

Oil Revenues, Fluctuations in Economic Growth Rates and the Risk of Political Instability in Iran in Post JCPOA

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ABSTRACT

The present paper is meant to answer the question: How fluctuation in economic growth rate increased the risk of instability in Iran in the Post-JCPOA? In response and based on reliable data and taking a political economy approach, it is hypothesized that the high fluctuations in the economic growth rate associated with JCPOA has led to the political instability through deepening and intensification of expectations gap. To do so and using a comparative method, a number of factors affecting the economic growth rate including agriculture, oil, services, industry and mining as well as Foreign Investment are analyzed in two time spans of pre and post JCPOA. For further validity, reference is made to the results of some polls conducted by some credible institutes. The findings show that the sudden rise and fall of the economic growth rate due to oil revenues after the agreement turned the hope created in the context of the expected gap created by the promises of the agreement into disappointment; and paved the way for street unrests. It reflects the key fact that joining an international security regime by a Rentier country with a revolutionary approach, not only cannot guarantee national interests, but it may also increase the risk of political instability.

1. Introduction

Issuance of six United Nations Security Council resolutions against Iran under chapter seven of the United Nations charter, followed by the passage and implementation of the US and EU resolutions, placed the nuclear issue and the necessity to reach a deal with the West over it to exit the predicament and reduce the risk of war at the center of Iran's eleventh presidential elections candidates attentions in the course of the

presidential debates in 2013. With Rouhani's victory in the presidential elections, his government rearranged the foreign policy priorities so that realizing the president's promise became the top agenda in foreign policy of Iran. After several rounds of intensive negotiations and extending of the Geneva Agreement^{*}, a nuclear agreement was signed between Iran and the 5 + 1 in July 23, 2015. A comparison of Iran's oil revenues before and after the JCPOA clearly shows that after a downward trend from 2012 to 2015, a few months after the

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* On 24 November 2013, the Joint Plan of Action, also known as the Geneva interim agreement, was a pact signed between Iran and the P5+1 countries in Geneva, Switzerland. It consists of a short-term freeze of portions of Iran's nuclear program in exchange for decreased economic sanctions on Iran, as the countries work towards a long-term agreement.

implementation of JCPOA, we witnessed a significant increase in oil revenues through increased exports (despite a decline in the price).

Table 1. Iran's annual oil revenues before and after the JCPOA.

| | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
|--|-------|--------|-------|------|-------|-------|
| Oil and condensate revenues (billion dollars) | 68/6 | 64/3 | 55/45 | 31/8 | 55/7 | 65/8 |
| Brent Price (Dollar) | 111/7 | 108/69 | 99/54 | 53/6 | 45/13 | 54/74 |
| Crude oil exports (million barrels per day) | 1/21 | 1/2 | 1/92 | 1/92 | 1/92 | 2/125 |

Source: Researchers' calculations from Data obtained from Central Bank of Iran (CBI.ir)

As Table 1 shows Iran's oil revenue has fallen by about 25 percent in the spring of 2012, and as a result, overall economic growth experienced a negative 6.7 percent growth in the year. And this trend continued until the JCPOA was signed. From this time onward, the economic growth rate began to experience a positive trend and in particular after the implementation of the deal in the winter 2015, oil sector growth reached around 40% and economic growth 15% in summer 2016.

Soon after, while about \$ 22 billion (ISNA, 2017) of Iran's blocked money was returned and the amount of oil sales increased from about one million barrels in 2015 to two million barrels at the end of 2016 and to two million

and three hundred thousand barrels in 2017; the country experienced an exponential increase in insecurity cases which mostly was manifested in union and syndicate protests.

A few months later, after Donald Trump took office in the United States and repeatedly threatened to withdraw from the nuclear deal (Bucher, 2017), the number of insecurities were increasing to December 2017 which a widespread protest overtook 160 large and small Iranian cities in that bore little similarity to the previous instabilities in the last forty years, in terms of gender participation, extent and the characteristics of the population and the individuals involved.

Figure 1. The number of insecurity incidents in Iran by the beginning of 2016.

Data source: <https://www.cntsdata.com>)

As shown in the chart above, the rise in insecurity incidents under Rouhani's presidency is not limited to December 2017, but there is instead, an exponential increase in such incidents - though in mild levels such as syndicate gatherings – in tandem with the rise in the earnings from JCPOA. However, December 2017 was a turning point which dissatisfactions emerged in a more dangerous form of instability such as widespread riots. Although having a mere quantitative view to these events - without attention to their quality and nature– could be misleading, but the importance of diversity in the cases of insecurity and their high number, irrespective of their quality, has its own implications for the analysis of the situation and provides a preliminary understanding. Perhaps one of the strategic implications of the December 2017 instabilities that made it a unique, is the

rise in the hope among US officials for a regime change in Iran. Trump's promise to European allies that the system will collapse in three months, as well as the US maximum pressure policy manifested in the US Secretary of State, Pompeii's twelve demands (Pompeo lecture in The Heritage Foundation, May21, 2018), and most importantly the US withdrawal from JCPOA in May 2018 (Landler, Mark, May 8, 2018) is one of the prominent indicators and the beginning of special measures that originates from the unprecedented instabilities of December 2017 in the streets of Iran.

Since then, there are a lot of ambiguities for the public about the causes of these incidences and their future as far as raising questions about the future of the political system. That's why the media, and research institutes, began presenting analyses and explanations



about the causes of these incidences and the possibility of their resumption.

Some of the analyses and explanations traced the grounds and reasons of these incidences in the lack of political freedom, institutionalized corruption, systemic inefficiency, regional policies, and the religious nature of the political system, poverty and injustice. There are others who unlike the first group, attribute the protests to rumors suggesting such as the environmental tensions, droughts and fine dust problems, the issue of financial institutions and so on. Some also talked about the role of intelligence services in creating unrest, some about the role of intrusive agents, and some about the role of social media such as telegram in creating unrest. Alongside these brief and mostly journalistic analyses, there were also some works that tried to analyze the reasons for the occurrence of the December 2017 instabilities using theoretical frameworks and from a scientific standpoint. Some scholars have applied Peter Eisinger's theory of political opportunity, assuming the existence of discontent and economic-based social demands in the occurrence of the December 2017 instabilities and pointing to how social discontents is transformed into social movements turning from the stage of resistance and protest to the stage of shaping a general and pervasive political crisis, have mentioned the following factors as the most important political opportunities that have formed the instabilities of December 2017 (Pour Saeed, 2016):

- Accumulation of the demands of different layers of Iranian society through the formation of equivalent chains under different governments and their failure.
- Destructive and exclusionary competition between the ruling elites and formation of the so-called factionism of the official elites
- Intensification of social-structural problems, including corruption, unemployment, social disorders and social despair
- Decline in the status, value or the significance of the institution of elections

Some analysts, while pointing out the underlying causes of the protests in society and with reference to the butterfly effect, emphasize the catalyzer or proximate causes which refer to the competing political actors and their role in breaking the atmosphere of silence and surfacing of the deep-rooted discontents (Rabie, 1397):

"Among communication theories, there is a theory called the spiral of silence according to which when people are in a state of insurrection and unrest, but feel that there is no space to reveal it, the ground is paved for

their unrest when the dominant atmosphere is fractured. It is analogous to a dam, when holed or fractured a disaster and flood ensues. In December 2017, events in Mashhad broke the spiral of silence of the crowds."

These analysts, who are often supporters of present government, believe that (Rabie, 1397):

"A political current that wished, in a way, to humiliate the government and take people to streets against it, led to the break of the spiral of silence, but the joining of other cities was not what they wanted. In Mashhad itself, soon after the slogans changed, a game began that was no longer under the control of those who started it."

Now, few years after the December 2017 instabilities, and the settling of the emotions rising from multiple and diverse interpretations and analyses, in this article we have attempted to engage with the relation (not as a causative) between JCPOA as an international agreement with the incidences of political instability from a political economy perspective, more comprehensive than the mere December instabilities. Perhaps the innovation of this article lies in this challenging point that the JCPOA which has already emerged with the aim of bettering the wellbeing of the people and improving the economic indicators of the country with some considerable initial success, turned into an area for occurrence of instabilities in the country and the rise in relative instability risk.

Obviously, many of the analysis presented above can be both rejected and approved but presuming the recognition of the share of those causes in the occurrence of insecurity and unrest, none of them could explain the how or process of relations between those incidences and their causes.

The hypothesis we examine to explain for the post-JCPOA instabilities and the continuation of the internal instabilities risk, is organized as follows:

The high fluctuations in the economic growth rate associated with JCPOA increased the risk of political instability through deepening and intensification of expectations gap.

As mentioned, it should be reiterated that authors are concerned with "How" and not with "Why". In social phenomena, basically the linear and univariate approach of explaining the phenomena comes to some fundamental flaw/s. Therefore, it is emphasized that the study, together with its hypothesis, is going to deal with the "How" and neither the "Why" nor the exploration of the causes of political instability.

As a result, the comparative analysis makes the chief methodological approach of the present work. Via this method, the “Joint Comprehensive Plan of Action” or JCPOA serves as a macro event or moment and also a turning point contributing to the exacerbation of instability. What is examined by this “how” question is the sharp fluctuation in the growth rate? To explain how it has happened, the “growth rate” variable was employed, and thus, four dimensions and indicators of this concept, not narrowly, but broadly, as a thick signifier, and based on some reliable data, were compared in two pre-JCPOA and post-JCPOA. In comparative analysis method, it is important to calculate measurable criteria and indicators to compare two phenomena or a phenomenon in two time periods in order to find similarities and differences. Of course after on (similarities and differences) one might ask why, which is not the subject of this article, but a critical question for future research.

On the other hand, to complete the process of “HOW” process, or how it is linked to the political stability, the theory of the relative deprivation and the index of despair (as the principles underlying this theory) were applied. That is to say, the sharp fluctuations in economic growth around the macro-event of JCPOA increased the risk of political instability in the society through the mechanism of relative deprivation of the social classes and their increasing disappointment about the enjoyment of the tangible benefits invoked by promises of officials. Thereby, once more it is announced that this paper is not going to explain “Why” or explore the causes, yet, it is to deal with the “How” question. This manner (how) contributes to the macro event of JCPOA.

2. Theoretical Framework

“Political stability” refers to the balance between “popular demands” on the one hand and “government functions” on the other hand. In other words, within any society, if the ruling political system is able to respond to the diverse demands of the people and the system is consistent with the beliefs and ideologies of the society and is approved by that society, the system will be stable. Thus, if government efficiency declines for any reason, or if national belief rejects the ruling model, discontent is likely to arise. If this discontent expands and deepens, it deteriorates the political legitimacy of the system and eventually leads to protests which are the manifestation of political instability. According to David Sanders,

political stability refers to the relative lack of some kind of destabilizing political event that occurs as a change or challenge in any dimension of the political system (Sanders, 2001: 1). The unstable political situation is also a situation in which the influence or interaction within and between elements of the political system is unpredictable or indefinable (Sanders, 2001: 119). Political instability is measured by the degree of aggressive behavior of the individual or group within the political system against other individuals, groups and formal or semi-formal institutions affiliated with the government. Political instability involves the instability of established political power, the volatility and rapid shifting of the positions of political actors, and steady transformation of policies. This situation occurs when the established power, ruling groups and actors and current policies are constantly subject to intense pressure and aggression by rival forces (Azimi Dolatabadi, 2008: 68). Political instability can have a variety of dimensions including: syndicate protests and gatherings, anti-government demonstrations, general strikes, guerrilla war or riots, independence and secessionist movements, chaos, political assassination, political cleansing, government crises, public or revolutionary movement, Civil War and Coup (Banks, 2017).

Different views and theories have been put forward as the causes of political instability and each of the different aspects of it which will be discussed in the following section from the perspective of developmental political economy (Patrick, 2006).

Although there is some consensus among development theorists on the macro-development goals including economic growth, equality, stability, democracy, and independence; there are diverging viewpoints about how to achieve them and more precisely the relationship between these goals. These viewpoints can be divided to three paradigms. The first paradigm is based on the intrinsic compatibility of development goals, the second paradigm is based on irreconcilable inconsistencies, and the third is based on the necessity to end these inconsistencies (Huntington, 2011). The intrinsic compatibility of development goals paradigm is based on the assumption that achieving one development goal spontaneously reinforces other development goals. The following table illustrates the distinction between the three theories regarding the focal point of other development goals (adapted from Huntington, 1987).

Table 2. Intrinsic coordination theories between development Goals (adapted from Huntington, 1987).



| theories | Base Development Goal | Nature of base goal |
|-----------------------------------|-------------------------------------|---------------------|
| Liberal development goal | Economic growth (wealth production) | economic |
| Traditional Marxist theory | Equity and socialism | economic |
| Dependence theory | independence | economic |

In contrast to the above paradigm, stands the paradigm of inherent conflict of development goals. According to this paradigm, not only some development goals do not provide the driving motive for other goals, but they are essentially in conflict with them. In particular, the emphasis is on the relationship between economic growth with other development goals, particularly political inequality and instability.

While liberal development models have emphasized the congruence of poverty or low rates of economic growth with political instability, for the inherent conflict paradigm researchers, the focal point is the relationship between economic growth and political stability (Olson, 1963).

But whether economic growth is the cause of political instability or one of the major contributing factors to the risk of political instability is disputed. Some theorists point to the Rete / Level paradox in explaining the contradictory relationship between economic growth and political stability in which a high level of variable A can lead to a high level of variable B, but a high rate of A does not necessarily lead to a high rate of B and can rather be accompanied by no increase or even negative rate of variable B (Huntington, 1987: 89). Accordingly, high levels of economic growth may have a direct relationship with high levels of other development goals such as stability and equity, but the relationship between high growth rates and other development goals does not necessarily follow such an equation (Marshal, 1930).

What we adopted in this paper to write a hypothesis, is neither to equate economic growth with instability nor, even as Huntington describes, using the rate / level paradox, but to explain the relationship between high fluctuations of growth rate with internal instability. On the other hand, the high fluctuations can depend on different causes or conditions. Since we have so far approached examination of the instabilities that culminated in the December 2017 incidents and the continuing risk of high political instability in Iran from the perspective of political economy, the only issue over

which there is a consensus and falls in this timeframe is JCPOA. Therefore, we have focused on this turning point. However, in order to elucidate the relationship between Instability and fluctuations of economic growth rate and political instability or to explain the mechanism of the above-mentioned relationship, we need to use other complementary theories. In our view, Robert Gurr's view of relative deprivation still better explains this relationship.

Ted Robert Gurr attributes all violent behavior to relative deprivation. This theory can be divided into two parts: (a) how the relative deprivation is formed in the minds of individuals and the resources of deprivation; and (b) how the created deprivation is unfolding in the form of collective political violence influenced by social variables (Sam Daliri, 2003:815). Although the power of government force, institutionalization, legitimacy, and structural and social facilitation all have a significant effect on the level of internal insecurity, relative deprivation is the only important and effective factor. Feyerabend also believes that social frustration defined as the ratio of the formation of demands to their satisfaction is a major source of all violent and insecure political behavior. Feyerabend concludes that although government pressure, high levels of economic and social change, and a lack of modernization are among the major contributors to political violence and domestic insecurity, but social frustration is the most immediate and important source of violence or insecurity. In the gap hypothesis, Huntington believes that the gap between people's expectations of social change and the economic and political resources of the state to meet expectations and aspirations, determines the level of domestic insecurity. In political violence after the formation of relative deprivation and dissatisfaction, if political rulers are known by people as the cause of deprivation, the mass violence takes on a political form and aggression resulting from frustration focuses on inflicting damage to the source of deprivation. (Sam Daliri, 2003: 817). The kind of political violence that emerges is another issue which in Ted Robert's theory depends on the extent of

the potential for political violence, the degree of institutional support of the regime or the opposition, and the extent of the regime or opposition's control over coercive force (Gurr, 1998, p.459).

From theories of relative deprivation, it can be deduced that any factor that gives rise to expectations for a better life for the people, without providing the means necessary to meet those expectations, can lead to political instability. On the other hand, based on developmental theories, it focuses on the conflicting development goals, in particular economic growth and political instability.

The economic growth of a rentier state depends on a variety of variables, such as: the structural and functional effects of oil revenues, excessive expansion of government spending and fiscal policy instability, high and volatile money growth rate, government's determination of interest rate, real currency rate decline, technology development and foreign policy (Nili et al., 2008). But what we have emphasized in this paper's hypothesis is not the rejection of these factors, but rather finding the powerful variable its entrance in the period between December 2013 and December 2016 and even later, played the most important role in activation of these factors.

It seems that what is relevant in this paper (2013-2016) is the JCPOA that will be addressed in the next section with a comparative approach, relying on statistics and information on its impact on the determinants of economic growth in two different time frames of before and after the JCPOA.

3. JCPOA and Economic Growth Rate

In simple terms, economic growth is the increase in a country's output in a given year compared to the base year. At the macroeconomic level, economic growth is the growth in the Gross National Product (GNP) or Gross Domestic Product (GDP) in the year under review relative to its value in a base year (Callen, 2008). The reason that the base year prices are used to calculate economic growth is that the calculated increase in GDP results from an increase in output and the effect of rising prices (inflation) is eliminated (Mohammadi, 1998: 27). Gross domestic product can be calculated in three ways: 1) production or value-added method 2) expenditure or expense method 3) income method (calculation based on income). It is usually difficult to calculate GDP based on the method of income because of the inaccuracy of the income of different sectors and therefore either the value-added method or the expenditure method are used instead to calculate national income (De Gregorio, J,1992). In order to calculate the GDP by value-added method, the economy is divided into four sub-sectors including agriculture, oil, industry and mining and services sector (Branson, 1999: 48). According to the principle of equality of GDP (value added) and total expenditures during the module, instead of calculating the value-added method, the expense method can be used. In the expenditure method, we have three sectors of consumption (private and public), value added of industries and mines (private and public) and net exports. Thus, the volatilities in economic growth depend on the amount of value-added changes in each of these four sectors. The following table shows share of each of four sectors in Iran's GDP in 2017.

Table 3. The Share of Different Sectors of Economy in Iran's GDP in 2017 (Percent).

| Total | Service | Agriculture | Mining and industry | Oil |
|-------|---------|-------------|---------------------|------|
| 100 | 49/5 | 6/5 | 22/5 | 21/5 |

Source: data from central bank of Iran (CBI.ir)

It should be noted that the total Rial value of the GDP at constant prices in 2017 was 6940 billion.

Table 4. Gross domestic product at constant prices in 2111(oil and non-oil) - amounts in parentheses shows the annual growth (thousand billion Tomans).

| year | Excluding oil | Including oil |
|------|---------------|---------------|
| 2012 | (-0.9)493 | (-6.8) 563 |
| 2013 | (-1.1)501 | (-1.9) 585 |
| 2014 | (3.0)516 | (3.2)604 |



| year | Excluding oil | Including oil |
|------|---------------|---------------|
| 2015 | (-3.1)500 | (-1.6)594 |
| 2016 | (3.3)516 | (12.5)669 |
| 2017 | (4.6)540 | (3.7)694 |
| 2018 | (-2.4)527 | (-4.9)660 |

Source: data from central bank of Iran (CBI.ir)

In Iran, oil is one of the most important products that play a major role in GDP, especially in export production. Although taxes and other factors also play an important role in the national production index, but due to the high share of oil in the general budget of the country (about 40%), this sector is very important and at the same time it is considered as the Achilles heel of the budget. This is because any volatility in this important variable will cause fluctuations in GDP and per capita income.

As mentioned, the most important factors affecting the economic growth rate include the growth rates of industry, oil, agriculture and services. The factor affecting economic growth by the method of calculating total cost is also considered, but since the rate of capital formation, or investment, is the most important factor in the growth rate volatilities in this method, it is also examined here. On the other hand, to establish the relationship between these indicators in two periods before and after the JCPOA with the expectation gap variable, the status of welfare and sustainable livelihood indices that somehow represent these expectations and

the expected widening of the gap should be analyzed. To this end, we will refer to the International Index of Logatome's Quality and Economic Welfare, as well as the Gini coefficient that addresses the class gap in society. In addition, occupation status in the pre- and post-JCPOA periods is also evaluated as a complementary index.

3.1. Investigating the Growth Trend of the Oil Sector Index and GDP

Analyzing the Problem Based on Revealed Facts in Iran Economy Iran is among the most important countries regarding the endowment of natural resources. According to the OPEC the country owns about 10.6 percent (2012) of the global oil reserves. Before the introduction of the recent sanctions by the US and the EU, oil accounted for 80 per-cent of the Iranian exports and up to 60 percent of fiscal revenues. Similar shares can be observed for the GCC countries. Table 5 for some macroeconomic characteristics in different periods of the development. (dreger & rahmani,2016).

Table5. Macroeconomic characteristics in different periods of the development.

| | Iran | | | Gulf cooperation countries | | |
|-----------|------|-----------|-------|----------------------------|-----------|-------|
| | GPD | Inflation | Oil | GPD | Inflation | Oil |
| 1965-1971 | 11.4 | 1.9 | 21.4 | | | |
| 1972-1979 | 3.7 | 13.4 | 14.2 | | | |
| 1980-1988 | 1.4 | 19.7 | -17.3 | -2.6 | 1.7 | -21.7 |
| 1989-1996 | 6.1 | 25.7 | 31.7 | 4.4 | 2.9 | 4.9 |
| 1997-2004 | 5.1 | 15.5 | 20.7 | 4.5 | 1.7 | 9.6 |
| 2005-2012 | 3.4 | 18.5 | -6.9 | 5.4 | 4.7 | 6.4 |

With the beginning of the Central Bank sanction and the European action in boycotting the purchase of Iranian oil in late 2011 and early 2012, the country's crude oil production was significantly reduced, reaching 2/85 million barrels per day in September 2015. After the agreement on Iran's nuclear negotiations with so-called 8+1 countries, the oil industry, especially oil production and exports, increased significantly, and Iran was able to significantly regain its lost production. In crude oil exports, in post JCPOA period, the oil industry had a good opportunity and managed to increase oil exports.

It should be noted that, Iran exported more than 2 million barrels per day of crude oil and gas condensate to various destinations before the withdrawal of the United States from JCPOA and the re-imposing oil sanctions (November 2018). After the withdrawal of the United States from JCPOA and the announcement of new sanctions against our oil industry, the oil production and exports decreased. The range of forecasts for

decreasing Iran's crude oil exports after the imposition of sanctions varies from 200,000 barrels to one million barrels per day. The main reason for decreasing the crude oil and gas condensate production is the lack of export capacity due to US sanctions.

As the data in Figure 1 illustrates, Iran's crude oil exports in August 2020 were less than 300 barrels per day, of which about 200,000 barrels were purchased by China and the rest were sold to other customers through unconventional methods. Given that Iran's oil export is subject to US sanctions, most of Iran's oil was exported to China before the Corona Virus outbreak, so that in 2019, an average of about 250,000 barrels per day has been exported to China (as the main customer). Therefore, as long as the oil sanctions are in place, with the partial elimination of the effects of the Corona virus pandemics, it is not possible to expect more exports than this level¹.

Table 6. Iran crude oil sales (pre& post JCPOA).

| (average daily volumes, in barrels per day) | | | | | |
|---|---------|--------------------------------|-------------------------------|---------------------------------|---------------------------------|
| Country/Bloc | 2011 | JPA period Average (2014-2016) | At U.S JCPOA Exite (Maye '18) | At SRE Determination (Oct. '18) | May 2020 (post-SRE Termination) |
| European Union (Particularly Italy, Spain, Greece) | 600.000 | negligible | 520.000 + | 100.000 | 0 |
| China | 550.000 | 410.000 | 700.000 | 838.000 | 130.000 |
| Japan | 325.000 | 190.000 | 133.000 | 0 | 0 |
| India | 320.000 | 190.000 | 620.000 | 354.000 | 0 |
| South Korea | 230.000 | 130.000 | 100.000 | 0 | 0 |
| Turkey | 200.000 | 120.000 | 200.000 | 161.000 | 0 |
| South Africa | 80.000 | negligible | negligible | 0 | 0 |
| Other Asia (Malaysia, Sri Lanka, Indonesia) | 90.000 | negligible | negligible | | 0 |
| Taiwan | 35.000 | 10.000 | 67.000 | 0 | 0 |
| Singapore | 20.000 | negligible | negligible | 33.000 | 0 |
| Syria | 0 | negligible | 33.000 | 96.000 | 0 |
| Other/unknown (Iraq and UAE swaps, other) | 55.000 | negligible | 100.000 | 21.000 | 97.000 |
| Total (mbd) | 2.5 | 1.06 | 2.45 | 1.60 | 0,227 |

Source: congressional research service (July23, 2020)

¹ In addition to the impact of US sanctions on reducing Iran's crude oil production and exports, the widespread outbreak of the Corona virus in most parts of the world has led to a

significant decline in global oil demand, which this article does not cover the effects of this phenomenon.



Along with other political and economic motivations of United states, paving the way for the US oil market to enter into the global oil market can be regarded as one of the important motivations of the US government in the violating the JCPOA. Increasing energy production with shale oil and gas motivation is one of the main energy policies of the Republicans in line with the US energy independence project.

As shown in chart 2, the United States has experienced the largest increase in oil production, both during the 2011 sanctions period and after this country's withdrawal from the JCPOA. Following the one-way withdrawal of the United States from the JCPOA agreement in 2018, the country has increased its oil production by more than 3 million barrels per day to an

unprecedented level of 13.26 million barrels per day. The United States is currently the world's largest oil producer, after Saudi Arabia and Russia. Oil production in Russia and Saudi Arabia in 2019 compared to 2018 has changed 240 and 200 thousand barrels per day, respectively. One of the main reasons for limiting oil production of these two countries during this period was their relative obligation to the OPEC Plus oil agreement to manage the oil market. Another issue that can be mentioned to explain this trend is the limitation of the production capacity of these two countries to higher production ceilings. The US has gained the most benefits from the Iranian oil removal from global markets, and due to OPEC restrictions, Saudi Arabia and Russia have experienced a little but not a significant increase in their oil production.

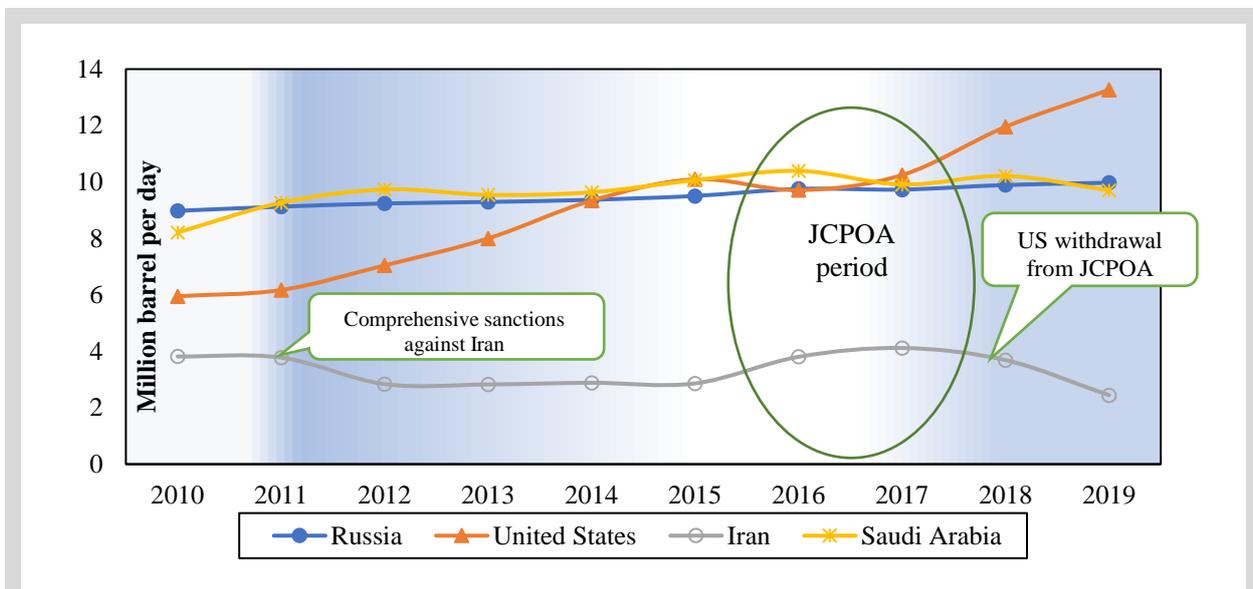


Figure 2. Iran oil production flow and the main players in this market (before and after the JCPOA).

Source: global energy statistical yearbook 2020.

Regardless of who has benefited the most from Iran's oil sanctions, an important point to note is that the business cycles (recession and prosperity) in the Iran's economy are inevitably affected by oil revenues. To better understand this phenomenon chart 3 illustrates the growth of GDP at market prices (including oil) and GDP without oil over the past decade. Two important point can be mentioned here. First, during two years of 2011 and 2018, when two rounds of US sanctions were imposed on Iran, our economic growth has been negative with and without oil revenues. The second point is that the growth of GDP, including the value added of the oil sector, has been more turbulent, which shows that the increase and decrease in the economic growth is significantly dependent on oil revenues. As a result, the

economic recession and prosperity in our country is significantly dependent on the exogenous oil revenues, and this dependence has led to an increase in the vulnerability of our economy through the imposition of sanctions. According to the latest data obtained from Statistical Center of Iran, GDP at constant prices in 2010, in the first quarter of 2020 reached 1656 thousand billion Rials (including oil revenues) and 1445 thousand billion Rials (not including oil revenues), which shows a growth of -3.5 percent of GDP with oil and -1.7 percent of GDP without oil in the spring of 2020.

As the figure below shows, in 2016, optimistic expectations resulting from the implementation of JCPOA along with increased oil sales have led to a positive GDP growth this year. But the important point

is that this positive trend has not lasted and in 2017 GDP growth has become decreasing again.

But this growth will be of poor quality and short lived. Because oil dependent GDP may be positive in the first period, but because it is not continuous, it will

decline in the second period and then become negative. But rising expectations in the post-JCPOA period, which is being repeated as in 2017, by not receiving any response from real sector of the economy can lead to social riots and unrests.

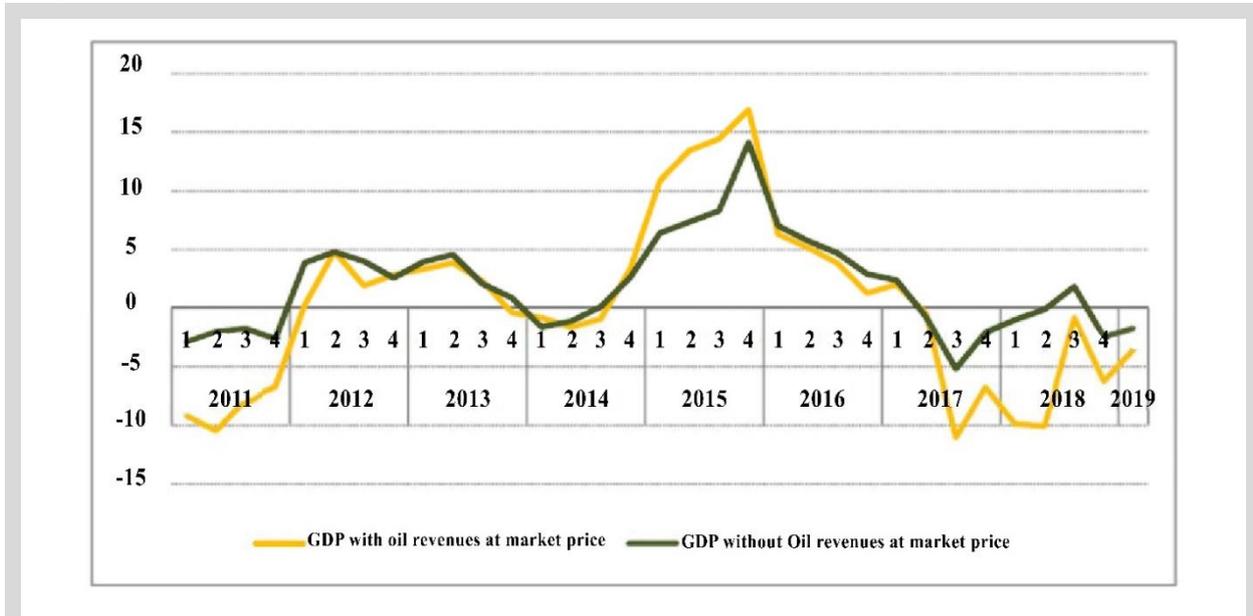


Figure 3. The growth of GDP with and without oil revenues in Iran.

Source: data from central bank of Iran (CBI), 2020.

On the other hand, we know that almost 1.4 of GDP belongs to oil, and so the 40% growth in this sector was the most important reason for GDP growth in 2016. However, what is very important is to examine the impact of this increase in income and consequently the increase in economic growth, especially in 2016, on the

economic well-being and employment of the people, which will be addressed in the following sections. Therefore, we should see how much the one-year growth rate has been affecting the productive sectors of the economy and thereafter the expected indicators such as employment and subsistence.

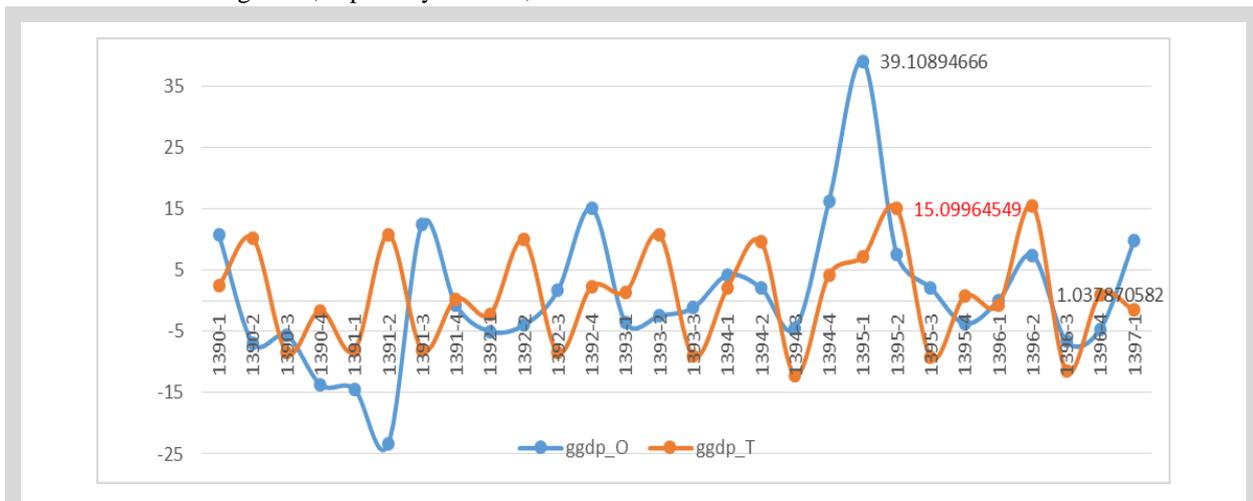


Figure 4. Value added growth of the Total economy (GDP_T) and value-added growth of the oil sector.

Source: researchers' calculations from data obtained from central bank of Iran (CBI.ir)

Due to the high dependence of the government budget on oil revenues, if the mechanisms are not

designed by the government to manage fluctuations and maintain financial discipline, the oil rent fluctuations



severely affect the government budget. Since rentier states expenditures are largely determined by oil revenues, the volatility of petroleum revenues leads to instability in government spending. Furthermore, the rentier state budget is a major contributor to the aggregate demand of the economy, the instability of the state budget and its expenditure leads to the instability of the aggregate demand of the economy and consequently to production and economic growth. It should be noted, however, that the reaction of production and economic growth to oil rent volatilities is asymmetric, meaning that the decline in oil revenue has severer effects on output and economic growth than its increase. In fact, the reaction of the Iranian economy to oil rent volatilities resembles a drug addict. Drug use only keeps a person on their feet, and not taking the drug kills the addict. Similarly, when oil revenues are high, the economy is functioning, but as soon as oil revenues fall significantly, the economy faces a negative shock and economic growth rates decline sharply (Zamzadeh, 2012).

3.2. Investigating the Growth of Industry Sector and GDP

As it is shown in chart 5, over the past decade the value added of this sector has been about 50 hundred

billion Tooman. And during the sanctions and lifting of sanctions, there has been a change of about 3 hundred billion Tooman. In other words, considering the implementation of the JCPOA in 2015, the value added of the industrial sector accounts for just about one percent of the changes in GDP. However, the positive expectations created in the society about the effects of JCPOA, were far greater. Therefore, this increase in value added of the industry sector was far from positive expectations. Therefore, it can be concluded that the highest economic growth in the post JCPOA period was due to the increase in oil revenues, which did not have a significant impact on the growth of the industrial sector.

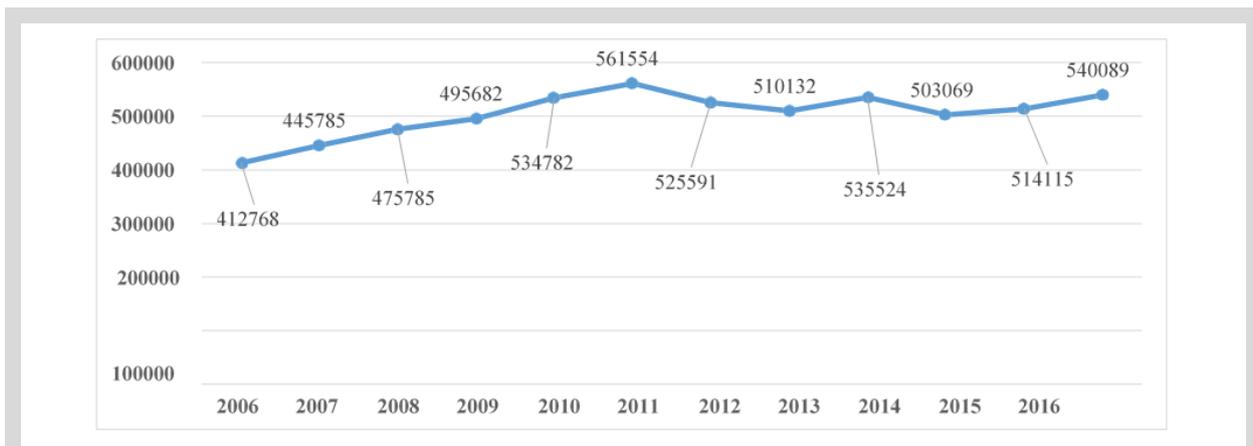


Figure 5. Value added of the industrial sector during the period of 2006-2017 (at constant prices of 2004- billion rails) data source: central bank.

Source: central bank of Iran, data and statistics department, Iran national accounts department, 139

3.3 Investigating the Growth of Agricultural Sector and GDP

the value-added growth rate of the agricultural sector increased from 2011 to 2014, but decreased in 2015. Growth in this sector experienced a slight increase (about 0.1%) in 2017 and decreased by 2.3% to 1% in 2018 and declined in 2019. As the figure shows, although this sector does not have a significant impact on the value added of the overall economy of the country (about 6.2% in 2017), a separate survey of the agricultural sector shows that since the beginning of 2014 the country has been selling more oil, growth in this sector also declined,

indicating that the policy makers were more interested in oil revenues than the income of the agricultural sector. This means that the sanctions have inevitably led to a greater focus on the agricultural sector, which has been diminished by signing the JCPOA and hoping for oil revenues.

3.4. Investigating Growth Trend and GDP (service Sector value added trend)

Investigation on the services sector is of great importance due to the high share of this part of the country's GDP, so that in the year 2017 the share of services in GDP was 45%.

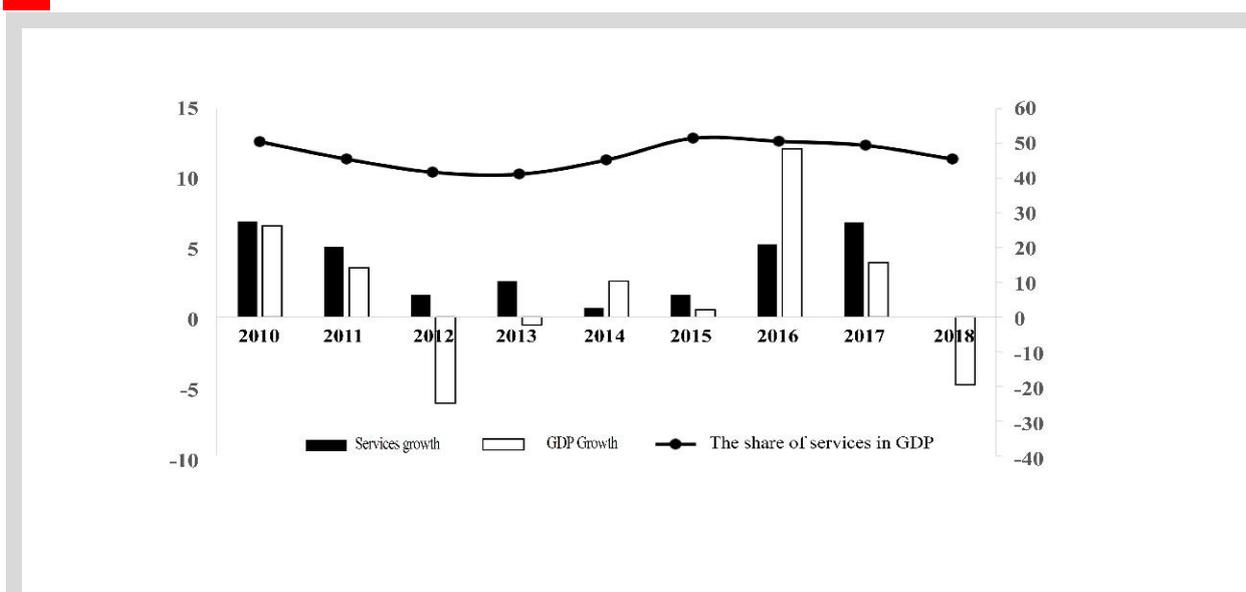


Figure 6. Service sector growth, GDP growth, service sector share growth, service share of GDP.

(Source: researchers' calculations from Iranian statistical center data)

As shown in chart 6, the growth of the service sector during the sanctions period has been declining, with growth from 5% in 2011 to 0.7% in 2014. Since the beginning of 2015, until Trump's violation of the JCPOA, for three consecutive years, the service sector experienced good growth, reaching 6.8% in 2016. But threats from 'Group B' led to a slowdown in service growth, reaching to 0 in 2018. It is important to note that although the signing of the agreements has led to a positive growth in the services sector and an increase in GDP over the period under review, its role is very low compared to other sectors including oil sector growth (130%).

Another reason for the growth of the service sector at the time of the signing of the nuclear deal between 2015 and 2016 can be attributed to trade and brokerage activities. Among the activities that have led to the growth of the service sector in recent years have been the growth of imports and the expansion of banking activities, especially of credit institutions, which have only increased the value added of the services sector without creating employment. It is necessary to explain that the attraction of most financial resources from

people in the form of bank deposits in 2016, and finally the bankruptcy of such credit institutions at the end of 2016 and the beginning of 2017, caused some public discontent in the society.

3.5. Investigation of the Process of Fixed Capital Formation

One of the most important variables affecting economic growth is investment growth. Without investment, production and employment would not happen. Therefore, we examine the statistics in this section to examine the impact of JCPOA on economic growth from the investment channel. As shown in Figure 6, although the trend of fixed capital formation has been increasing throughout 2011 and has reached its highest level during the period under review, it has seen a downward trend since this year. In other words, what the statistics show is that the implementation of the JCPOA did not have a significant positive impact on the formation of domestic fixed capital and the trend of this variable during the intensifying of nuclear sanctions (2011-2015) and after the nuclear agreement (2016-2017) was not different.

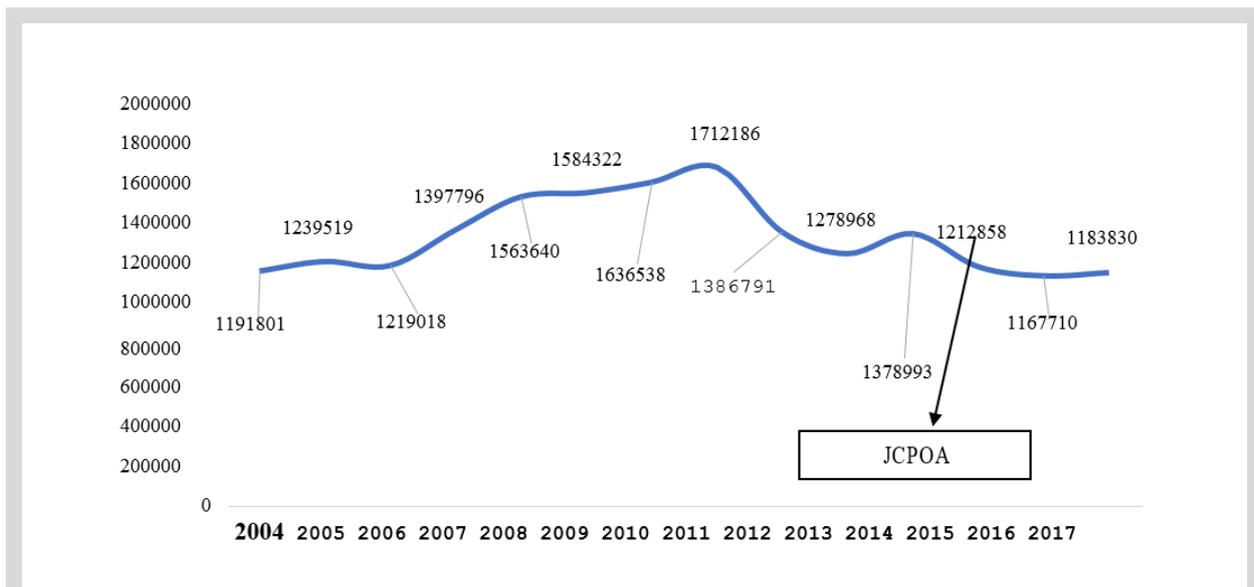


Figure 7. Fixed capital formation trend during 2004-2017 source: central bank. (constant price in 2011- billion rials).

(Source: Iranian statistical center data)

3.6. Investigating the Foreign Investment Trend and its Impact on Economic Growth in the Pre and Post JCPOA Periods

As shown in chart 8, the FDI variable experienced only one year of positive trend after the JCPOA, and it declined in 2017, at the same time as the US presidential election and the creation of an uncertainty atmosphere for foreign investors about the JCPOA. The sanctions have therefore had a delayed impact on the foreign investment. But it is important to note that the share of

foreign investment in GDP in 2016 is about 0.45%. Thus, as the figure shows, over the past decade, an average of about \$ 3 billion of foreign direct investment has been made in our country, indicating a minimal impact of this variable on the economy. In this context, it appears that during the period of JCPOA negotiations and the increase in positive expectations about foreign capital inflows, expecting a significant increase in foreign investment so that it could have a significant impact on economic growth - given the statistics and experience of absorption. Foreign investment - even in the pre-nuclear sanction's era - has not been feasible.



Figure 8. Foreign Direct Investment Trend over the period 2009-2017 (million dollars).

Source: Iran central bank

4. JCPOA and Expectation Gap

As mentioned in theoretical framework, the notion of expectations gap is among the key concepts in the relative deprivation theory, rooted in principle in the Marxist theory (Bischof, 2015, 17). This kind of deprivation means the gap between the value expectations and (what people think they should gain from the political system with respect to status, wealth, freedom and justice) and the observable value capabilities (what the people can earn from the political system in practice) (Gurr, 1998: 27). Davies who is among the pioneers and founders of this theory believes

that societies compare their conditions in a given time with a specific time in the past and despair if they conclude that they used to be less deprived (Davies, 1962:6). The relative deprivation can be explained in different patterns of descending, ascending and ambitious according to the two previously mentioned needs (Gurr, 1998: 46). Considering the above charts and measuring the role of JCPOA on the economic indicators as well as foreign investment, in this part, the influence of these factors on real sector of the economy that can be felt by the society and raises the citizens' optimism or pessimism is studied.

4.1. Employment Trend in the Pre and Post JCPOA Period

Official data from the Iranian Statistics Center show the unemployment rate was less than 11 percent from mid-2013 to the early months of 2015 when the JCPOA was signed. In other words, the country was forced to exploit its domestic capacity because of sanctions and reduced imports of final products. After the JCPOA, the unemployment rate rose again to above 12% after the currency restrictions were lifted. In other words, foreign exchange earnings and an 80 percent increase in oil sales did not increase or decrease employment rates which contradicts the rising expectations of the people from

JCPOA. The increase in people's expectations from JCPOA in the area of employment can be illustrated by the economic participation rate, which rose from 37.2% in 2014 to 40.5% at the end of 2017. In other words, people with the ability to work increased more than 3 percent. Furthermore, international index of Iranian economic welfare during the years 2012 to 2017 which shown in chart 9, indicates that it has not been changed that much. In other words, JCPOA has not made a significant change in the components of economic prosperity, and Iran's rank has declined from 107 to 93, in the same period. That is, while the expectations of the people have risen sharply, in practice the level of economic welfare has not changed significantly.

Figure 9. Investigation on economic welfare legatum welfare index score (www.prosperity.com).

According to Gini coefficient index, income inequality and class division has increased over the years 2013 to 2016. It means that implementation of the JCPOA has failed to improve people's welfare and reduce the income gap. However, even the total cost share of food and housing groups in the household

consumption basket has increased with the implementation of JCPOA (2015) compared to the preceding year. In this regard, it can be inferred nuclear deal has failed to control the overall increase in the share of food and housing costs (as vital needs) in the country. In other words, economic growth has not infiltrated people's daily lives.

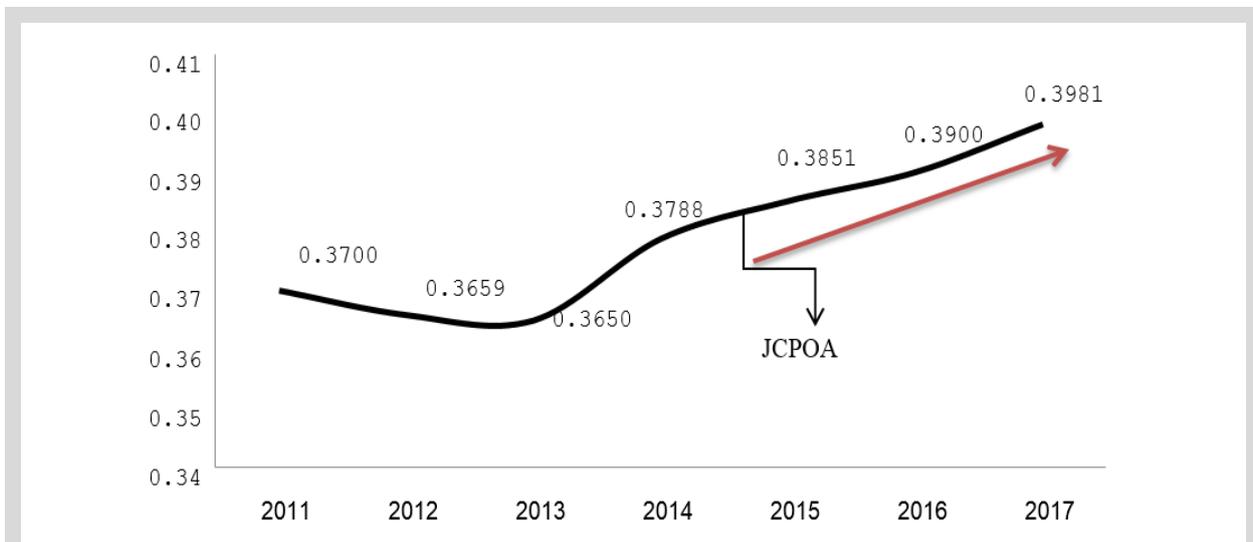


Figure 10. Gini coefficient of the whole country (source: statistical center of Iran).

As noted in the previous section, with the enforcement of nuclear deal, the imposed nuclear sanctions impact on the economy reduced significantly, and significant liquidity flowed to the economy. However, surveys conducted nearly one year after the implementation of JCPOA, demonstrate that the people

have been disillusioned about the JCPOA and speed of the promised changes (www.irantracker.org). A survey conducted by the Maryland Institute for Security and International Research demonstrates that people's beliefs to the benefits of JCPOA has fallen. According to this survey conducted periodically, the first immediately



after the JCPOA and the next, one year after it, demonstrates support to JCPOA has fallen from 76 percent to 62 percent. Whereas the first hand supporters

of the deal (strongly approved), however, have dropped from 43 percent to 22 percent.

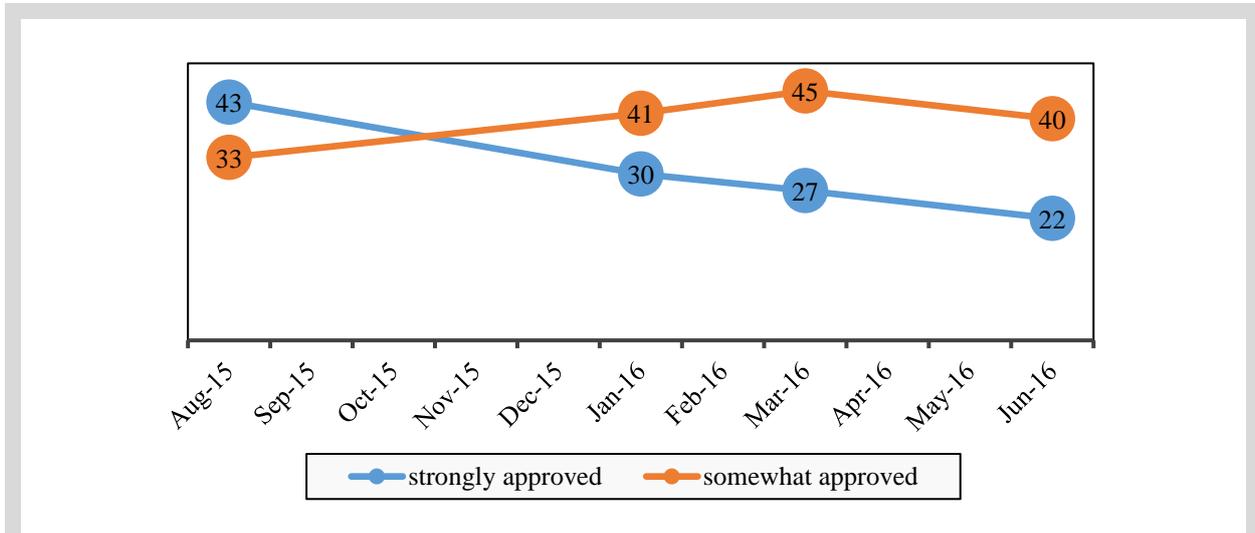


Figure 11. To what degree people approve or disapprove the JCPOA.

(Data source: The center for international and security studies at maryland, 2019)

Some scholars believed that economic misfortunes played a key role in increasing frustration about the JCPOA, as people still had not known to what extent the remaining US sanctions could impede Iran's access to their blocked assets and other supposed openings. Indeed, considering the growing public demand from government about what JCPOA supposed to bring to

peoples, there has been an inevitable degree of about the JCPOA gains. When people asked “how good or bad is our country's general economic situation”, Majorities have described the economy negatively since May 2015 and specially June 2016, when it became evident that any benefits to the economy resulting from the JCPOA would not come quickly.

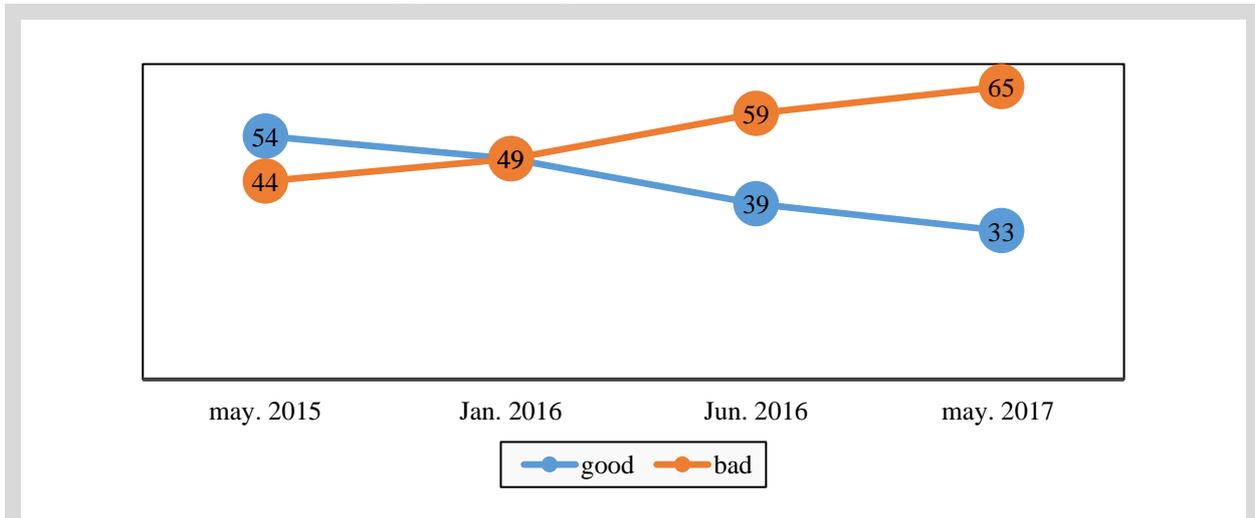


Figure 12. How good or bad is our country general economic situation.

(Data source: The center for international and security studies at maryland,2019)

The first surveys after Iran's nuclear deal showed that 63 percent of Iranians expected a tangible economic recovery in the first year. But just a year later, 74 percent

of Iranians believed that there was no improvement in their livelihoods and leaving the economy out of recession.

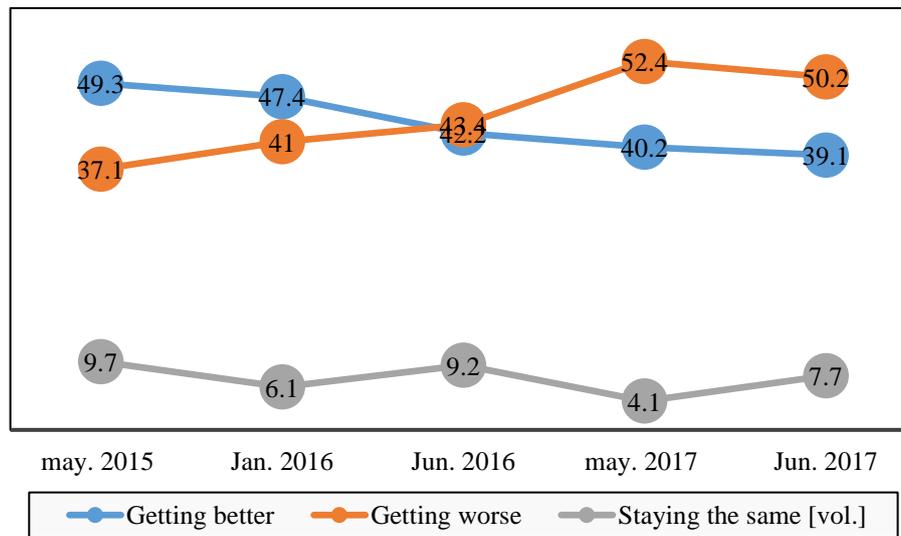


Figure 13: Do you think economic conditions in Iran, as a whole, are getting better or getting worse?

data source: The Center for International and Security Studies at Maryland, 2019)

Furthermore, In September 2015, 45% expressed confidence that the United States would live up to its obligations under the agreement. Less than a year later (June 2016), only 26% believed so. (Gallagher, October 2019)

However, such a quick gap has a variety of reasons, perhaps a significant among them is the authority’s exaggerations in response to the repeated criticism of the oppositions. While some critics have denounced any achievements of the JCPOA in various interpretations, the government officials have described the JCPOA as one of the greatest honors in the history of the country, insisting that all problems of the country can be resolved with a nuclear agreement. It is clear that such a picture of the agreement greatly increases the volume of expectations in an environment where economic indicators are triggered by sanctions and the inefficiency of negative economic policies and severe pressure on the public. This volume of fake expectations, when it is not compatible with the augmented reality, greatly widens the gap between the practical and value expectations, and thus has a significant impact on social capital indicators such as hope, satisfaction, and trust.

5. Conclusions

The volume and number of protests and syndicate rallies since early 2016, which finally turned in January 2016 into widespread instabilities and unprecedented strikes, increased as the country faces a decline of at least 50% in sales volume and a 70% decrease in sales prices,

meaning a decrease of about 80% in oil revenues. However, with the signing of the nuclear deal in July 2015 and a few months after it came into force, oil revenues rose sharply as part of the released dollars lifted Iran’s nominal GDP growth and led to a considerable economic growth. That’s why president rouhani 5 years after 2015 repeatedly underlines:

“After the nuclear deal in 2016, our economic growth was an unprecedented economic growth even globally. We had 12.5% growth in 2016. Such growth in these years in the history of our country and even in the world was unprecedented. Our oil exports once increased from 900 thousand barrels to 2700 thousand barrels per day.” (President Rouhani, may 6, 2020)

This true claim was documented in the figures cited in the preceding sections. The findings confirm that among the determinant indicators of calculating the GDP by value added method, including oil, industry, services, and agriculture, as well as the rate of capital formation, or investment in the calculation of total cost, this is simply the oil sector and the oil revenues that increased from the JCPOA and led to an economic growth rate of about 12 percent. In other words, because the added revenue was injected into the economy from the non-productive channel, it could not be entered into the productive and employment-based economic sectors, and vice versa.

However, in order to reduce the Interpretability and to examine the hypothesis more precisely, expected tangible economic indicators such as employment and



livelihoods were paid attention. Also, in order to validate the above findings and the relationship between JCPOA, economic growth fluctuation and its impact on expectation, the gap was analyzed before and after the JCPOA based on the survey data.

In a situation where rising incomes, and consequently economic growth, especially in 2016, have little impact on people's economic well-being and job creation because of its unproductivity and poor quality, and at the same time as Donald Trump's victory and his constant threats to violate the JCPOA, There is a strong psychological atmosphere for the economy and its future in public opinion as well as in domestic and foreign investors, creates a second sharp volatility less than a year after the JCPOA; people's expectations and promises from JCPOA were Disappointed.

The nuclear deal known as the JCPOA, seems to have created a reassuring and haunting picture of progress in the government that as long as we adhere to the JCPOA we will enjoy its gains and since the government does not think for any other scenarios, and did not expect the change in the JCPOA, did not adjust itself to the conditions different from what had pictured in the beginning. The false hope created and the Trump's actions against the JCPOA resulted in the failure to manage all the factors mentioned, such as budget, interest rate, exchange rate and so on.

The findings reflect the key fact that adhering to an international commitment in a situation where the country's major foreign policy orientation is based on incompatibility with an unjust order and with a revolutionary approach, not only cannot serve the country's national interests such as well-being and security, but can also create domestic turmoil through interdependence and restrictions, as well as the formation of macroeconomic outward-looking approach. This condition not only doesn't lead to welfare, but also leads to internal insecurity and an increased risk of political instability. The JCPOA is a remarkable example and a valuable experience that demonstrates the dependence on outsiders and the acceptance of international regimes for a country with revolutionary foundations can be hopeful - albeit in the short run -, but with the breach of the treaty, can causes volatility in economic growth rates and public expectations, followed by public despair. The ramifications of this can be an increase in the political system's fractures and social divisions. Social capital is among the reference objectives of security for a democratic country and should be taken care of.

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