant. At the same time, the reduction of fixed capital formation, due to the scarcity of capital in Iran, will create more restrictions for the country's economic growth in the future.

It has already been pointed out that physical distancing pushes the exchanges to become virtual and non-physically-present purchases. Naturally, this will increase the demand for telecom services and information and communication technology. However, as the share of this sector of the country's economy is relatively smaller, increasing its demand will hardly be able to neutralize the decrease in demand in other sectors. In fact, increasing the penetration of telecom and information and communication technology through facilitating returning of demand in other sectors will have a major impact on economic recovery. Given the state-owned nature of much of Iran's economy, the existence of many monopolies, most businesses with low competitiveness will not have the required speed to adapt quickly to the new situation, and it is predicted that more likely private services sector have the highest speed in using telecom to adapt to new conditions.

Overall, along with declining private sector consumption and fixed capital formation, public sector expenses are likely to experience a significant increase due to Corona's financial burden. Also, due to the increase in trade restrictions, the country's exports is experiencing a significant decline, and in general, the demand for the economy as a whole is declining significantly this year, and in turn exacerbating the recession.

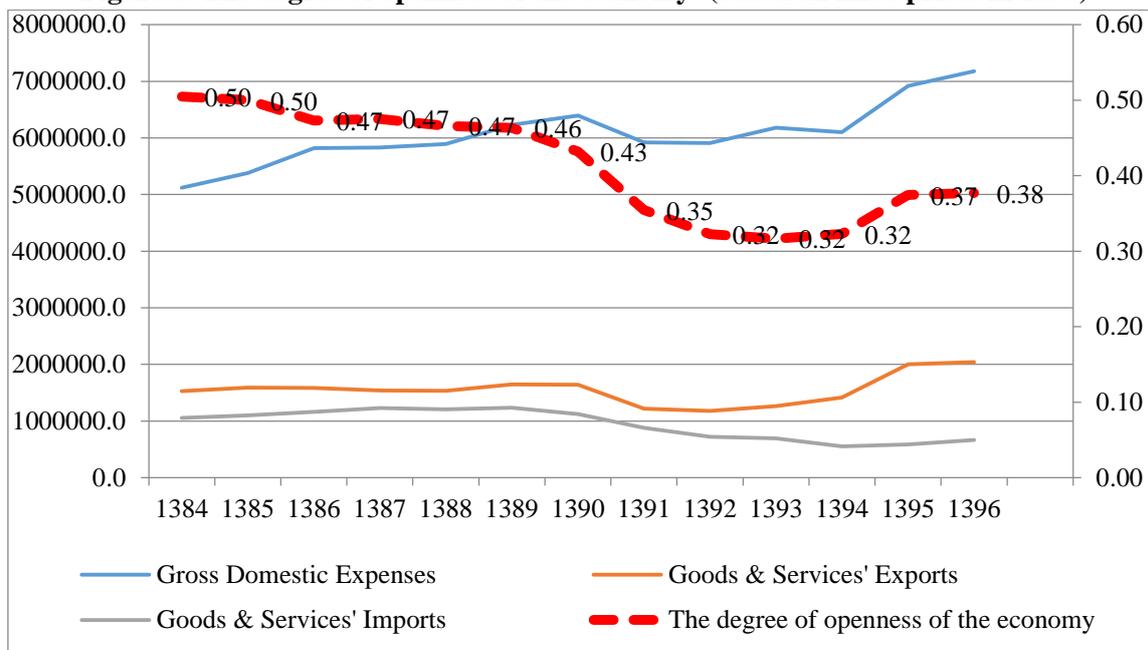
### **1-3- Corona's indirect effects on the country's economy**

If we want to look at global variables affecting Iran's economy, the issue should be examined from several angles, including declining oil prices, sharp cuts or declines in trade of goods and passengers, and therefore trade, and ultimately, rising gold prices and exchange rate fluctuations



The significant drop in crude oil demand due to the recession caused by the corona, combined with OPEC's disagreement to reduce production and Saudi Arabia's political use of the rises of oil production, has severely reduced oil prices and thus reduced the country's foreign exchange earnings. Given that there is no hope for an agreement to reduce oil production significantly, and the large volumes of manufactured oil have been stored in tankers and the cold season has passed, it is predicted that low oil prices will continue to stay for a while. This, along with a sharp drop in oil exports due to sanctions, implies that the country's economy will be a truly oil-free economy this year. Of course, a few openings in the form of the liberalization of the central bank's currencies portion in South Korea, financing a medical equipment deal through INSTEX and a \$50 million loan from the International Monetary Fund to fund the corona-related expenses are measures that play a key role in reducing Iran's oil revenues, but they are temporary and ineffective compared to the effects of sharp decline in oil revenues. Thus, the country's economy will have to focus more on non-oil exports as well as governmental financing through domestic resources, as it will be a difficult year in terms of foreign exchange earnings, which could cause turmoil or exchange rate appreciation.

**Figure 8. The degree of openness of the economy<sup>1</sup> (based on fixed prices in 1390)**



The degree of openness of the economy in the whole period under review, with the exception of two years after “Joint Comprehensive Plan of Action”, has been declining and has decreased from 50% at the beginning of the period to 32% in 1393. “Joint Comprehensive Plan of Action” has also had a temporary and partial effect of 5% on improving this index and has compensated less than half of the 14% reduction in this index due to the

<sup>1</sup> The degree of openness of the economy is calculated as the ratio of total trade (exports and imports) to Gross Domestic production (cost). This index is a measure of the country's foreign interactions and relations and also the intertwining of its economy with the international economy. According to the increasing trend of globalization and the division of international labor, the greater openness of the economy, the greater the efficiency of specialized work and economies of scale, so in the normal case, if the degree of openness of an economy is higher, then development outlook of it will be more promising by taking advantage of the international economic opportunities.



intensification of sanctions in 1390, which is mainly because of facilitating the sale of oil and its products and reduced cost of Iranian products due to the rise in the exchange rate.

Source: Central Bank Time Series Database

Reducing global demand and consequently reducing foreign imports make our export's activities more difficult. In addition, travel bans of people and goods trades between countries are another serious obstacle to trade. Event hough, this is bilaterally harmful for Iran and its trade partners, as production relies on imports (12.7% for all industries in the country)<sup>1</sup> but, due to the absence of multinational corporations in the country and Iran's lack of role in the global production chain of many goods, the impact of these bans on Iran's economy is much less than in open economies. This is actually an interpretation of the low degree of openness of the Iran's economy, which is illustrated in Figure 8.

In other words, although lowering the openness of the economy deprives the country from the benefits of global interaction, but this issue<sup>2</sup>, along with the high share of inventory in total demand, will be the main factor in lowering the vulnerability of the country's economy from Corona compared to open developed countries. Similarly, the share of raw materials and intermediate goods in imports of the country's businesses is lower than the other countries, and therefore the interruption in imports has less impact on Iranian companies compared to its foreign counterparts. At the same time, the high inventory in the warehouses of the country (as mentioned earlier) acts as a very effective shock absorber against the initial and main wave of the economic shocks of Corona. Thus, despite the serious delayed production of developed countries with heavy dependence on import of raw materials or intermediate goods from China, there was no such a sudden interruption from the channel of interruption of import flows in Iranian businesses. In addition, business interruptions due to the direct effects of Covid-19 and the implementation of quarantine programs and social spacing and distancing has been in the form of command and control.

Another influential factor is the price of global gold. Due to the prospect of declining business profits, the stock prices of many companies have fallen globally and investors have flocked to safer markets such as gold. As a result, the world price of gold has risen sharply, and before overcoming and digesting the economic consequences of the Corona crisis, it is not expected that there will be a significant decrease in the world price of gold any time soon. Although some stock exchanges have recently experienced positive days, but it is less likely that the decline of gold prices happens soon. This is because, firstly, the chance that the disease can become under control is still gloomy, and secondly, many countries have enacted and adopted unprecedented assistance to their businesses in order to manage the economic crisis of Corona, which can increase the amount of money volume and inflation that in turn keep the price of gold high. This can be important in terms of influencing on the choice of the right

---

<sup>1</sup> Country's' Export Development Roadmap Document 14040-1399- Institute of Business Studies and Research - March 2012.

<sup>2</sup> As a result, the impact of the 2008 financial crisis on the country's economy was palpable.



foreign asset to maintain the purchasing power of companies or the settling basis of foreign contracts, including reinsurance contracts.

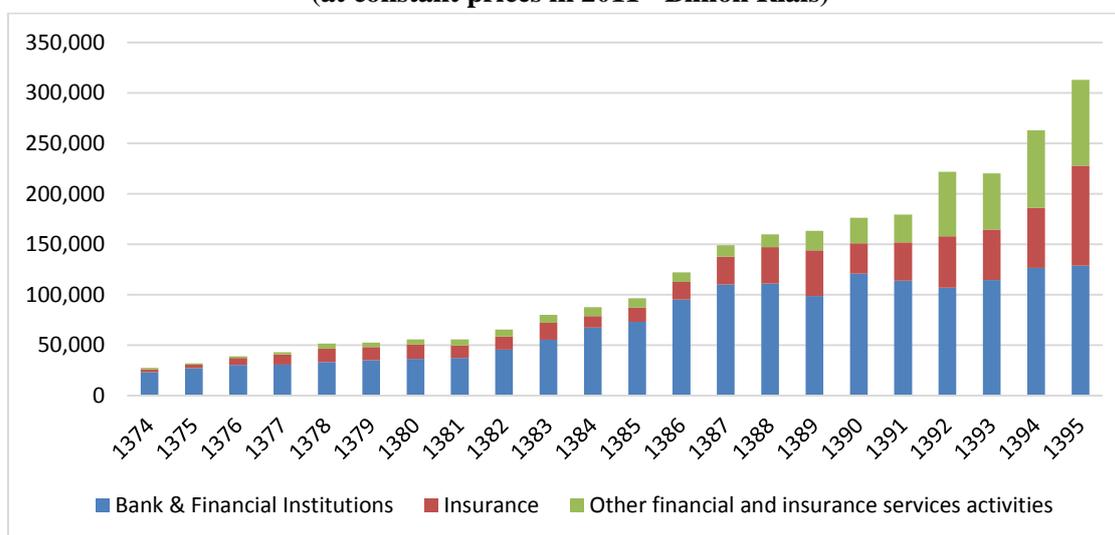
## 2- Corona's effects on the country's insurance sector

In this section, first, the position of the insurance sector in the production of value-added is analyzed, and then, the consequences of the economic recession caused by Corona on the country's insurance industry using the input-output method are examined.

### 2-1- Insurance sector Value Added

During the last two decades, the total value added of the country's financial and insurance activities has increased from 27,385 billion rials in 1995 to 312,829 billion rials in 2016 in nominal prices, and from 2,821 billion rials in 1995 to 98,932 billion rials at the end of 2016, at real prices. (Figure 9)

**Figure 9- Value added of financial and insurance activities of the country by their components (at constant prices in 2011 - Billion Rials)**



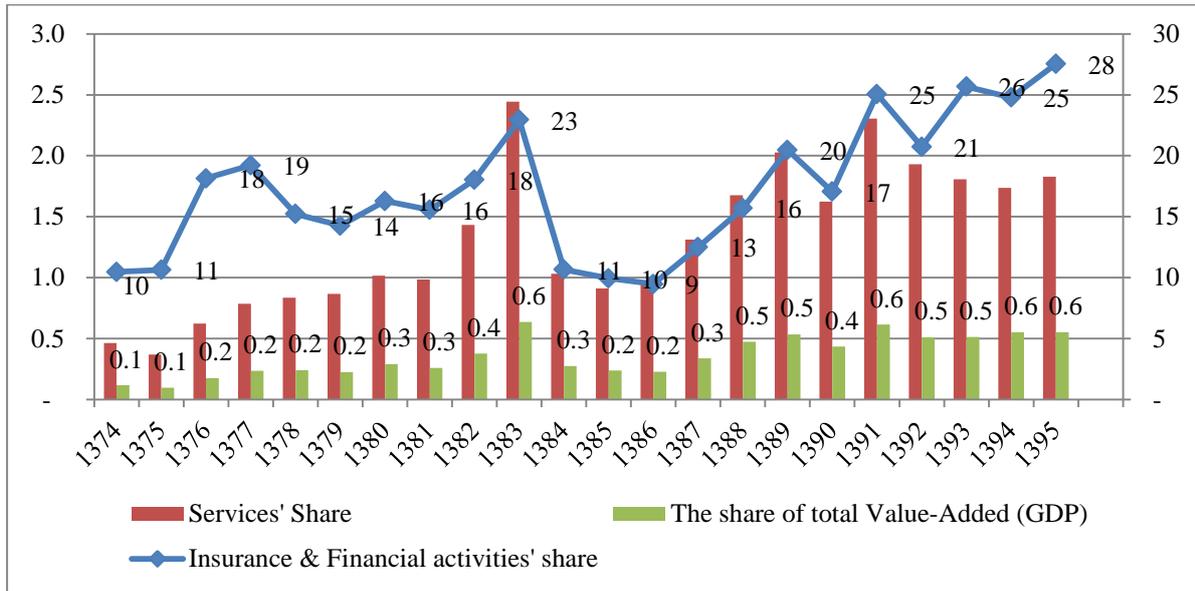
Source: National Accounts of Iran Statistics Center

The share of insurance in the value added of financial and insurance activities has also been increasing, from 10.46% in 1995 to 27.53% in 2016 for the period under review.

Given that monetary and financial activities are considered as a sub-sector of the services sector, the share of insurance in creating value addition in the country's services sector is also shown in Figure 10. During this period, the insurance sector had a small share, for some years below one percent of service sector value added. The largest share of insurance with 2.44 percent belonged to year 1383. The average share of the value added of the insurance sector in the value added of the country's services sector for the whole period under review was 1.32 percent. In addition, the share of insurance sector value added in the total value added of all economic sectors of the country in the years under study has been less than one percent, more precisely 0.36 percent for the 1394-1374 period.



**Figure 10- Insurance share of total Value Added, services and financial sector of the country during 1395-1374 period**



Source: National Accounts of Iran Statistics Center

The average annual growth rate of the value added of the country's insurance sector in the period under review was 22.58%, which is significantly higher than the average growth of the financial services and insurance sector together and the average growth of the overall services sector. In addition, the fluctuations of insurance growth rates have been much higher than these groups. It should be noted that the added value of insurance sector is different and much less than the premium received (as the amount of insurance sales). On this basis, in what follows, the impact of corona on insurance sector is examined through the channel of reducing the demands for various economic sectors and its impacts on reducing the insurance sector value addition. Then using the (experimental) ratio of value-added to premiums, the results are also presented for the premiums received.

## 2-2- Assessing the effect of corona outbreak on the insurance industry using input-output model

Assessing the impact of corona outbreak on the insurance sector requires an estimate of declining demand or sales of the sector's products and economic activities. One of the best ways to evaluate these effects is to use input-output model. For this purpose, it is necessary to use the input-output table that considers the insurance sector separately. Fortunately, the input-output table of the Statistics Center of Iran in 2011 has such a feature.

The main problem facing this study is that there is no accurate estimate of the impact of Corona on the whole economy and on economic sectors. All the discussions, including generalities about the impact of Corona on the national economy or, in some cases, the available detailed information, have been given for some classes of jobs that is very difficult to extend to different economic sectors.

The input-output table has the feature that it can show the effect of a change in the economy or in any of the economic sectors on a desired sector. The main goal here is that at first, we be



able to show how much the insurance sector is affected by changes in the demand of other sectors of the economy, and then, using those information to show the impacts of corona on insurance sector due to stagnating economic activities.

In input-output analysis, two types of linkages for economic sectors are considered, including direct and total linkages (direct as well as indirect). These calculations are based on the basis that if the demand for products of one or more sectors decreases, these activities will stagnate and therefore reduce their demand for goods and services in other sectors (including the insurance sector). Therefore, estimating the rate of recession or declining demand in any economic activity is very critical for this study.

One of the criteria that show the dependency of one sector to other sectors is how much the sector needs to purchase the products and services from other sectors in order to produce and deliver its goods and services. This criterion indicates direct linkages. By performing these calculations, the results are shown in Table 3.

**Table 3. Direct linkages of the sectors on the demand of other sectors**

Sector	Rank	Direct Dependence Index
Wholesale And Retail Services	1	4.069402
Chemical Products	2	2.54743
Freight Road Transport Services	3	1.765377
Iron, Steel And Its Products	4	1.760568
Services Of Non-Residential Units For Rent	5	1.709624
Coke And Petroleum Refining Products	6	1.568357
Electricity And Related Services	7	1.276773
Distribution Of Natural Gas, Liquefied Petroleum Gas And Gas Condensate	8	1.251353
Crops	9	1.227496
Metal Products	10	1.118087
Insurance Services	38	0.357714

Table 3 shows that the wholesale and retail services sector, with an index of 4.07, have the highest direct dependency to demand in other sectors. These results show that the insurance sector ranks 38th. Therefore, if the economic sectors are in recession, the wholesale and retail sectors will be affected the most.

Now, if we consider the indirect effects, the total dependency index is obtained as shown in Table 4. These figures show that when a sector faces with a recession, its purchases from other sectors falls, and a wave of such reductions starts, and the sum of all these reductions is shown by the total dependency index.

**Table 4. Total dependency (direct & indirect) of the sectors to the demand of other sectors**

Sector	Rank	Direct Dependence Index
Wholesale And Retail Services	1	8.460155
Chemical Products	2	6.654502
Freight Road Transport Services	3	6.317251
Iron, Steel And Its Products	4	5.471093
Services Of Non-Residential Units For Rent	5	5.300583
Coke And Petroleum Refining Products	6	4.920422
Electricity And Related Services	7	4.768089
Distribution Of Natural Gas, Liquefied Petroleum Gas And Gas Condensate	8	3.876544
Crops	9	3.545976
Metal Products	10	3.162788
Insurance Services	35	1.619874

The above results show that the insurance sector ranking is slightly different based on the direct and total index; 38<sup>th</sup> vs. 35<sup>th</sup>.

We will now examine how dependent the insurance sector is on other sectors as shown in Table 5 for some sectors.

**Table 5- Dependence of the insurance sector on other sectors**

Activity	Direct Index		Total Index	
	Index Value	Rank	Index Value	Rank
Other buildings	0.01478	1	0.022091	1
Water transportation services	0.009206	2	0.015353	2
Air transportation services	0.007092	3	0.011669	3
Residential buildings	0.006466	5	0.011073	4
Coal and lignite, peat	0.006542	4	0.010519	5
Chemical products	0.005713	6	0.010477	6
Optical tools, medical equipment and devices related to radio and television	0.004096	7	0.008408	7
Passenger road transportation services	0.003707	8	0.00566	12
Freight road transportation services	0.003644	9	0.005555	13
Architectural and engineering services, analysis and testing	0.003553	10	0.006355	8



Activity	Direct Index		Total Index	
	Index Value	Rank	Index Value	Rank
Copper	0.003151	12	0.005693	11
Banking services	0.002935	13	0.004857	17
Chicken, poultry and other live fowl	0.001978	15	0.005907	9
Gardening products	0.001896	16	0.003948	22
Public accommodation services	0.001348	21	0.002494	41
Crops	0.001289	22	0.003384	27
Wholesale and retail services	0.001099	27	0.002244	49
Sports and entertainment services	0.001004	31	0.002102	53
Medical and dental services	0.00034	53	0.001213	79

The dependence of the insurance sector on the demand of other sectors in the above table shows that the construction sector ranks 1<sup>st</sup> in terms of both indicators. These figures are interpreted in such a way that, for example, the poultry and chicken production sector ranks 15<sup>th</sup> on the basis of the direct index. The value of this number shows that if the production of chicken and poultry sector decreases by one Rial, the production of insurance sector products will decrease by about 0.002 Rials. On the other hand, according to the total index, which ranks 9<sup>th</sup>, the poultry and chicken production sector, due to its close linkages with other sectors, will reduce its demand for other products in other sectors, which in turn reduces its demand for insurance. That's why its rank is higher in the total index than the rank in the direct index. Therefore, if the demand for chicken and poultry products decreases by one rial, the insurance products will decrease by 0.006 Rials. Therefore, the total effect is about 3 times the direct effect, showing that the presence of indirect effects plays an important role in analyzing the effects of the recession of other sectors on the insurance sector. Now, based on the data in the input-output table, we can examine the impact of reduced production of the other sectors of the economy on the insurance sector. But at first, it is needed to estimate the decline in demand for products in other sectors of the economy. In previous sections, Corona's impact on the country's economy was analyzed both on supply and demand sides, but due to the fact that to the changes in variables are high, and low validity of their timeframe and that the conducting quantitative analysis is time consuming we decided to only provide an analytical view of Corona's impact on the country's economy only. Therefore, in this section, in order to obtain a quantitative estimate of the decrease in demand, we use the existing studies in this field as a base. Various studies have been conducted in recent days to examine the effect of corona on the production of different segments. Each of these studies has addressed this issue in different ways depending on the the goals they were looking for. But most of these studies have addressed the issue at a very general level. In other words, they have largely described Corona's impact on the national economy, and there is a little quantitative information in this regard. Therefore, this discussion can be examined under different scenarios or the conducted studies can be used as a general guide. Here are two studies.



The first study was conducted by the Parliamentary Research Center, which found that the decline in the level of economic activities was largely affecting the service sector, which is in line with our previous result. In this study, service sectors are divided into three categories, the first of which is strongly influenced by corona disease, such as tourism and the like. The second category is like brokerage and real estate services with less impact from Corona. The third category is related to education services, which is less affected than the other two categories. In addition, depending on the extent of the government's reaction to corona, the third scenario is considered using the average of the first and second scenarios. According to this scenario, the first, second, and third categories experience 75%, 46.5% and 45%, decrease in demand, respectively.

The second study was conducted by the Isfahan Chamber of Commerce, Industries and Mines, which in one of its computations, estimates the value-added reduction of agricultural activities at 3% and industries and mines at 8%. It also estimates the decline in demand for services at about 45 percent. Based on the data in the input-output table and the ratios obtained from this table, we can convert the reduction in value added to a reduction in the final demand. The results show a decrease in demand for agricultural products by 3.15 percent, industry and mining by 10.72 percent and services by 45 percent.

Based on the results of each of these two studies, the reduction in demand for products of different sectors has been calculated. Then, the rate of reduction in production of each sector is calculated in response to this reduction in demand. The results for the insurance sector show that if we base our calculations on the results of the report of the Parliamentary Research Center, the decrease in the value of production of insurance products for a quarterly period is about 6.2 percent, compared to 6.8% for the Chamber of Commerce report. Using the ratio of insurance premiums to the production value of the insurance sector, these reductions translate into decreases of about 15.7% and 16.66% reduction in premiums, respectively, as the approximate reduction in premiums generated for a period of three months.

In addition to these calculations, it is worth noting that the reduction in some types of insurance is mainly due to the postponement of people's decisions, and in others, as a result of a decrease in insurance demand. Obviously, such assumptions will be very difficult to account for in the models. Having said that, it is noted that studying different scenarios using the input-output model is quite possible. What has been analyzed in this research is an estimate for the short-term period and depending on the longer-term trend of demand behavior and more completed and more realistic scenarios, a more thorough analysis can be conducted.



### 3- Conclusion

Iran's economy faced with Covid-19 in a situation with 30 percent inflation and negative economic growth. It was also in the last month of the year that overdue payments were generally settled throughout the year, as well as many annual household purchases. Both the economic foundations were weak and there was a periodic boom of Nowruz night, and so Corona, while closing the periodic boom of the Nowruz night market, imposed itself on the country's economy in the worst possible macroeconomic conditions.

Due to the country's long-term sanctions, Iran's international economic interactions have not developed much. Therefore, the division of international labor and productivity promotion approaches such as minimizing or the elimination of inventory are not of much interest in Iran's economy, and the major interactions are limited to importing goods without similar domestic ones (mainly capital and intermediate goods) and exporting low diversified products. Since the structure of the country's economy is not that, much developed or complex that could experience a major blow from Corona due to the interruption of international interactions. From another point of view, nearly 50 percent of the country's production is in the service sector, which has been most affected by Corona. Therefore, the country's economy has been hit hard directly from the Corona.

In order to understand Corona's direct costs, a rough estimate of Corona's treatment costs was estimated at 83.9 million rials per hospitalized patient, which with an average number of 1,500 inpatients per day, the average daily cost amounts to or 125 billion rials. It is worth reminding that these numbers are the lower bound estimates and only include officially identified and registered cases of corona infected patients. In addition to the cost of diagnostic and treatment services and the possibility of normal hospitalization and intensive care, the cost of reducing life quality due to illness, the cost of losing human capital due to premature death because of corona and also psychological cost of losing a person for the survivors, and especially the impossibility of holding funerals and the continuation of mental trauma should be added. These costs may not be high compared to non-contagious deadly diseases (such as cardiovascular disease, cancer, etc.), but they are significant for infectious diseases, and that the pace of spreading the disease can quickly lead to a human-economic catastrophe. On this basis, the preventive measures are at the forefront of the actions of governments, including Iran, and their economic consequences are approximated less than the outbreak costs.

Corona and the preventive measures to fight against it have significantly reduced the overall demand, especially in the areas of luxury and non-essential services and goods, shrinking labor supply. The preventive measures caused many service units and small or medium-sized enterprises (SMEs) with their sales or production dependent on human interactions to stop or reduce their activities temporarily or over a longer period of time. The pressure of demand on the country's medical units has reached the highest possible level, and the production of disinfectant and preventive products has become a new priority for the economy. Corona's financial burden, along with a sharp drop in oil revenues, will have a negative impact on government development activities, and reduction in government expenditures will exacerbate



the decline in total demand. In total, it appears that about 60 percent of the country's economy is directly affected by the corona and its preventive measures.

The share of insurance in the value added of the service sector is about 1.8% and 0.6% in total value added (GDP). Based on input-output table analysis, the direct impact on insurance from the growth or recession of other economic activities is about 0.35, putting the insurance sector in 38<sup>th</sup> place with respect to the extent of adverse impacts the sector receives from the other activities. The total impact (direct and indirect) equals to 1.61, putting the insurance sector in the 35<sup>th</sup> rank in terms of sensitivity to the demand of other sectors. Among the various sectors, building activities, water, air and roads' transportation, have the most impact on insurance demand in the country. Based on the two demand reduction scenarios (a study by the Parliament Research Center and a study by Isfahan Chamber of Commerce), the value added of insurance industry in a quarterly period will experience a decrease of 6.2 and 6.8 percent, respectively. This reduction will be equivalent to a decrease of 15.07 and 16.66 percent in charged premiums in the period.

It seems that some of the activities that came to a halt or reduced their activities will reenter the market stronger than the pre-Covid after the virus fading away and as a result, bring about a tangible boom. But for some sectors, consumer and economic behaviors are not easily restored, and the effects of the disease on the economy of those activities will be more long lasting. It is also feared that the increase in people's mobility after the slowdown of the disease create a new wave of spread and hurting the economy once again and more severely. Therefore, the quality of the governance and management of this issue will be a determining factor in controlling the economic consequences of the disease. The Ministry of Health has developed preventive protocols for many businesses that can facilitate the process of returning to normal conditions if they meet the required quality.

With respect to total demand, given the predominant share of low-income groups in the country's population, it seems necessary that supporting programs of government for low-income households to continue with greater vigor to prevent further declining of total demand due to income reduction. It is also necessary for the government to take advantage of the current growth of the capital market and, while providing the necessary financial resources, develop construction activities and, with an expansionary fiscal policy, prevent the deepening of the economic recession.



## References

1. A series of reports on the prevalence of corona virus, the impact of corona prevalence on production-service trade unions (the result of telephone surveillance of units across the country during the first two weeks of April 1399 by work areas (36). 1399, Parliamentary Research Center.
2. Central Bank - Time Series Database. Address: <https://tsd.cbi.ir/>
3. Corona disease assessment report on Iran's economy, Economic Research Unit. 1399, Isfahan Chamber of Commerce, Industries, Mines and Agriculture.
4. Corona Economic Effects and Prevention Strategies, Ministry of Industry, Mines and Trade, March 2017, Deputy of Planning and Programming (Policy-making PowerPoint).
5. Dr. Hashemian's interview with Sima News Agency, available on the news agency's website on 2/10/1399 and address <http://www.iritv.ir/portal/newsview/31876>
6. Epidemiological report of Covid-19 patients in hospitals under Tehran University of Medical Sciences. 1399, Covid-19 Epidemiology Committee.
7. Forouzandeh, Ramin. 1399, Corona outbreak: trends and implications by looking at the oil industry, (PowerPoint), third edition.
8. Institute of Business Studies and Research, Export Development Roadmap Document, available on the Institute's website on 10/2/1399.
9. Iran Statistics Center - Database for 2011. <https://www.amar.org.ir/>
10. Iran Statistics Center - National Accounts. <https://www.amar.org.ir/>
11. Online news agency, interview of the Deputy Minister of Health, available on the news agency's website on 2/10/1399 and address: <https://www.khabaronline.ir/news/1377494/%D9%87%D8%B2%DB%8C%D9%86%D9%87-%D8%A8%DB%8C%D9%85%D8%A7%D8%B1-%DA%A9%D8%B1%D9%88%D9%86%D8%A7%DB%8C%DB%8C%D8%AF%D8%B1-%D8%A2%DB%8C-%D8%B3%DB%8C-%DB%8C%D9%88-%D9%88-%D8%A8%D8%AE%D8%B4%D8%A8%D8%B3%D8%AA%D8%B1%DB%8C-%D8%A7%D8%B9%D9%84%D8%A7%D9%85-%D8%B4%D8%AF>
12. Proposed policies and measures to compensate the adverse economic effects of the prevalence of corona disease (comparative study of countries and identification of vulnerable guilds), Institute of Business Studies and Research (PowerPoint), fifth edition dated 12/26/1398.
13. Report of economic effects of Covid-19 in the post-Corona period and how to deal with its negative consequences on the country's economy (with emphasis on the monetary and financial sector). 1399, The Chamber of Commerce, Mining and Agriculture Industries, Monetary and Financial Committee.
14. Soori, Amir Reza. 1399, The Consequences of Coronavirus on the World and Iran's Economy. Institute of Business Studies and Research, Department, Macro and Future Research.

# C VID-19

## CORONAVIRUS

Insurance Research Center. 43, West Sarv Ave., Kaj Sq., Saadat Abad, Tehran, Iran.

Postal Code: 1998758513

Phone: +98-21-22084084- ext. 129

Fax: +98-21-22081088

Email: [INTinfo@irc.ac.ir](mailto:INTinfo@irc.ac.ir)