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**SOCIO-ECONOMIC DEVELOPMENT OF IRAN WITHIN THE  
TRANSFORMATION OF SANCTIONS POLICY IN 2012-2018**

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***Abstract***

Over the past ten years, the Islamic Republic of Iran has gone through several stages of sanctions policy by the United States and its allies, which included both a decreased economic pressure on the country and increased sanctions. Sanctions were likely to cause the deterioration of national socio-economic indicators, which, in turn, could not but affect the overall developments in the state and society. Since 2012, Iran has come under new sanctions targeted at the key economic sector – the oil industry. The result was a new wave of deterioration in the country's socio-economic indicators and a decrease in household incomes. After signing the Joint Comprehensive Plan of Action between Iran and a group of countries dedicated to the nuclear program of Iran, the country began to restore its socio-economic development at a rapid pace. However, by 2017, growth slowed down, which was one of the factors behind the mass demonstrations of late 2017 – early 2018. Announced in early May 2018 by Donald Trump, the US decision to withdraw from the agreement turned out to be a shock for the Iran economy, marked by a rise in prices and a more than threefold decrease in the exchange rate of national currency. Many foreign companies were forced to leave Iran and abandon their economic relations with it. However, the country, either then or ever since, has not changed its domestic and foreign strategy, which indicates the relative stability of the Islamic political regime in Iran..

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## 1. Introduction

Sanctions against Iran can today be called a historical precedent. The first sanctions were imposed by the United States and European countries against the Islamic Republic in 1979 and since then have only changed their configuration (Fayazmanesh, 2003). In 2002 the next and most intensive turn in the sanctions policy was triggered by Western countries responding to Iran's initiative to launch its own nuclear program. Since then, Iran was subject to sanctions not only by the United States and a number of individual states, but also by all EU countries and all members of the UN Security Council. The formal grounds for the sanctions appeared to the handover of the Iran's nuclear dossier from the IAEA to the UN Security Council.

Over the entire period, starting in 2002, Iran's position towards uranium enrichment has changed, and this has affected the sanctions policy. Thus, at the initial stage, the Iranian side was actually looking for ways to reconciliation and the government of Iranian President Mohammad Khatami even decided to freeze the uranium enrichment program. During this period, the Saadaba agreement of 2003 was signed by the United Kingdom, Germany and France. In most of the 2000s, the EU and the USA pursued a dual strategy with regard to Iran, aimed at both negotiating and imposing sanctions (Hassibi & Sauer, 2013).

However, with the change of political elite in 2005, Iran is gradually moving from a policy of reconciliation to a policy of confrontation that has been implemented for the entire term of presidency of President Mahmoud Ahmadinejad from 2005 to 2013. This period has become very difficult for the Iranian economy, since the cooperation with the key trading partner, the European Union, was actually damaged.

From 2006 to 2013, the UN sanctions against Iran continued to increase. The reason for this was Iran being accused of non-compliance with the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) and insufficient cooperation with UN inspectors on nuclear weapons monitoring (Alam, 2011). If the first decision of 2006 by the Security Council was of a warning nature (Crook, 2007), the subsequent resolutions carried a real threat for the national economy. Here we are talking about the four main resolutions, as follows:

- UN Security Council Resolution 1737 – adopted on December 23, 2006.
- UN Security Council Resolution 1747 – adopted on March 24, 2007.
- UN Security Council Resolution 1803 – adopted March 3, 2008.
- UN Security Council Resolution 1929 – adopted June 9, 2010.

All of these documents were aimed at restricting Iran's uranium enrichment activities and creation of a nuclear bomb, as well as the development of nuclear weapons carriers. In this regard, the resolutions, beginning with resolution 1747, dealt with a ban on the sale of military equipment and weapons to Iran, including even defensive technologies.

It can be stated that the ban from the UN Security Council actually created the potential for the development of a unilateral sanctions policy by the United States and the European Union, and the transfer of sanctions from the military sphere to civil aviation and industry.

Western sanctions policy against Iran from 2006 to 2012 implied sanctions against Iranian banks, shipping, oil producing and logistics companies. The sanctions policy developed in an essentially unregulated and exponential manner, which was largely promoted by the aggressive policy of President Ahmadinejad. In the context of sanctions, European companies were trapped in the policy being pursued,

since, on the one hand, interaction with Iran seemed extremely beneficial for them, but on the other hand, there was always the threat of falling under American sanctions.

Following the change of political elite and particularly with the accession of a new government of Hassan Rouhani to power, the situation begins to gradually transform. The new political leadership chooses the path of negotiations, which resulted in signing the Geneva Agreement concluded between Iran and the six international mediators on November 24, 2013.

This agreement laid the foundation for the intensification of socio-economic development of the country within the gradual removal of sanctions barriers.

## **2. Problem Statement**

The problem of study can be identified as the variability of socio-economic path of the Islamic Republic under the influence of foreign economic sanctions that reflect the political dialogue between the members of the P5+ the European Union.

The problem is urgent, because in the period under study characterized by a real and intensive negotiation process, the situation changed many times. That was reflected in the gradual easing of sanctions against Iran until 2018 when the United States, being among the top five mediators, refused to recognize the agreements reached, thus bringing the sanctions policy to a new level, through yet another transformation of the intensity and structure of the Iran's socio-economic development.

## **3. Research Questions**

The subject of study is the socio-economic development of Iran in the context of constantly changing sanctions policy. The socio-economic development of the country is presented in the study as a set of statistical variables that, being changed and interacted, can be interpreted as a complex factor modifying the level of Iranian well-being in the period under study. Sanctions, in this regard, act as a factor of forced reduction in the intensity of socio-economic development, which in different political contexts can generate a different inhibitory impact.

With this in view, the hypothesis consists in the assumption that in some intervals of the study period, namely in 2012-2015, 2015-2017 and 2018+ the level of socio-economic development of Iran had a different degree of stability, due to the difference in the degree of keeping the state open to the world, as well as the presence or absence of "points of influence", subject to the intensive impact of sanctions. In addition, our research hypothesis is limited to the consideration that socio-economic cooperation being currently boosted between Iran and the P5 + the EU but – the USA has made Iran the most vulnerable to US sanctions over the entire study period.

## **4. Purpose of the Study**

The purpose of study is to identify the level and nature of sanctions impact on the socio-economic development of Iran in the period 2012-2018.

The research matter has led to the formulation of a set of research tasks, the solution of which has enabled to diversify the problem stated. Among the key objectives of study, the following should be noted:

1. It was necessary to summarize the data on the sanctions imposed on the Islamic Republic of Iran, denoting their source, direction, date of adoption, duration and other characteristics.
2. It was necessary to consolidate information on real measures, decisions and precedents that followed the adoption of sanctions, which was due to the need to identify the effect of their introduction.
3. It was necessary to analyze the effect of individual sanctions and “packages” of sanctions adopted simultaneously, and their impact on socio-economic development of the republic.
4. It was necessary to analyze the effect from nullifying individual sanctions and “packages” of sanctions on socio-economic development of the republic.
5. It was necessary to follow up comprehensive sanctions movement affecting socio-economic development of the Republic of Iran during some definite time periods studied and during the whole time period covered by the study.

It was necessary to analyze short-term prospects for the development of sanctions policy, by creating two scenarios as to what might happen.

## 5. Research Methods

The study is based on a combined analysis of statistical, legal and political information. The statistical information is presented by statistical data provided by Iran government bodies including the Central Bank of Iran, the Iran Chamber of Commerce and the Customs of Iran, as well as separate data sets of the World Bank. Legal information is represented by a wide range of legal documents of all levels including international that imposes or terminates sanctions, as well as various international and interstate treaties. The block of political information is represented by speeches of leading political figures of all parties involved in the opposition, and acting as participants and mediators in conflict interaction.

Dealing with different datasets called for several groups of methods to be included in the study approach. The first group consisted of methods for analyzing statistics. Among them is the method of absolute statistical values to mainstream the phenomena and processes involved in temporal transformation of socio-economic development in terms of time, volume and, in some cases, regional affiliation. In some cases, summary and grouping techniques were used to measure statistical indicators. In addition, work was carried out with relative values representing a final comparison of opposite statistical indicators.

Statistical data was designed to determine the evolution of indicators in the study period. After that, certain data series were placed over the time axis correlated with key international challenges (primarily sanctions) for the Iranian economy. The correlation of key socio-economic indicators with various challenges received both negative and positive consideration, owing to the fact that, inter alia, positive impacts from nullifying the sanctions or the importance of high-profile political statements were evaluated. The data related to investments, inflation, national currency exchange rate, unemployment, export and import, population incomes, demographic indicators were selected among the temporal data series. Resulting from the superposition of separate statistical series, an expert generalization of data was carried out for each of the time periods studied.

Regarding documents institutionalizing sanctions, the study applied a systematic method to present the sanctions policy as a whole and the sanctions policy by individual countries like the United States as an integral system consisting of interacting elements. The analysis of regulatory documents also required a

limited use of the structural-functional method for a deeper analysis of the sanctions mechanisms provided in the documents under study.

The study of the events of 2018 and the prospects for socio-economic development of the Islamic Republic called for the tools to analyze political rhetoric, in particular, the content analysis used to study key speeches of American establishment as the main threat to the future socio-economic development of Iran. Along with the content analysis, but concerning not only American, but Iran and European establishment as well, participant and indirect observations in the territory of Iran and the EU countries were applied.

## 6. Findings

The main and most significant outcomes of the study are as follows. The study found inconsistent actions and contradictions among the main decision-makers. This could be observed both at the international level, for example, disputes between the United States and the EU countries, and at the national level. Thus, the structure of American political system made it possible to assume that the Joint Comprehensive Plan of Action defended by Barack Obama in 2015 could be canceled by the next congress or by the new US president, which is to be expected (Eichensehr, 2018). The same can be said about the Iran political system, in which President Hassan Rouhani faced a strong opposition within the country. However, the importance of the JCPOA for Iran is confirmed by the fact that Iran did not withdraw from the agreement, although the possibility of withdrawal (in response to one of the parties' withdrawal) was stipulated by the law adopted by the Majlis in 2015 (Act of Majlis, 2015). This proves the dependence of Iran economy on economic relations with Western countries.

The study brought out the socio-economic development in Iran from 2001-2003 to 2012 (the introduction of particularly strict Western sanctions against Iran oil assets). The development was characterized by a fairly rapid progressive economic growth, relatively small inflation, and an average level of unemployment. Some decline in socio-economic indicators was observed only during the financial and economic crisis and a serious drop in oil prices in 2008-2009. (in 2008 GDP per capita fell by 0.9%, and in 2009 – by 0.1%), but just before 2012, economic growth was resumed. GDP per capita for 2001-2011 increased by 39.4% and reached \$ 18.2 thousand. The net inflow of foreign direct investment also grew at a significant pace (+ 17.2% in 2010-2011, or from 3.6 to 4.3 billion dollars). Unemployment generally fluctuated around 10%–12% (*World Bank*, 2018). Meanwhile, there was a consistent decrease in Iran's trade with the EU countries: Iran's imports from these countries fell in 2008/09 to 2011/12 from \$ 1.85 to \$ 1.62 billion, and exports from Iran to these countries dropped from 16.26 to 12.44 billion dollars (*Statistics*, 2018).

The study identified the specific changes in important socio-economic indicators developed by Iran after the introduction of strict Western sanctions and the EU's refusal to buy oil, oil products and petrochemicals from Iran, as well as attempts to freeze accounts of the Central Bank of Iran in 2012 (Dupont, 2012). The Iranian economy experienced a very deep crisis, much deeper than in 2008. It is shown that a markedly high drop in all major socio-economic indicators is directly related to the sharp sanctions tightening. Thus, Iran exports with the main share of oil, in a predictable way, fell sharply in 2012 – from \$ 118.2 billion to \$ 87.9 billion (–34.7%), investment growth slowed sharply to 4.7 billion dollars, GDP

per capita fell by 9.4%. Inflation rate rose dramatically to 26.5% in 2012, compared to 10%-17% in 2001-2010 (World Bank, 2018). In the same year, trade with the EU fell particularly sharply: in 2012/13 imports fell from 1.62 to 1.09 billion dollars (much more than in the previous 4 years), and exports – from 12.44 to 10, \$ 15 billion. Income from oil exports dropped twice as much in 2010-2012 (Drezner, 2015). However, countries such as China and India continued to buy Iranian oil, although they reduced the volume of its imports, which prevented the worst outcome of the Iranian economy crisis (Oskarsson, 2012).

The study considers the dynamics of socio-economic development of Iran in 2013-2015 that was characterized by the stabilization of some of the indicators in question at a level significantly lower than before 2012. However, in most cases the impacts of the 2012 sanctions, on the contrary, were more visible in these years, which led to the fall of the relevant indicators. Thus, the net inflow of foreign direct investment fell drastically – to 3.1 billion in 2013 (–52.8%) and 2.1 billion in 2014 (–44.9%), while inflation reached a maximum in 2013 – 39.3% (World Bank, 2018). In 2012/13 to 2014/15, the level of oil production fell from 3.7 to 3.1 million barrels per day (Central Bank of Iran, 2018). During this period there was a particularly sharp weakening of the rial. At the beginning of 2010, 1 US dollar cost 10 thousand rials and in early 2012 – 11.2 thousand, whereas in 2013 it rose to 12.3 thousand and in 2015 – to 27.2 thousand (Central Bank of Iran, 2018). The collapse of Iran's trade with the EU continued – exports from Iran to these countries fell down to \$ 6.45 billion by 2015/16. However, imports rose slightly to \$ 1.59 billion, although it did not reach the pre-crisis level (Statistics, 2018). In the fall of 2013, Iran President H. Rouhani acknowledged the sanctions having a very strong negative impact on the economy and stated the need for negotiations with the West on the nuclear issue (Drezner, 2015).

The study analyzed the socio-economic growth of Iran in 2016-2017, following the adoption of the Joint Comprehensive Action Plan provided for repealing all sanctions imposed by the United Nations, the United States and the European Union. During this period, the Iranian economy began to grow rapidly, with many indicators to reach their highs that allowed the country to significantly exceed the level achieved before the introduction of the 2012 sanctions. Thus, in 2016, there was a rapid increase in foreign direct investment (+64, 5% or 3.4 billion dollars), and the figures for 2017 exceeded the pre-crisis level (5.0 billion dollars and + 48.8%). Exports increased substantially in 2016 (+ 41.3% or 144.5 billion) and in 2017 (+ 7.3% or \$ 155.1 billion). However, a significant slowdown in the growth of the Iranian economy was revealed as early as 2017, remaining quite high, though. Iran's oil exports increased very quickly from 1.2 million barrels per day in 2014/15 to 2.2 million – in 2016/17. The oil sector of the economy grew by as much as 61.6% during that year (non-oil – only by 3.8%). Crude oil production increased greatly – to 3.85 million barrels per day in 2017 (Mamedova, 2018). It was possible to sharply reduce inflation to 8.6% in 2016 and 10.4% in 2017. Nevertheless, there was an increase in unemployment rate – from 10.4% in 2013 to 12.5% in 2017 (World Bank, 2018). The rise in prices at the end of 2017 abruptly accelerated, primarily for essential goods. Trade with the EU began to grow rapidly with exports rising to 11.58 billion dollars in 2017/2018, although imports remained almost unchanged (1.55 billion dollars) (Statistics, 2018).

The study explores a broad aggregate of statistical data to take a closer look at the change in the socio-economic situation of Iran after President Trump's decision to withdraw from the JCPOA. The study underpins that this entailed an increase in inflation, a sharp weakening of the country's national currency, the rial, as well as a deterioration in the poorest strata of Iranian society. So, according to the Iranian press,

at the end of June 2018 the purchasing power of 13 million employees fell by 48.2%. compared to the end of December 2017, while the growth in consumer inflation from June 2017 to June 2018 in cities reached 18%, which is much higher than in recent years (Mashrehk, 2018). In early 2018 the national currency rate was 36.1 thousand rials per dollar, and since May there has been a significant increase with the peak reached at the beginning of August 2018 (66 thousand rials per dollar). Currently, the official rate dropped to the level of the beginning of May and amounts to 42 thousand rials per dollar (CBI, 2018). However, in the black market, the dollar was worth 128 thousand rials.

It is possible to talk about a broad correlation of economic and social indicators. In particular, compressing the Iranian economy led to a marked decrease in the volume of public investments in social infrastructure, which, in turn, affected the level of welfare, purchasing power, mortality, including reduction in child mortality, drug availability, etc. The study analyzed a wide range of demographic indicators. It justifies that, unlike socio-economic indicators that often respond quite rapidly to serious foreign policy changes (first of all, regarding the dynamics of foreign investment, as well as exports and imports), demographic indicators change much more slowly and do not deviate radically from a given trend, in which they changed before the events in question. However, shown by the results, they were massively affected by the sanctions as well.

The decrease in the total fertility rate in the country in 2012-2016 (from 1.742 to 1.661 or  $-0.081$  children per woman) turned out to be twice faster than in 2008-2012 ( $-0.036$  children per woman) (World Bank, 2018). This shows a rather significant impact of sanctions on the demographic behavior of residents. The growth in life expectancy in Iran has slowed from 2008-2012 (from 73 to 74.8 years) to 2012-2016 (from 74.8 to 76.0 years). Infant mortality has also slowed its decline from 2008-2012 (from 18.6 to 15.4 or  $-3.2$  points per mille) to 2012-2018. (from 15.4 to 13.3 or  $-2.1$  ppm). This indicator in Iran compared with the developed countries of the West (3-4 ‰) remains very high (World Bank, 2018).

## 7. Conclusion

Based on the outcomes derived, it can be concluded that the sanctions regime has had a decisive influence on the directions of socio-economic development and on the demographic dynamics of Iran. Since 2006, the country's economy has already been subject to UN and US sanctions, but they had a minor effect on economic growth that kept being fairly stable. In the period 2001-2012, Iran has achieved very significant progress in socio-economic development, having increased its GDP per capita. The export and import growth along with foreign investments were very high. Even the economic crisis of 2008 did not carry devastating consequences for the country's economy that was able to overcome its impact in a short period of time and again to reach a sustainable growth path. The demographic indicators in Iran changed in accordance with the theory of the demographic transition – the mortality rate (including infant) was falling quite rapidly, and the birth rate almost stabilized at a fairly low level (below simple reproduction).

In 2012, very severe sanctions were imposed against Iran, which had a direct impact on the key sector of its economy – the oil sector. As a result, the socio-economic development of the country was significantly undermined (a direct correlation of oil production and the pace of development in this period), and many of the achievements of the pre-crisis period were lost (Dizaji & Bergeijk, 2013). From this period,

a slowdown in the mortality reduction and acceleration in the birth decline begins, which underlines a very negative humanitarian effect of sanctions.

The period from 2013 to 2015 was marked by the stagnation of the GDP indicator (and for many economic indicators 2013 became the year of the largest drop in indicators). The economy of Iran was hard to adapt to the very painful limitations of development.

In 2016, the country was experiencing an economic overheating. The oil sector demonstrated particularly high growth rates due to the repealed ban on the sale of oil to the EU countries that used to buy a fairly significant share of Iranian crude oil. However, in 2017, the extremely high rates of socio-economic development could not be sustained. Moreover, the country suddenly began to accumulate and aggravate socio-economic problems, which led to mass demonstrations in late 2017 – early 2018.

Meanwhile, demographic indicators in Iran continued to deteriorate (in a prosperous 2016, the birth rate declined much faster, and mortality fell more slowly than in the 2000s), which is associated with a very intensive demographic inertia, as well as uncertainty of the population that changes for a better socio-economic sphere are long-term.

In 2018, Donald Trump announced his country's withdrawal from the JCPOA and called on the rest of the US-loyal states to do the same, which came as a shock to many European companies operating in Iran, many of whom were forced to leave the country. In the country itself, prices for essential goods rose sharply, which affected the interests of many ordinary people. As a result, apathy and frustration with the government's economic policies increased among Iranians. However, Iran's Supreme Leader attempted to reassure the population, saying that the country had resisted serious Western pressure for forty years and, despite everything, stood up. He urged people to hope for the best, stating that the crisis was primarily caused not by the Western pressure but misguided economic policies that the government should correct now, heeding the views expressed by the experts (concerning, first of all, the excess money supply).

Further development of the situation will depend, firstly, on the ability of Iranian government to correct their own previous mistakes, and on whether they can find effective mechanisms to reduce the negative impact of new US sanctions and panic among Western investors. However, being aware of Iran's extremely high dependence on oil exports, the main focus of economic sanctions, one can assume that Iran is about to face a rather strong economic crisis, and the results of the second half of 2018 will again show a decline in key economic indicators, as was the case in 2012-2013 years. The government will have to take very unpopular measures towards severe economic rationalization, cuts to subsidies to the poor and increase in basic food rates, which may lead to a new turn of discontent and protests among Iranians. The Iranian leadership decided to abandon any negotiations with the United States, stating that due to such a perfidious policy, America can no longer be trusted (Speech ..., 2018). Thus, besides worsening Iran's economic and domestic situation, a further deterioration in the foreign policy can be expected, apparently provoked by the actions of the US authorities that thwarted the agreement being so important for the economic development of Iran and the entire region whose achievement had demanded enormous diplomatic efforts.



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## References

- Act of Majles*. (2015). Act of Appropriate and Mutual Actions of the Government of the Islamic Republic of Iran for Implementation Joint Comprehensive Plan of Action. *Official site of laws and acts of Islamic Republic of Iran*, 20569. Retrieved from <http://www.dastour.ir/Brows/?lid=367399>
- Alam, A. (2011). Sanctioning Iran: Limits of Coercive Diplomacy. *India Quarterly*, 67, 1, 37-52.
- Central Bank of Iran (CBI)*. (2018). *Economic Time Series Database*. Central Bank of Iran, Retrieved from <https://tsd.cbi.ir/Display/Content.aspx>
- Crook, J. R. (2007). Contemporary Practice of the United States Relating to International Law. *The American Journal of International Law*, 101, 3. 636-673.
- Database*. (2018). *Official site of Islamic Republic of Iran Custom*. Retrieved from: <http://www.irica.gov.ir/?>
- Drezner, D. W. (2015). Targeted Sanctions in a World of Global Finance. *International Interactions*, 41, 4, 755-764.
- Dizaji, S. F., Bergeijk, P. A. G. (2013). Potential early phase success and ultimate failure of economic sanctions: A VAR approach with an application to Iran. *Journal of Peace Research*, 50, 6, 721-736.
- Dupont, P. E. (2012). Countermeasures and Collective Security: The Case of the EU Sanctions against Iran. *Journal of Conflict & Security Law*, 17, 3, 301-336.
- Eichensehr, K. E. (2018). Courts, Congress, and the Conduct of Foreign Relations. *The University of Chicago Law Review*, 85, 3. 609-675.
- Fayazmanesh, S. (2003). The Politics of the U.S. Economic Sanctions Against Iran. *Review of Radical Political Economics*, 35, 3, 221-240.
- Hassibi, N., Sauer, T. (2013). Easing Sanctions on Iran Might Someday Be Necessary – But It Won't Be Easy. *Bulletin of Atomic Scientists*, 65, 5, 46-55.
- Mamedova, N. M. (2018). Stormy events in Iran. Before and after the presidential elections of the 2017. *Svobodnaya Mysl*, 2, 1668, 97-108.
- Mashrehk-news. (2018). The entire economic team of the government must be replaced. *Mashrehk-news*, 28.07.2018. Retrieved from: <https://www.mashreghnews.ir/news/878419>
- Oskarsson, K. (2012). Economic Sanctions on Authoritarian States: Lessons Learned. *Middle East Policy*, 19, 4, 88-102.
- Speech of Rouhani. (2018). US Presidents remarks had nothing but void. *Donyaye eghtesad newspaper*, 13.10.2017. Retrieved from: <https://www.donya-e-eqtesad.com/fa/tiny/news-3299391>
- Statistics. (2018). *Official site of Iran Chamber of Commerce Industries, Mines and Agriculture*. Retrieved from: <http://en.iccima.ir> Gomroke jomhurie eslamie iran
- World Bank. (2018). *World Development Indicators Online*. Washington DC, World Bank, Electronic version. Retrieved from: <http://data.worldbank.org/indicator/>