

The Impact of the Joint Comprehensive Plan of Action on the Startup Ecosystem in Iran.

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ABSTRACT

The objective of this study is to determine the impact of the Joint Comprehensive Plan of Action on the startup ecosystem in Iran, exploring which factors will help the startup ecosystem in Iran cultivate post sanction relief.

To complete the research objectives, the researcher conducted in-depth interviews with 4 entrepreneurs who have experience in the startup ecosystem in Iran. In-depth interviews are transcribed and reduced to important data with theme extraction resulting in a more comprehensive understanding of Iran's entrepreneurship ecosystem.

According to the data analysis, the findings of this research can be fragmented into two main topics: First, the startup ecosystem in Iran and second, the effects of the JCPOA on it. Each of these topics includes three different themes accordingly. The important themes regarding entrepreneurship sector in Iran can be pointed out as: (1) Motivation needed for establishing a business, (2) The funding of the startups, and (3) Challenges they have to face while operating in Iran.

Additionally, three imperative themes were extracted according to the impact of the JCPOA on start-ups in Iran: (1) Attract more foreign investments, (2) Improvement in education in entrepreneurship sector, and (3) More competition as international companies enter the Iranian marketplace.

This paper concludes with the analysis of the data collection in correspondence to the existing literature presenting the factors triggering growth in the startup ecosystem in Iran.

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LIST OF FIGURES

Figure 1: Overview of Implementation of JCPOA. (Rizvi, 2015)	25
Figure 2: Estimated Impacts of Sanction Removal on Global GDP Growth	27
Figure 3: Estimated Impacts of Sanction Removal on Global Oil Production	27
Figure 4: Estimated Impacts of Sanction Removal on Oil Price.....	28
Figure 5: Estimated Impacts of Sanction Removal on Global Oil Production	28
Figure 6: The SWOT Analysis of Startup Ecosystem in Iran (Ghiabi, در کارآفرینی، فرصت، تهدید، قوت و ضعف: تحلیل SWOT سیستم استارت‌آپ در ایران، 2017)	31
Figure 7: Internet Penetration Growth in Iran(Abbaszadeh, 2015)	33
Figure 8: Pardis Technology Park Sectors (n.n, Pardis Technology Park, 2015) ..	37

LIST OF TABLES

Table 1: History of Iranian Sanctions(K.Mackey, 2016)	17
Table 2: The in-depth Interview Participants	46
Table 3: Interview Participants.....	49
Table 4: Interview Questions	50
Table 5: Themes extracted of Data Analysis.....	62

LIST OF ABBREVIATIONS

Acronym	Explanation
CBI	Central Bank of Iran
CISADA	Comprehensive Iran Sanctions, Accountability, and Divestment Act
CRS	Common Reporting Standard
GDP	Growth Per Capita
HEU	Highly Enriched Uranium
IAEA	International Atomic Energy Agency
ITSR	US Iran Transactions and Sanctions Regulations
JCPOA	Joint Comprehensive Plan of Action
MENA	Middle East and North Africa
MNC	Multinational Corporation
NPT	Non-Proliferation Treaty
O&G	Oil and Gas
P5+1	UN Security Council's five permanent members (the United States, Britain, China and Russia and Germany)
R&D	Research and Development
ROI	Return on Investment
SaaS	Software as a Service
SDN	Specially Designated Nationals
SMEs	Small and Medium-sized Enterprises
SWIFT	Society for Worldwide Internet Financial Telecommunication
TCI	Telecommunication Company of Iran
TRR	Tehran Research Reactor
UK	United Kingdom
UN	United Nations
US	United States
VC	Venture Capital

Table of Contents

ABSTRACT	ii
ACKNOWLEDGEMENTS	iii
LIST OF FIGURES	iv
LIST OF TABLES	v
LIST OF ABBREVIATIONS	vi
CHAPTER 1: INTRODUCTION	1
1.1. Background and Existing Research	1
1.2. Significance of the study	2
1.3. Purpose of the study	3
1.4. Research Questions	4
1.5. Outline	4
CHAPTER 2: LITERATURE REVIEW	6
2.1. Introduction	6
2.2. Global Rise of Entrepreneurship and Startups	6
2.3. Islamic Republic of Iran	9
2.3.1 Iran's foreign relations after the revolution	11
2.4. Iran's Market Place	12
2.5. The Implication of Sanctions on Iran	14
2.5.1 The Impact of Sanctions on the Economy	18
2.6. Entrepreneurship in Iran and The Rise of Domestic Startups during the Sanctions	18
2.7. Joint Comprehensive Plan of Action	21
2.7.1. The Impact of JCPOA	25
2.8. Entrepreneurship Ecosystem Post Sanction Era	30
CHAPTER 3: METHODOLOGY	42
3.1. Introduction	42
3.2. Exploratory Design	42
3.3. Research Gap	43
3.4. Data Collection	44
3.5. Sampling	45
3.6. Limiting Consideration	46
CHAPTER 4: DATA ANALYSIS AND RESULTS	48
4.1. Introduction	48
4.2. Data Analysis	48
4.3. Results	49
4.4. Analysis and Findings	61
4.4.1. Startup Ecosystem in Iran	62
4.4.2. Impact of Joint Comprehensive Plan Of Action on startup ecosystem in Iran	64
CHAPTER 5: CONCLUSION	67
5.1. Summary	67
5.2. Discussion and Conclusion	67

Bibliography.....	71
APPENDIX A.....	80
APPENDIX B.....	84
APPANDIX C.....	86
APPENDIX D.....	90
AFFIDAVIT	94

CHAPTER 1: INTRODUCTION

1.1. Background and Existing Research

Entrepreneurship as conveying a business unit into existence has been a topic of discussion especially in the recent decades. (Cardow, 2010) As mentioned by Schumpeter an entrepreneur is an innovator and a business creator, which leads to job creation, new inventions and services and thereby supporting the development of the business sector of the surrounding society.

One of the positive driving forces on economy is the development of entrepreneurship, as Deakens and Freel said, “entrepreneurs have influence on cultural, social and technological dynamics of an economy” (Yaribeigi, 2014).

Eghbali presents the view that “entrepreneurship is important as a main element in development acceleration of developing countries and development continuity of industrial developed countries.” (Eghbali, 2015)

Iran like any other country is encouraging entrepreneurship, and its startup ecosystem unlike most developing countries, is booming fast. In the last few years the concept of entrepreneurship and startups has been evolving in Iran with the development of e-commerce startups. It was only in 2007 that the first e-commerce website was found in Iran, and although in the first couple of years of its establishment, Digikala—the Iranian version of Amazon— had difficulties breaking into the market, now it is the leading e-commerce brand with the market share of approximately 90 percent.

As Yaribeigi explained “Most approaches to entrepreneurship in developing countries in recent decades caused a wave of development policies to create jobs in the world. These approaches indicated that these countries have been able to make remarkable progress in different fields of economic and social gain.”

Having to live with the sanctions for many years made Iran isolated. Because of sanctions huge international e-businesses were banned to enter Iran’s market therefor Iranian engineers and entrepreneurs took the matter into their own hands (Hormats, 2016). As Hormats said “Years of sanctions have forced Iranian people to create their own Internet companies and services-and provided an incentive to establish a wide variety of homegrown information technology firms.”

Sanctions make economies paralyzed, the effects of sanctions on Iran were due to freezing Iran's assets, embargo on buying Iranian oil, restrictions on Iranian trade and commercial ties and prohibition of money transaction with Iranian banking systems.

On the implementation day on 14 July 2015, Iran and the P5+1 signed the Joint Comprehensive Plan of Action in Vienna, Austria. This agreement was a result of a long negotiation between Iran and European countries— France, Germany and United Kingdom— alongside European Union, United States, China and Russia.

Regarding the agreement, Iran would stop nuclear activities and the production of nuclear weapons and in return all the sanctions against Iran will be lifted.

Implementation of JCPOA will indeed have a positive effect on Iran's economy. Although two years has passed from the nuclear deal, most of the sanctions are still remaining, for instance limitation of Iranian trade and the connection between Iranian and International banks.

1.2. Significance of the study

This research will focus on the impact of the Joint Comprehensive Plan of Action on the startup ecosystem in Iran and factors triggering growth for startups in Iran.

Theoretical work on the topic of this research is limited and although some research papers were found, there is limited research on factors triggering growth of the startup ecosystem in Iran and since the JCPOA happened less than two years ago, there is still no precise hypothesis on what will change for entrepreneurship in Iran or even whether the agreement will last or the sanctions will be imposed again.

However there has been some speculations regarding the research topic through tech savvies and economist in and outside of Iran, the related literature is narrow. This paper will contribute to the understanding of the key factors influencing the entrepreneurial activities in Iran, by examining the existing papers and with conducting in-depth interviews and analyzing the data. The results of this study will provide a more comprehensive knowledge of the startup ecosystem in Iran.

1.3. Purpose of the study

The main purpose of this research is to look into the startup scene in Iran and to determine the effects of sanctions on it.

Ali Davari highlights different elements which shape the startup ecosystem and entrepreneurship activities in societies, involving motivation, skills, financial resources, desirable opportunities and culture (Ali Davari, 2012). Iran with more than 80 million population is amongst one of the highest literacy rates ranking in the world. As Hormats cited "The country has a skilled workforce and an extraordinary high literacy rate of over 87 percent. Iranians have particular skills in mathematics, science, information technology, engineering, and medicine. Nearly half of all college graduates major in these fields; this far exceeds the figure in other Middle Eastern nation." (Hormats, 2016) Since 2012, Iran's startup ecosystem has experienced a boom. Although Iran has been isolated in terms of conducting business internationally and economic growth on a global scale for many years, technology has helped the population connect to the world and follow their paths. Currently the Internet penetration rate in Iran is more than 55 percent, and it is estimated 40 million people use smartphones according to Iran's Ministry of Communication and Information Technology (Dorigo, 2016).

Alongside its rich culture, the huge number of university graduates and high literacy rate, Iran has an excellent potential to develop on a global scale. Iranian people are extremely globalized and young people are up to date regarding digital sector and technology, they are known to be early adopters and they follow the footsteps of developed countries, for instance during the sanctions when international moguls could not enter Iran, young Iranians imitated their path and cloned their business models for Iran's market. Accordingly Mohammadi said, "In 2015, Iran's startup ecosystem was at the peak of its e-commerce boom, and a massive amount of web and mobile startups emerged in this year. It is safe to say that Iran had one of the fastest growing startup ecosystem s in the region." (Mohammadi, 2017)

It is estimated now that there are more than 350 startups working actively only in the capital. Years of sanctions made Iran isolated and made the economy paralyzed; not being connected to the global market, the currency crisis and high unemployment rate derived people into survival mode and loss of creativeness and innovation. However as Ghiabi said, "During the decade long implication of sanctions on Iran to cripple the \$400

billion economy on multiple levels, Iranian startups had to operate without access to foreign markets, finances, and social media channels. Many used this to their advantage by creating their localized versions of international startups and building startups according to local needs.” (Ghiabi, How Startup Ecosystem is changing Iran's economic dynamics, 2017)

After the implication of Joint Comprehensive Plan of Action, Iranian people celebrated the deal on the streets. The hope of connecting to the world and optimism of improvement of the economy arose amongst them. It can be pointed out that the most impact of lifting the sanctions is due to economy (Rizvi, 2015). As Rizvi mentioned “Foreign investor have been eyeing the Iranian market even before the nuclear deal was clinched in 2015.”

1.4. Research Questions

This paper will look deeper into the factors impacting entrepreneurs and entrepreneurship in Iran with answering the research questions:

RQ1: Has the implementation of Joint Comprehensive Plan of Action had a positive impact on the startup ecosystem in Iran?

RQ2: What factors will help the startup ecosystem in Iran to grow after the sanction relief?

1.5. Outline

This thesis is divided into five chapters. Starting with the Introduction in chapter one, which provides an overview of this study, including a review of existing research, the scope and purpose of this research, the limitation and finally the research questions are presented.

Chapter two, the Literature Review, is fragmented into different categories in regard to the topic of this study with gathering the information from previous researches, online articles, journals and books to gain a more comprehensive understanding of the research topic.

Chapter three, the Methodology, presents the methods used for the data collection and data analysis in this study. Further more the sampling and the limitation of the study is presented.

Chapter four, presents the qualitative data analysis by analyzing the interviews followed by the results and findings of the in-depth interviews.

Finally in chapter five the discussion and conclusion of the results of this study will be presented followed by a summary of the purpose of the study and the findings of this research.

CHAPTER 2: LITERATURE REVIEW

2.1. Introduction

This chapter provides the relevant literature to the topic of this research by going through previous studies, books, article, journals and online documents. The literature review consists of different section related to the impact of the Joint Comprehensive Plan of Action in which it starts with a definition of entrepreneurship and startups followed by a comprehensive literature review on Iran; a brief history of implication of sanctions, the marketplace, the implication of JCPOA and finally the startup ecosystem in Iran and the impact of JCPOA on entrepreneurship in Iran. Each of these topics was reviewed in order to gain knowledge and insights on the topic.

2.2. Global Rise of Entrepreneurship and Startups

Entrepreneurship has been a topic of discussion since the early 1700s and has been defined in different theories thereby establishing definitions over time. (n.n, 1950) In spite of numerous publications epitomizing the theory of entrepreneurship, there has not been a consensus on one defined or globally accepted definition. (Ivan Bull, 1993)

Numerous authors support the claim of entrepreneurship with starting a new business. Reynolds explained it could be linked to finding new opportunities and creating a new venture. Entrepreneurship has an impact on all kinds of organizations and on an economy as a whole despite of their aims and purposes. (As cited by Álvaro Cuervo, 2005)

Schumpeter defined “Entrepreneur as the innovator, the individual who introduces new combinations of production factors.” He also argued “an entrepreneur is an innovator—an individual who carries out one of the following five tasks: (1) the creation of a new good or a new quality; (2) the creation of a new method of production; (3) the opening of a new market; (4) the capture of a new source of supply; or (5) the creation of a new organization or industry.”(As cited by Joseph M. Cherukara, 2002). The same definition was discussed by Thornton about entrepreneurship being connected to establishing a

new organization which is connected to social and economic progression. (As cited by Joseph M. Cherukara, 2002).

Deakens and Freel mentioned that entrepreneurs have influence on cultural, social and technological dynamics of an economy (Yaribeigi, 2014). One of the positive factors on economic growth is the development of entrepreneurship as W. Naude quoted "Schumpeter (1950; 1961) famously defined the entrepreneur as the coordinator of production and agent of change ('creative destruction'). As such the "Schumpeterian" entrepreneur is above else an innovator." (Naude, 2013)

As descussed, Schumpeter had a great influence on construction of understanding of entrepreneurship in modern world, in particular conveying the part of the entrepreneur alongside business creation in the United States business sector (Cardow, 2010). More over the combination of the two words, innovation and creativity, is linked to Schumpeter's literture on entrepreneurship (Cardow, 2010). Additionally as Lumpkin and Dess stated, "entrepreneurship consists of productivity and risk taking alongside the creativity and innovation and it is now conventional that entrepreneurial emphasis comprises of all four elements. In other words entrepreneurship is all the actions an entrepreneur has to take to convey a business unit into presence."

There are two sides to entrepreneurship, on the positive aspect it is affiliated with finding new opportunities, foreseeing problems, finding a solution for it and being determined to create new ideas. On the contrary, the negative side associated with entrepreneurship is the uncertainty of the outcomes alongside the awaiting of the passage of time (Osberg, 2007). To overcome this obstacle it is necessary to develop a hypothesis to test the uncertainties and generate a prototype to help the areas, which are not explained (Álvaro Cuervo, 2005).

Regarding entrepreneurship's impact on economic growth as mentioned above, two major points should be highlighted. The first can be linked to "new entry" where the entrepreneur is someone who establishes a new business venture and organizes it and the second is the "newness" where there is innovation involved (Wennekers & Thurik, 1999).

Lumpkin and Dess integrate that “ New entry can be accomplished by entering new or established markets with new or existing goods or services. New entry is the act of launching a new venture, either by a start-up firm, through an existing firm or via internal corporate venturing” (As cited by Wennekers & Thurik, 1999). A start-up is a company that is newly established and is aimed to grow rapidly. This does not mean that every newly established company is a start-up, the most important factor distinguishing a start-up is the growth (Graham, 2012). Additionally Wennekers and Thurik mentioned “completion as well as innovation and “newness” of start-ups are key factors of linking entrepreneurship to economic growth.” Eric Ries has a more comprehend explanation of a start-up where he states “A start-up has a product or service that is a new innovation. Start-ups have a destination in mind: creating a thriving and world-changing business, which is called start-up’s “vision”. To achieve that vision, start-ups employ a strategy, which includes a business model, a product road map, a point of view about partners and competitors, and ideas about who the customer will be.” (Ries, 2011)

Furthermore Ries implied the innovation of an start-up can be seen in different innovations: “Novel scientific discoveries, repurposing an existing technology for a new use, devising a new business model that unlocks value that was hidden, or simply bringing a product or service to a new location or a previously underserved set of customers. In all these cases, innovation is at the heart of the company’s success.” Looking back at innovation it is stated that innovation can be discussed in two different forms as Freeman and Engel cited “where one is linked to Corporate model and the other to entrepreneurship model, and refer to existing firms that are older and usually larger as “corporations” and firms recently started by entrepreneurs as “start-ups.” (Freeman, 2007)

Entrepreneurship has a positive impact on national economic growth (André Van Stel, 2005). As Stel and Carree explained “The additional positive impact of entrepreneurship in highly developed economies may be caused by various factors. It may indicate that entrepreneurial activity is important in the process of the commercialization of new (technological) knowledge. It may also indicate that entrepreneurial activity is important for a healthy development of the business population.” They also added “New firms are important in the introduction of various (non-technological) innovations and they may also serve as a vehicle of increased work effort since the reward for entrepreneurs is

likely to be more effort-dependent than for employees. Entrepreneurs may also be more likely than incumbent firms to enter (or even create) new industries. The history of the software- and biotech-industries shows the importance of new firms in the early phases of the industry evolution.”

However entrepreneurship may have a negative effect on the GDP of the developing countries. As Stel and Carree explain in their research “One striking result of our study is the negative impact of entrepreneurship on GDP growth for developing countries. The result that poorer countries fail to benefit from entrepreneurial activity does not imply that entrepreneurship should be discouraged in these countries. Instead, it may be an indication that there are not enough larger companies present in these countries. Larger firms play an important role in the transformation process from a developing economy to a developed economy. It is suggested that developing countries can benefit considerably from foreign direct investment by MNCs (multinational corporation) since this also increases the potential economic contribution of local entrepreneurial activity.”

Further more Cuervo stated that “The entrepreneur’s central activity is that of business creation, which can be studied at an individual and/or group level –analyzing psychological aspects and social variables of education, background or the family– either at an environmental level using variables that enable business development, or by analyzing aspects of the economic, social and cultural environments.” He also added “The study and teaching of entrepreneurship and the role played by professors dedicated to teaching and research on this topic are of growing importance, as reflected by the boom in courses and chairships in entrepreneurship in the United States in the last few years.” (Álvaro Cuervo, 2005)

2.3. Islamic Republic of Iran

“Iran is an heir to one of the world’s oldest civilizations, as an independent state located in Western Asia. Iran is officially known as Islamic Republic of Iran.” (Rezaei, 2017)

“Revolutions do not have religious causes; they develop out of economic, social and political crisis” as quoted by (Ashter, 2017). The Iranian revolution happened in 1979 by the people who opposed the regime of Reza Shah (the king ruling the country at the

time) and with the mastermind of the revolution, Ayatollah Khomeini (Brandis, 2009). This revolution has been the most important landmark of Iranian people's lives.

As Brandis stated " Pre-revolutionary Iran was characterized by inflation, sociopolitical marginalization, political corruption, despotism, and policies of modernization that disenfranchised the vast majority of Iranian society."

The Iranian revolution was mostly based on political perspectives with demand of democracy. In 1978 people started demonstrating in the streets, following the call of the leader Khomeini to protest unemployment, poverty, lack of religion and economic insecurity (Oldu, 2013). Khomeini was proposing the downfall of the monarchy and establishing a new regime with the promise of establishing a republic or an Islamic republic containing "social justice", making Iran an oil supplier to the west, homecoming of the exiles, etc. (Oldu, 2013). As Milani puts it "Khomeini suppressed his rivals in political efficacy, vociferous opposition to the Shah, and the ingenuity to attract popular support" (Brandis, 2009).

During Shah's government, Iran has developed in many ways and Shah improved education system in the country, handed rights to women and made other reforms. It has been said that people were not irritated completely however reasons such as collapse of monarchy, wealth of the Shah and his surroundings while some people were suffering from poverty, political pressure and corruption led people to rebel against the government (KODAL, 2014).

Later in 1979 after months of protests an election was conducted for people to vote either for or against the Islamic republic 98 percent of the population voted for the Islamic republic, which resulted in the formation of Islamic republic of Iran (Brandis, 2009).

To describe it in other way, before the Islamic revolution, according to the World Bank, Iran's economy has developed the most between 1946 and 1979, approximately 9.6 percent growth which was double the size of the third world countries (Abdurazokzoda, 2014). Moreover, Abdurazokzoda stated "government spending on social and public services: education and health, have significantly reduces absolute poverty levels, as well as infant mortality rates, malnutrition, and endemic diseases. At the same time life

expectancy and literacy rates have measurably increased. But widening income gaps, inadequate investment in agricultural sector, lack of attention to non-oil exports on one hand, and exploitation of the oil reserves to fund the military-industrial complex on the other hand, contributed to the growing dissatisfaction with the regime.”

2.3.1 Iran’s foreign relations after the revolution

Iran’s main source of foreign exchange was to its oil and gas exports during the 1970s. Before the revolution United State had excessive control over Iran and Iran supplied US with its oil during the Arab oil embargo¹ (Abdurazokzoda, 2014). To emphasis Nixon believed that Iran was United Sates’ ally in the Persian Gulf to keep the region secure. However after the revolution conflicts arose between the two countries when the Islamic Republic stated that Iran is not ready to be the guardian of any other country.

Furthermore these conflicts got more serious when Iranians attacked the US embassy in Tehran and took hostages on November 1979 (Fakhreddin Soltani, 2010). This act made Iran isolated as Fakhreddin explained “United States re-acted the hostage crisis by enforcing sanctions against Iran which began with freezing Iran’s assets in the Unites States. United States prevented Iran’s access to more than \$10 billion Iranian assets and canceled the loans expected to give to Iran before overthrowing of Shah’s Regime.” The precedent actions made Iran isolated and United Sates continued the sanctions on Iran through Iran-Iraq war².

¹ On October 1973 the organization of petroleum exporting countries (OPEC) signed an agreement to stop exporting oil to United States. (Amadeo, OPEC oil embargo: causes and effects of the crisis, 2017). Kimberly said “The oil embargo is widely blamed for cuasing the 1973-1975 recession.”

² According to Ian Black Iran-Iraq War “began 30 years ago when Saddam Hossein launched what he hoped would be an easy victory over a disorganised enemy. By its end, nearly eight years later, more than 1 million people were dead and both countries deeply scarred. It has marked the politics of the Middle East ever since.” (Black, 2010)

Additionally United States started to criticize European countries of still having a public relations with Iran stating that Iran antagonizes peace in the Middle East, Iran's willing for weaponry and human rights disruptions.

European countries tried to convince Iran to actuate their policies according to the United States but Iran was not willing to cooperate. Iran-Iraq's war was the crucial point in arising the conflict of Iran and European countries relations. One year after the revolution Iraq invaded Iran; in the meantime through the eight years of war between Iran and Iraq, European countries supported Iraq by providing them chemical weapons in addition to their reduction of oil trade with Iran which led to the challenges between Iran and Europe (Fakhreddin Soltani, 2010). However Iran entered a new era after the Iran-Iraq war, which came to an end by adopting the UN resolution 598 which stated "discontinue all military actions and withdraw all forces to the internationally recognized boundaries." The adaptation and further negotiations resulted in a positive effect on the relations between Iran and European countries (Fakhreddin Soltani, 2010).

2.4. Iran's Market Place

Iran is a large country with a population over 80 million people and is the second largest in the region, alike to the size of Germany. Iran has a significant influence and power in Middle East (Holmquist, 2016). The Islamic republic of Iran was shaped after the revolution of 1979, which was caused by political and religious causes. Although the revolution isolated the country for decades Iran had improved in literacy rate and education, research and technology.

Iran is a wealthy country in terms of oil and gas(O&G) resources, it is considered the 4th in the world. Besides its O&G, natural resources and minerals are also common in Iran. Although it is a vast source of Oil and Gas the income of the country is not only depended on O&G. Iran has become one of "the most economically diversified economy" in the recent decades (n.n, 2016). As Rizvi stated "Iran is a large and diversified regional economy. Oil and Gas are dominant, but there are other important sectors contributing to Iran's economy including small scale agriculture, which employs a third of the labour force, as well as service sector, manufacturing and financial services."

Iran is the 18th largest economy in the world with a diversified economy where the growth per capita(GDP) for oil is 15 percent and service 53 percent. According to the central bank of the Islamic Republic of Iran(CBI) the GDP growth was 3 percent in March 2015 and is predicted to increase between 5% to 8% until 2020 (Azizi, 2016). The supreme leader Ali Khamenei had set a target for Iran's GDP to grow 8 percent annually for the next five years to exceed the GDP of Turkey and Saudi Arabia (Rizvi, 2015).

Iran has an immense consumer market with the population over 80 million in which more than 60 percent of whom are under the age of 35 and are highly educated (Rizvi, 2015). Additionally, according to the annual report 2016 Azali explained that "Iranians are highly educated with the highest literacy rate in the MENA region, secondary school participation of 80 percent and tertiary education participation among the highest in the world, ahead of United Kingdom, France and Germany. Iran's urbanization rate of 73% is twice that of India (33%), well ahead of Italy (69%) and close to the levels of Germany (75%) and France (80%), a good starting point for rolling out new infrastructure."

Iran is located in the Middle East and shares borders with countries where the combined population is more than 400 million which provides the opportunity for the country to become a regional trading center (Azali, 2017).

The Tehran stock exchange is the second largest in the Middle East which makes the country attractive for foreign investment and trade, as well as Iranians' willingness to spend money on clothes, food and tourism which exceeded the total amount of \$113 billion according to the world bank 2012 (Rizvi, 2015).

Iran's internet penetration is still low in comparison to Europe. However it has been growing over the past two decades since the availability of higher speed internet. According to the annual report Iran has 60 percent internet penetration which is approximately twice as much as countries like India and Egypt. Smartphone penetration has been emerging notably, going from 50.4% in 2016 to 56.4% in the same year (Azali, 2017). The growth in internet penetration in Iran shows the country's evolution towards an information society (Jafari, 2017).

However, there are internet limitation and censorship in the country. Iran's government maintains one of the most high-level censorships governments in the world (Aryan, 2013). Nonetheless, the international sanctions have more negative affect on internet and tech scene in Iran than the censorships which can be evaded with a proxy (Crouch, 2016). To be more vibrant, as Crouch explained "The internet restriction work in two ways. On one hand, a Great Firewall-esque apparatus designed by Iran's government blocks services deemed inappropriate. On the other hand, American companies like Google are barred by US sanctions from having a commercial presence in Iran, so they are unable to offer services like Analytics for businesses."

One of the most challenging aspect of Iran is the high level of unemployment. In the year 2013 the unemployment rate was estimated 10.3 percent according to the official government study. To emphasis this fact, around 750,000 young people each year enter the labour market, in which many cannot find work and get disappointed and are forced to leaving the labour market. It has been noted that Iran has around 150,000 brain-drain each year, since young educated people leave the country for higher education and/or to find jobs in other parts of the world (Rizvi, 2015).

2.5. The Implication of Sanctions on Iran

The implication of the sanctions on Iran originated decades ago. The origins of the sanctions is relevantly connected to Iran's nuclear programm. Iran was an ally of the United States in the Middle East during the Cold War³ to counter the Soviet effect. Iran and US declared an agreement for "cooperation in research in the peaceful uses of atomic energy" in 1957. Two years later Iran established the Tehran Research Reactor (TRR) and US approved of supplying it with Highly Enriched Uranium (HEU). However the revolution led to cancellation of the deal and the West stopped cooperating with the Islamic Republic of Iran and blocked any trade of nuclear fuel or equipment with Iran (Dina Esfandiary, 2016). Furthermore as Esfandiary and Finaud explained "The origins

³ According to Treuman "The Cold War is the name given to the relationship that developed primarily between the USA and the USSR after World War Two. The Cold War was to dominate international affairs for decades and many major crisis occurred – the Cuban Missile Crisis, Vietnam, Hungary and the Berlin Wall being just some. For many, the growth in weapons of mass destruction was the most worrying issue." (Treuman, 2015)

of the Iranian effort to develop a nuclear program date back to the perception of betrayal by Iran's former Western partners after the Islamic Revolution. This was especially the case during the Iraq-Iran war, when Saddam Hussein's Iraq attacked Iran's civilian nuclear reactor, used chemical weapons against Iran and began developing its own nuclear weapon program. Similarly, the perception of Iran's hegemonic or aggressive behavior by Israel or the Gulf Arab States, nurtured by Tehran's support for anti-Sunni proxies, could only aggravate the tensions and make any negotiated solution more difficult."

Although it is significant to point out that the most critical US economic sanction against Iran was due to the blocking of assets of Iran, which was around \$12 billion after the hostage situation during the revolution (Caswell, 1981).

Furthermore another key turning point according to Esfandiary and Finaud happened in August 2002. They stated " The press conference of the National council of Resistance of Iran, an exiled Iranian opposition group, which published evidence that Iran had secretly constructed two nuclear facilities: in Natanz, for uranium enrichment, and in Arak, to produce heavy water that could be used for making weapons-grade plutonium. On 6 June 2003 the IAEA's director general, Mohamed ElBaradei, reported to the Board of Governors that "Iran had failed to meet its obligations under its Safeguards Agreement", but Iran insisted that its program was purely for peaceful purposes. Because of the lack of confidence in the truth of Iranian statements, on 12 September 2003 the Board of Governors called on Iran "to suspend all further uranium enrichment related activities and any reprocessing activities". Iran was requested to take the necessary measures "to resolve all outstanding issues involving nuclear materials and nuclear activities", as well as to sign and start implementing the IAEA Additional Protocol providing for possible inspections of undeclared activities or facilities." (as cited by Dina Esfandiary, 2016)

International concerns arose in the early 2000s of Iran's uranium enrichment activities, which led to the implication of sanctions from UN, US government and European Union with the purpose of blocking Iran's access to nuclear related materials and as Laub stated "put an economic vise on the Iranian government to compel it to end its uranium-enrichment program and other nuclear-weapons-related efforts." (Laub, 2015)

Additionally more sanctions were imposed on Iran by western powers. From 2006 multilateral sanctions were implemented on Iran by US and UN due to their concern about Iran's nuclear weapons operations (K.Mackey, 2016).

Finally the presidency period of Ahmadinejad resulted in imposing the final sanctions on Iran because of Ahmadinejad's urge of proceeding the uranium-enrichment plan and constructing new nuclear facilities in Iran. Setayesh and Mackey stated that "In 2010, the United States enacted a set of new sanctions as part of the Comprehensive Iran Sanctions, Accountability, and Divestment Act (CISADA) that targeted energy-sector activities, including insurance and shipping companies involved with Iranian imports and exports." They also added that "In addition to economic sanctions imposed by the US, the European Union has utilized a series of regulations and sanctions that have arguably had a greater negative impact on Iran's economy give the large volume of shared trade and economic activity shared between the regions." (K.Mackey, 2016) The history of Iranian Sanctions is shown in the table 1.

Table 1: History of Iranian Sanctions(K.Mackey, 2016)

History of Iranian Sanctions	
1997	Hostage crisis (turning point in Iran-US. Relations)
1984	Iran designated as state sponsor of terrorism after bombing of U.S Marine based in Beirut
1996	Iran sanction act
2000	Trade sanctions Reform and Export Enhancement Act
2010	Comprehensive Iran sanctions, accountability
2012	National Defense Authorization Act and Iran Threat Reduction and Syrian Human Rights Act
2013	P5+1 signed the Joint Comprehensive Plan of Action
July 2015	Finalizing Day, Historic agreement between Iran and P5+1 was reached
October 2015	Adoption Day
January 2016	Implementation Day
October 2020	Five years after Adoption Day, U.N sanctions on conventional arms lifted
October 2023	Transition Day, 8 years after Adoption Day, United Nations Security Council sanctions on ballistic missiles and other sanctions are lifted
October 2025	10 years after the Adoption Day, JCPOA terminates

2.5.1 The Impact of Sanctions on the Economy

Sanctions on Iran affected the country's economy in different sectors. United States sanctions against Iran affected the financial investments and banking system the most. Sanctions included prohibition of any payments through Iran's central bank, ban on oil exports which prior to 2012 was half of Iran's revenue, embargo on trades with Iran, weapon development bans and freezing their assets (Laub, 2015).

Laub explained that "International sanctions have taken a severe toll on the Iranian economy. In April 2015, US Treasury Secretary Jacob Lew estimated that Iran's economy was 15 to 20 percent smaller than it would have been had sanctions not been ratcheted up in 2012 and cost \$160 billion in lost oil revenue alone. In addition, more than \$100 billion in Iranian assets is held in restricted accounts outside the country." Laub added "The value of rial declined by 56 percent between 2012 and 2014, a period in which inflation reached some 40 percent, according to CRS and the unemployment rate might be as high as 20 percent."

However Katzman is of view that "The sanctions had not limited Iran's ability to arm militant movements in the Middle East." (Katzman, 2017)

Further more as Setayesh and Mackey cited "Although the primary intentions of the historically imposed Iranian sanction regime were to limit economic development, international trade and scientific and military assistance, sanctions have also directly contributed to creating critical medicine shortage within the country." (K.Mackey, 2016)

Torbat found in his research that "The total sanctions cost is \$777 million per year, that is about 2.7 percent of Iran's \$28 billion total exports and/or about 1.1 percent of Iran's \$70 billion GDP in 2000. The annual cost of the sanctions to the Iranian population is about \$12.1 per person." (E.Torbat, 2005)

2.6. Entrepreneurship in Iran and The Rise of Domestic Startups during the Sanctions

Entrepreneurship makes economies grow and develop. Economists and entrepreneurs play a vital role in innovation and evolution of the economy therefore it is necessary to

generate a condition in which entrepreneurship can flourish by providing environmental, physical, financial, spiritual and cultural support (Yaribeigi, Development of Entrepreneurship Ecosystem, 2014).

As Yaribeigi added "Most approaches to entrepreneurship and developing countries in recent decades caused a wave of development policies to create jobs in the world. These approaches indicated that these countries have been able to make remarkable progress in different fields of economic and social gain."

Having to live with the sanctions for many years made Iranian engineers and entrepreneurs take the matter into their own hands (Hormats, 2016). As Hormats explained that "Years of sanctions have forced Iranian to create their own internet companies and services-and provided an incentive to establish a wide variety of homegrown information technology firms."

In one way the sanctions helped entrepreneurship ecosystem in Iran. Since big tech companies-such as Amazon and Ebay were not allowed to enter Iran's market, Iranians started to copy their platforms and created the admissible version of them, for instance the platform like Youtube is called Aparat in Iran, and Digikala is the Iranian version of Amazon.

Specifically as Fadakar and Mehrinfar mentioned "What differentiate the Iranian e-business market from the rest of the world is that due to Iran's special political circumstances, the moguls of international e-business such as Amazon, Ebay, and Uber have been absent from the Iranian market. This has provided small and medium-sized Iranian entrepreneurs with an opportunity to take on the mantle of e-business industry in Iran. While these entrepreneurs have taken their inspiration from their foreign counterparts, they have also developed local innovations to a surprising fact." (Fadakar, 2017)

On the other hand as Jozi mentioned "The first thing that comes to mind when talking about sanctions is the paralyzing effect it has on local companies and how it's meant to cripple an economy on multiple levels. Because of the isolation created by outside, International companies do not have the privilege to enter the vast and untouched tech

market of Iran. But aside from all the assumptions it did turn out as an extraordinary advantage for local startups in Iran in many cases.” (Jozi, 2015)

As mentioned previously sanctions had direct impact on money transactions and payment systems. This issue as Jozi explained “was the golden gate for Iranian entrepreneurs to create their localized version of these business models with in-house solutions for payment and other transaction methods.”

On the contrary, sanctions made some complications for Iranian entrepreneurs and they had to face some difficulties over time where it closed the doors for the Iranian market to enter the international market and vice versa. In addition as Cheraghi and Yaghmaei explained “Tax laws and corruption are namely also other barriers to deter individuals, particularly diaspora entrepreneurs, to follow their economic activities in Iran. Moreover, limited access to local financial and local capitals are the typical challenges in a developing country such as Iran.”(Maryam Cheraghi, 2017). Additionally they added “due to sanctions on Central Bank of Iran (CBI), Iranian banks face limited options, which harden the entrepreneurship process.”

According to the obstacles of entrepreneurs in Iran it is important to mention that there are numerous challenges that entrepreneurs in Iran have to face, for instance government regulations, lack of entrepreneurship knowledge, funding challenges and limited academia engagement (Maryam Cheraghi, 2017). Explicitly as Cheraghi and Yaghmaei explained “Limited academia engagement into start-ups and tech entrepreneurship, lack of opportunities for private sector engagement, and small volume of investment in R&D could be named at knowledge challenge section.”

On the contrary, being cut off from the world enabled Iranian entrepreneurs to build the infrastructure of entrepreneurship ecosystem in Iran (Jozi, 2015). As Jozi stated “One of other benefits of the sanctions on Iran was that it helped spread the culture of entrepreneurship in Iran. Forcing aspiring entrepreneurs to take action in their own hands and build startups according to local needs while international big guys are far in the shadow. Being cut off from the outside competitors has bought time for these startups to grow in a playground with easy competitors, making them ready for the time where the doors to Iran’s market open to the world.”

2.7. Joint Comprehensive Plan of Action

In 2013, the 11th Iranian government and Hassan Rouhani came to the office focusing on one of its main campaign promises: lifting the nuclear sanctions against Iran. After three decades of economic pressures and diplomatic isolations and years of inconclusive negotiations, on 14 July 2015, Javad Zarif, Iran's foreign minister and UN Security Council 's five permanent members– the United States, Britain, France, China, Russia and Germany–also known as the P5+1, signed the Joint Comprehensive Plan of Action (JCPOA), in Vienna, Austria.

Under this 159-page agreement Iran has guaranteed to reduce its nuclear groundwork in return for the international sanctions release. But the deal had its own detractors, among them Israel, Saudi Arabia and most important the entire US Republican Party which claimed that not only the agreement does not prevent Iran from creating nuclear weapons but conversely empowers its nuclear capacities (Rizvi, 2015).

The agreement was sent to both houses of the US Congress for a 60-day authorized valuation. Many of the Republican Party members were stubbornly objecting the deal even before the commencement of the official reviews. Later President Obama announced that he would veto the resolution of disapproval. The only way the opponents could overturn the deal was by gathering two-thirds vote of the congress in order to overrule Obama's veto. Later the agreement was approved by majority of supporters (Rizvi, 2015).

This agreement as Esfandiary and Finaud stated “Is the result of intensive negotiations, ending a process initiated in 2003 by three European countries –France, Germany and the United Kingdom (UK)– later joined by the European Union (EU) high representative for foreign affairs and security policy (E3/EU), and enlarged in 2006 to China, Russia and the United States (US) (from then on, the E3/EU+3 or P5+1). The talks led to the first milestone in Geneva in November 2013 with the interim agreement that suspended parts of the Iranian nuclear program for the duration of the talks. The April 2015 framework agreement adopted in Lausanne followed this and served as the basis for the final comprehensive agreement, the JCPOA.” (Finaud, 2016)

On the other hand Batmanghelidj described JCPOA as “A document comprised in 159 pages, negotiated over 23 months- represents a triumph of diplomacy. It also represents one of the most important single document ever crafted in Iran’s economy.” (Batmanghelidj, 2016)

In the midst of various provisions of Vienna's nuclear agreement, there are parts, which dedicate special authority to the International Atomic Energy Agency (IAEA) in order to have supervision over Iran's nuclear activity and to verify that Iran does not have access to highly enriched uranium with the aim of making nuclear weapons. Besides the standard inspections, IAEA has also access to military facilities with cautious activities (Finaud, 2016).

The Nuclear Deal terms, as Amadeo stated is that “Iran agreed to limit its nuclear development program in return for the end of economic sanctions imposed by the United Nations in 2010. The arms embargo will remain in place for five years. Specifically, Iran will reduce its 12,000-kilogram stockpile of enriched uranium to 300 kilograms. It must remove 10,000 centrifuges (about two-thirds) that produce that uranium. It must remove the core of the Arak plutonium reactor. Iran will neither produce nor acquire highly enriched uranium or weapons-grade plutonium. The UN's International Atomic Energy Agency inspectors must have daily access to the Iran's entire nuclear production supply chain. The agreement guarantees that, for ten years, Iran would be a year away from producing a nuclear weapon. That is much longer than its pre-agreement "breakout time" of two to three months.” (Amadeo, 2016)

Iran accepted to change its heavy-water reactors into research facilities and the agency also controls the Iranian fuel system. Iran will less likely risk its current position (both domestically and internationally) by violating its treaties. As by this day Iran has been faithful to its covenant. The agreement might even change Iran's approach towards region's turbulent situation. On one hand, Saudi Arabia has changed his policies against Iran and on the other, Israel trying so hard to keep the attention away from its own nuclear activities by opposing the JCPOA. Regarding the strategic changes in the Middle East, the "realist collaboration against common enemies" may finally be actualized (Dina Esfandiary, 2016).

According to the Batmanghelidj “Sanctions relief will be operationally significant and allow free and unencumbered transfer of funds to and from Iran, the development of correspondent banking relationships, the facilitation of trade finance, and the reopening of offices and subsidiaries in Europe.” Additionally he cited “Many banks will even earn bank access to SWIFT, although those that are designated under US Iran Transactions and Sanctions Regulations (ITSR) on the Specially Designated Nationals (SDN) list will only have assured access to SWIFT after “Transition Day,” which can occur as soon as the “Director General of the IAEA submits a report stating that the IAEA has reached the Broader Conclusion that all nuclear material in Iran remains in peaceful activities. As such, several major banks will be to wage independent campaigns to be delisted in order to gain access to SWIFT.” (Batmanghelidj, 2016)

The JCPOA states, “As long as Iran fully complies with the JCPOA, the sanctions that were suspended or lifted shall not be reimposed on other bases (such as terrorism or human rights). The Obama Administration stated that it would adhere to that provision but that some new sanctions that seek to limit Iran’s military power, its human rights abuses, or its support for militant groups might not necessarily violate the JCPOA.” (Katzman, 2017)

Furthermore Parsi mentioned “There are two important elements to the actual implementation of the JCPOA: the legal-technical process and provisions, and the political context in which they are set.” (Parsi, 2016). Parsi also stated that “So far, the main complaints and complications have been caused by how the implementation has been conducted rather than the actual legal fulfillment of the agreement itself.” For the past 38 years, since Iran’s Islamic revolution, the Iran-US relation has experienced an era of discord, “distrust and fear”. However it is said that the JCPOA was a successful conclusion of long negotiations it was followed by different reactions among other countries, some immediately congratulated Iran while some did not support it. As Finaud and Esfandiary said “The Gulf Arab countries made it no secret that they oppose the nuclear negotiations and deal with Iran. For them, Iran’s nuclear program is a secondary concern in light of Tehran’s perceived expansionist regional policy. They believe that the JCPOA will provide Iran with further means to fund its proxies and destabilize the region. They see

the agreement as paving the way for a US-Iranian rapprochement at their expense, even though this is clearly not on the cards in the foreseeable future.” (Finaud, 2016).

In conclusion the final agreement was a win-win solution for both parties. As the P5+1 realized that the sanctions were not affecting the country in terms of reducing the missile technology and nuclear purposes but it affected the lives of Iranian people, they knew the sanctions have to be removed (Finaud, 2016). To support this idea Finaud explained “While the negotiations included all the official nuclear-weapons states, the successful conclusion of the JCPOA can be shown as an example of cooperative security. This achievement should inspire future disarmament and non-proliferation discussions in light of the need for further progress in diminishing the role of nuclear weapons in security policies recognized by the NPT(Non-Proliferation Treaty)⁴ parties.”

An overview of the JCPOA is presented in figure 1. (Rizvi, 2015)

⁴ United Nations Office explains “The NPT is a landmark international treaty whose objective is to prevent the spread of nuclear weapons and nuclear technology, to promote cooperation in the peaceful uses of nuclear energy and to further the goal of achieving nuclear disarmament and general and complete disarmament.” (n.n, Treaty on the Non-Proliferation of Nuclear Weapons (NPT) , 2016)

Figure 1: Overview of Implementation of JCPOA. (Rizvi, 2015)



2.7.1. The Impact of JCPOA

Implementation of the JCPOA will indeed have a positive effect on Iran's economy. As the International Atomic Energy Agency (IAEA) confirmed that Iran followed the key elements of the Joint Comprehensive Plan of Action on January 2016 the sanctions against Iran were lifted (Hormats, 2016). As Hormats explained "The removal of these sanctions opens up a wide range of possibilities for investment in and trade with Iran. There is optimism in many quarters of Iran and among foreign businesses that sanctions

relief will sweep away Iran's now considerable economic problems and lead to profitable investment opportunities."

Sanctions relief will have a positive effect on global economy, as Versailles stated "Non-oil trade between Iran and the rest of the world is currently limited but is expected to rise post sanctions. This reflects the aforementioned lowering of transaction costs, but also growth in the rest of the world and Iran's expected economic acceleration. The latter implies an increase in Iranian imports by 50 percent between 2015 and 2020, worth an accumulated \$525 billion, with ample opportunities for trading partners." He added "Global GDP is estimated to rise by about ¼ percent over the medium term, mainly owing to a decline in oil prices triggered by an increase in oil supply from Iran but also to an increase in non-oil trade with Iran. A gradual rise in Iran's oil production could amount to an increase of almost 1½ percent of global oil production by 2020, and is likely to drive global oil prices even lower (Figures 2.3.4.5)." (Versailles, 2016)

Furthermore after sanctions relief Iran will become the largest country entering the global marketplace and it is mentioned that Iran will have a 5 percent growth in GDP in one year. "According to the World Bank, the Iranian economy loses out on \$50 billion annually as talents look elsewhere for work today as 25 percent of Iranian with a post-graduate education live in developed countries. Removal of sanctions will perhaps persuade some educated Iranian to take their chances at home." (n.n, Trade and Geopolitical Implications of Iran ' s Nuclear Deal, 2016)

Figure 2: Estimated Impacts of Sanction Removal on Global GDP Growth

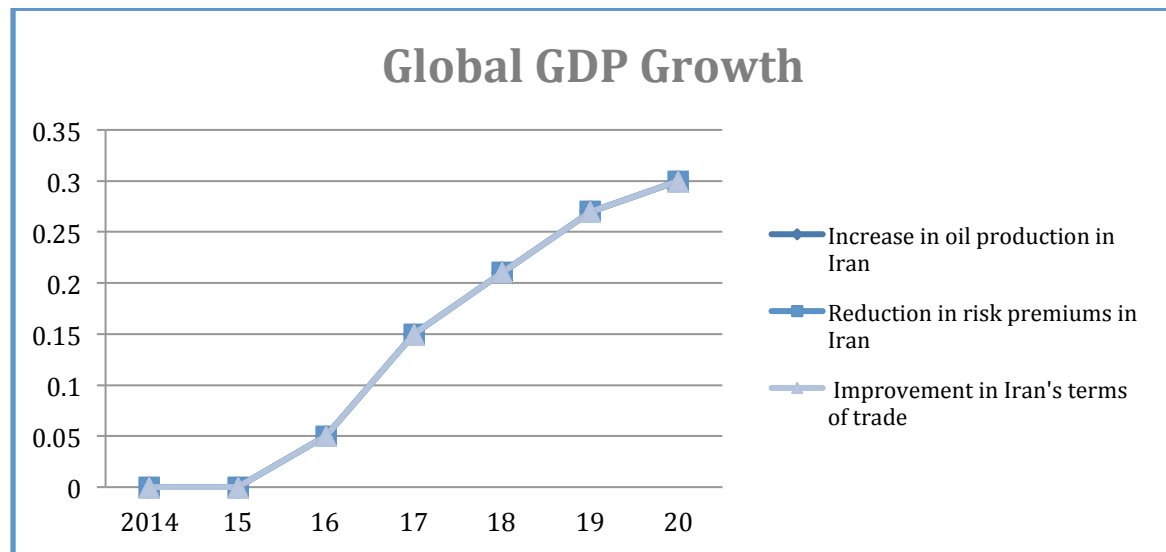


Figure 3: Estimated Impacts of Sanction Removal on Global Oil Production

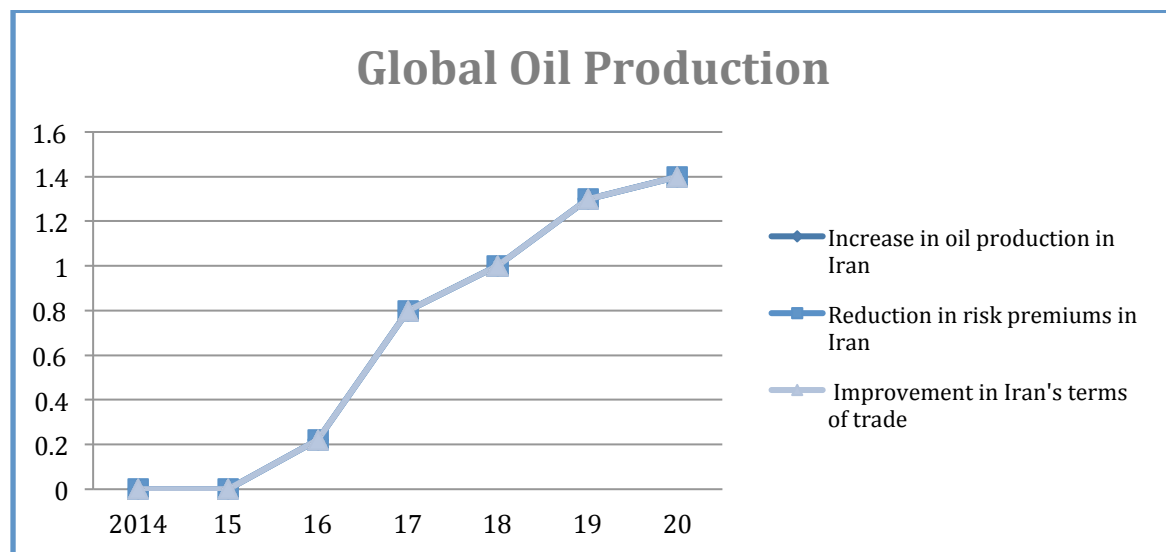
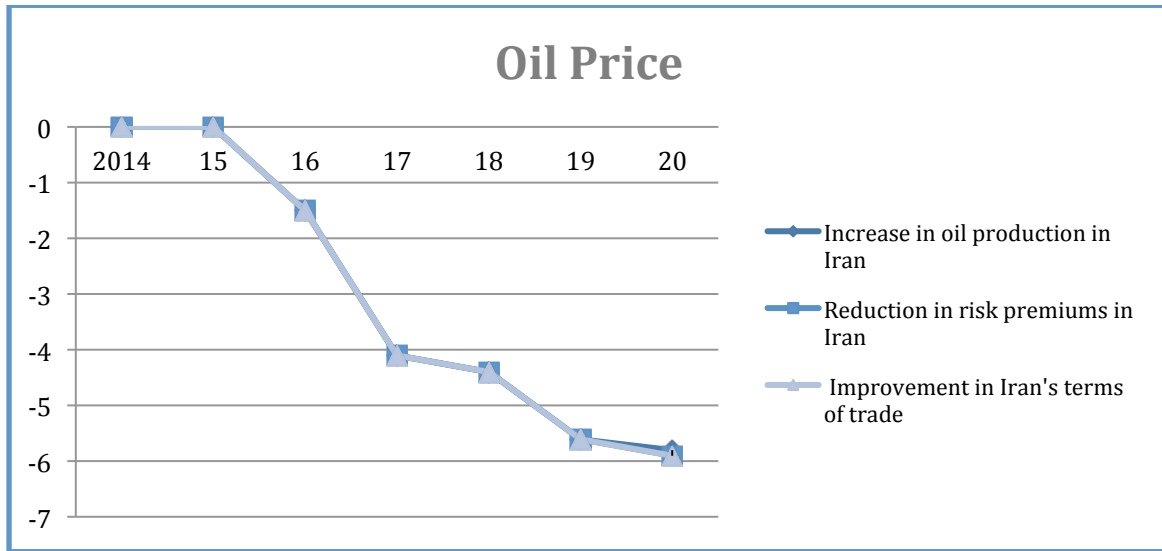
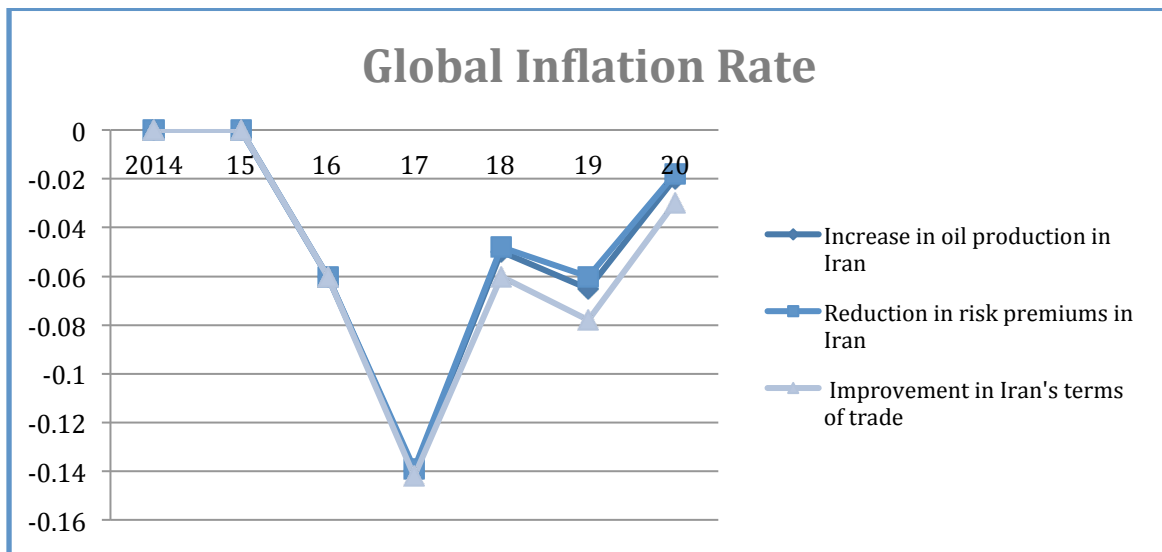


Figure 4: Estimated Impacts of Sanction Removal on Oil Price**Figure 5: Estimated Impacts of Sanction Removal on Global Oil Production**

Estimated Global Impact of Sanction Removal (Versailles, 2016)

Although it is expected a high rise on economy in Iran after JCPOA, it is important to issue the great amount of debt of Iranian regime. The Iranian people have a high expectation from the sanction relief while most of the money generated in Iran

afterwards will be spent on paying the debts and building the infrastructure and services of the country (Nader, 2015).

On the political aspect, the JCPOA will not end the conflicts between Iran and United States. However the election of president Rouhani for the second time means that Iranians want moderation and openness to the West, as part of the Rouhani's campaign was due to opening the doors to foreigners and engagement with the West, followed by the implication of JCPOA, which happened during his first four years of presidency (Nader, 2015).

In addition, Iranian people desire to be connected to the world more than ever. Hormants mentioned "Young Iranians are greatly interested in American culture, entrepreneurialism, and innovation. The vast majority welcome the nuclear deal because they hope it will lead to an opening to the West- and particularly to the United States-enabling more contracts and travel. Many also recognize that additional foreign investment will provide a substantial increase in employment opportunities."

Furthermore Rizvi and Kokona mentioned "Iran's large and growing middle class, a young and well-educated work force, a diverse manufacturing base and extensive natural resources, including the world's second-largest natural gas reserves, make Iran a very attractive market for foreign investors. However, the complex business environment with its significant risks needs to be navigated systematically, logically, and with care. If done successfully the potential marketplace will offer vast investment potential in numerous industries including Oil & Gas, Automotive, Aviation, Consumer Goods, Telecoms, and Real Estate." (Rizvi, 2015)

However lifting the sanctions will allow foreign investments in Iran, many investors are still hesitant to invest in Iran due to terrorist concerns and International transparency in addition to the possibility of reimposing the sanctions after the recently ballistic missile operation in Iran alongside the presidency of Trump.

Nevertheless foreign investments under the right circumstances can help Iran's economy and political environment (Hormats, 2016). As Hormats stated "By engaging with private sector companies and younger Iranians-including women entrepreneurs-Western investors would likely strengthen the role of these groups in the nation's economy and, over time, in its political life."

Moreover after the sanction relief, a wave of hope and optimism had begun (Walt, 2016). Walt mentioned “Only days after sanctions ended in January, Iran’s President Hassan Rouhani raced to Rome and Paris to hash out multibillion-dollar deals for auto and ship manufacturing, new airplanes, modern railways, upgraded oil facilities, and much else. Since then, executives from Germany, France, Italy, Japan, Korea, and elsewhere have jammed Tehran’s hotels, which report being booked solid for weeks.”

2.8. Entrepreneurship Ecosystem Post Sanction Era

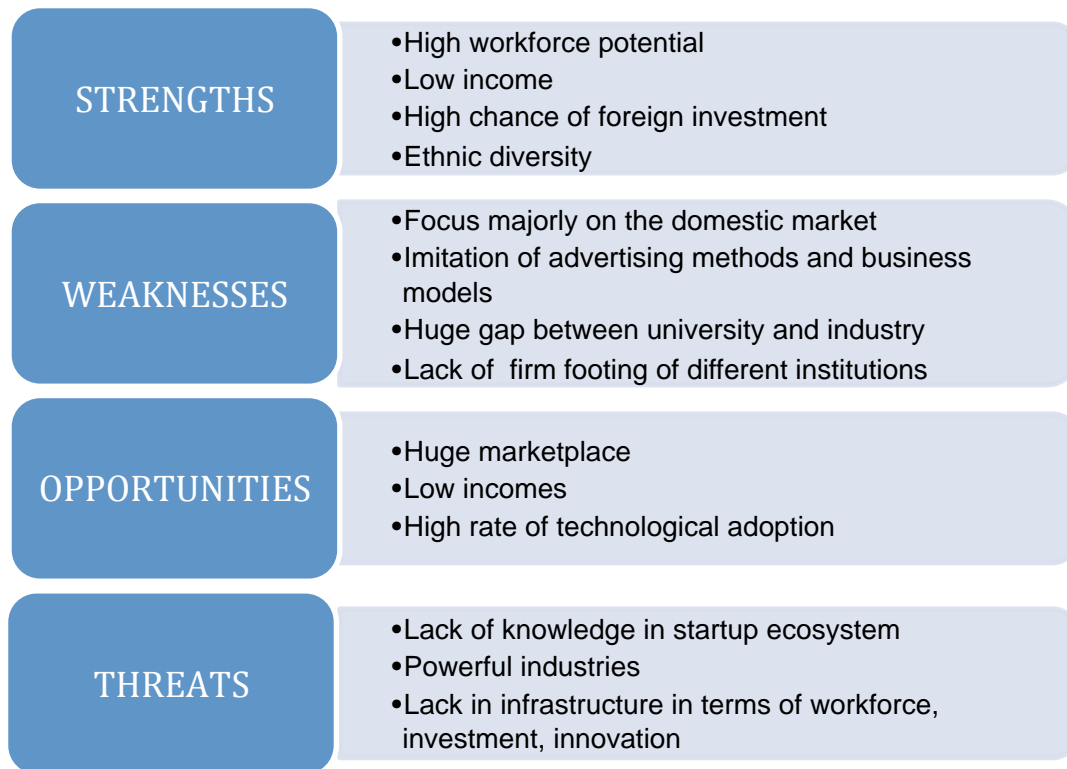
Ali Davari highlighted different elements which shape the startup ecosystem and entrepreneurship activities in societies, including motivation, skills, financial resources, desirable opportunities and culture (Ali Davari, 2012). Hormats emphasized on the greatest economic strength in Iran being its people with the population over 80 million. He stated “The country has a skilled workforce and an extraordinary high literacy rate of over 87 percent. Iranians have particular skills in mathematics, science, information technology, engineering, and medicine. Nearly half of all college graduates major in these fields; this far exceeds the figure in other Middle Eastern nation. Roughly 70 percent of Iran’s science and engineering students are women.” (Hormats, 2016)

It is important to mention that every environment has its advantages and disadvantages regarding the business sector. Each country has its opportunities for innovation and challenges, Iran being no different. Startups in Iran face some challenges, for instance one of the challenges for them is due to the fact that they do not have enough motivation to aim for the international market (Mohammadi, 2017). To be more precise Mohammadi explained “There is no easy way for them to access the world market. There is also a lack of funding for seed-stage⁵ startups and there are not many lawyers to guide startups in the right direction. Another problem that startups face is the lack of a proper legal framework for investments and registrations.”

⁵ “The initial stage of a new business in which the entrepreneur looks for investors.” According to business dictionary.

The SWOT analysis of startup ecosystem in Iran will be displayed and explained in this section as adapted by an article in Persian language from Ghiabi. (Ghiabi, در کارآفرینی، فرصت، تهدید، قوت و ضعف تدهی، فرصت، :ایران 2017)

Figure 6: The SWOT Analysis of Startup Ecosystem in Iran (Ghiabi, در کارآفرینی، فرصت، تهدید، قوت و ضعف تدهی، فرصت، :ایران 2017)



Discussion of the SWOT Analysis:

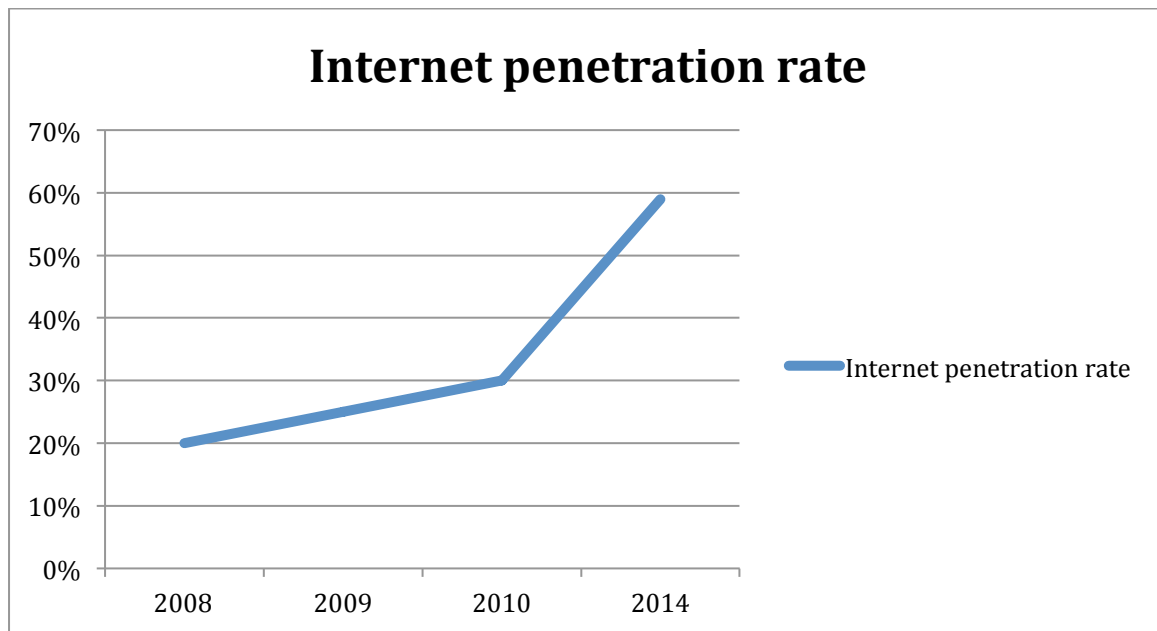
The opportunities of Iran's startup ecosystem is still unknown by economic intellectuals. Low wages and huge consumer market in Iran enables a good opportunity for people who wants to invest their money, time and energy in entrepreneurship. Apart from consumerism attitude of Iranians, they are early adoptors when it comes to a new technology, which makes it a desirable target market.

One of the biggest threats for Iran's startup ecosystem is its lack of knowledge of powerful industries, the workforce, investment and idea processing. To be more precise, there are people who are experts in one field and think that it is enough for establishing a startup.

Iran's biggest strength is its people, with the population of 80 million where more than 65 percent of whom are under the age of 35 with high tertiary rate. Having the fourth rank regarding the amount of engineers out of its population, nearly 5 million graduates—both gender equally— and low wages, makes Iran a great hub for entrepreneurship. Also low foreign investment so far and high GDP growth which resulted from sanctions, create chances for more foreign investment. Following the mentioned factors, ethnic diversity made Iran a dynamic work space and one of the fastest growing nations concerning their startup scene.

At last, the excessive focus on domestic markets and not considering international markets on one hand, and imitating business models and advertising methods on the other hand, are the weak points of Iran's startup ecosystem. Also the lack of skilled workforce in specific fields and the lack of support of the startup ecosystem can also be named as weak points. (Ghiabi, 2017, قوت و ضعف تهدید، فرصت، ایران در کارآفرینی)

Since 2012, Iran's startup ecosystem has experienced a boom. Although Iran has been isolated in terms of conducting business internationally and economic growth on a global scale for many years, technology has helped the population connect to the world and follow their footsteps. Currently the internet penetration rate in Iran is more than 55%, and it is estimated 40 million people use smartphones according to Iran's Ministry of Communication and Information Technology (Dorigo, 2016). "Young Iranians have begun to create startups with success thanks to a 4G speed connection that has grown by leaps and bounds over the past three years." This explains the importance of Web 2.0 for the augmentation of startups in Iran. "Iranian entrepreneurs and engineers, along with the businesses they have created, will provide a range of opportunities for foreign companies looking to establish partnerships. Years of sanctions have forced Iranians to create their own Internet companies and services." (Hormats, 2016) The rise in Internet penetration rate and mobile operator happened after Rouhani's presidency in 2013 (Walt, 2016). The year 2014 was a turning point for Internet penetration in Iran. With the 3G and 4G services being provided, "people started to rely on their mobile internet connectivity and online businesses started to get some serious traction." (Azali, 2017) The improvement of Internet services aided the augmentation of new businesses and startups in Iran.

Figure 7: Internet Penetration Growth in Iran(Abbaszadeh, 2015)

Regardless of the challenges, Iran's startup ecosystem is thriving. As Jozi stated "Iranians are really engaged in innovation – when a new technology comes, you can see a lot of early adoptors in the country." Iran's ecosystem is three years old now and in the early stages of its establishment (As cited by Crouch, 2016). Jozi added "If there is one word to describe Iran's startup ecosystem, it is optimism. The country has rapidly developed an assortment of companies, venture capitals⁶, and accelerators, pretty much from scratch – and it does not seem to be slowing down anytime soon."

Looking deeper in Iran's startup ecosystem, it is important to mention that one of the most crucial challenges Iranian entrepreneurs face is the lack of investments or the lack of capital to initiate start up ventures. As Abbaszadeh stated "Although International Sanctions limit access to e-commerce software, exclude the country from online money transfer systems, prevent advertising on global social media and, most significantly blocked almost all foreign investment. After sanctions and new situation, all shows that Iran has a very high potential for investment and still is the world's biggest untapped market." (Abbaszadeh, 2015)

⁶ Business dictionary describes, "Venture Capital is a type of funding for a new or growing business. The venture capital firm gives funding to the startup company in exchange for equity in the startup."

Apart from International sanctions on the banking system which prevented investors to invest in Iran, the lack of knowledge of investing in startups domestically and high interest rate of Iranian banks prevented investors to risk on investing on startups. However after the JCPOA, according to a report from Euronews “Europe’s SWIFT banking services were restored on implementation day. According to Central Bank authorities, 29 Iranian banks are connected to SWIFT, although banking relations still remain the main issue. Following the nuclear deal, Iran is now seeking investment in different sectors. On the other hand, this deal has made countries and companies think of resuming their commercial ties with Iran.” (n.n, Iran's post-sanction economy doing well one year after nuclear deal, 2017)

Furthermore as Ghiabi exolained “The entry of foreign investors not only allows to produce wealth, technical knowledge and transfer of technologies, but also the positive enjoyment of cultural assets in other countries.” (Ghiabi, 2017)

Moreover Hormats said “Foreign investment under the right conditions can support both Iran’s political and economic evolution. It would be naïve to think that major changes will occur soon, but also unduly pessimistic to belive that they will never happen, especially as foreign contacts increase and new generation of Iranians grow in influence. Such oppenness has resulted in major changes in far larger countries, such as China. The prospect of more job-creating investment could produce additional popular support for reformists.” (Hormats, 2016)

Hamidreza Ahmadi who runs the Iran Entrepreneurship Association said “Investments have increased over the last year. During these early stages, a little funding and a lot of guidance can make or break a startup’s success.” (Guttman, 2015) Ahmadi added “When the doors open, startups in Iran need to be ready to compete with the rest of the world. We need mentorship to establish corporate governance policies, social responsibility and standard processes in order to compete with international businesses.”

Finally as Ghiabi said “The Iran entrepreneurship ecosystem is still one of the most fast growing ecosystems in the region. To reach an average 8 percent economic growth during the next five-year period, the Iranian administration is shifting from a bank-based financial system into a more market-based one. This would creat plenty of opportunities

and special incentives to entice overseas investments.” (Ghiabi, HOW STARTUP ECOSYSTEM IS CHANGING IRAN’S ECONOMICS DYNAMICS, 2017)

Apart from foreign investment, recently there has been some domestic investments in entrepreneurship ecosystem in Iran (Hellmich, 2016). Hellmich explains “Sarava is a pioneer in Internet and e-commerce investments in Iran and, through offering world class services and mentorship, has established a unique track record in supporting local entrepreneurs to build some of the most successful consumer technology companies in the country and region. Sarava’s investment focus is on companies operating in the universe of internet, mobile, e-commerce, games, cloud computing and software as a service (SaaS).” Hellmich adds “Sarava currently has invested in more than thirty companies including the market leading businesses in Iran’s e-commerce and online classified sectors. The company also has a network of partner companies including online advertisement and digital marketing group, which employs more than 200 people and comprises several leading Iranian digital businesses including Anetwork. Sarava’s network also include the startup incubator⁷ and accelerator⁸ Avatech which are performing very well.” Sarava revenue’s is due to the shareholding same as Pomegranate. Pomegranate investment AB is a private investment company based in Stockholm which was founded on 2014. Pomegranate focus is to invest in internet companies in Middle East especially Iran (Hellmich, 2016).

Iran is experiencing a major development of e-commerce websites. Abedinpour is of the view that “the fast growing number of internet users in Iran along with the changes in online payment methods have caused the emergence of a large number of e-commerce websites in the country. According to Mohammad Javad Azari Jahromi, the Deputy Minister, currently there are 24,000 e-commerce websites operating in Iran.” (Abedinpour A. H., 2017)

While talking about e-commerce businesses in Iran Digikala is crucial to mention. Digikala is the first Iranian e-commerce website which was founded in 2007. With the

⁷ Business dictionary explains Incubator as “A place, especially with support and equipment, made available at low rent to new small businesses.”

⁸ An institution that helps startups develop via coaching.

business model like Amazon, Digikala introduced the word “startup” to people in Iran where its marketshare is about 90 percent now and valued up to \$500 million (Azali, 2017). Azali mentioned that “Digikala is the most successful startup in Iran and started to blossom and grow after Sarava-the pioneer in Internet and e-commerce investments in Iran- invested in this startup.”

Azali added “Sarava, as the sole investor, made a subsequent investment of approximately \$92 million in Digikala in 2016. Digikala has been deploying this capital investment on expansion, capacity, growth, logistics platform, marketing and new strategic initiatives such as Digistyle, an online fashion site, a new larger fulfillment center and a marketplace strategy.” Although Digikala being the most successful startup in Iran now, it had difficulties getting the tractions when it started working due to the lack of Internet infrastructure in the country (Azali, 2017).

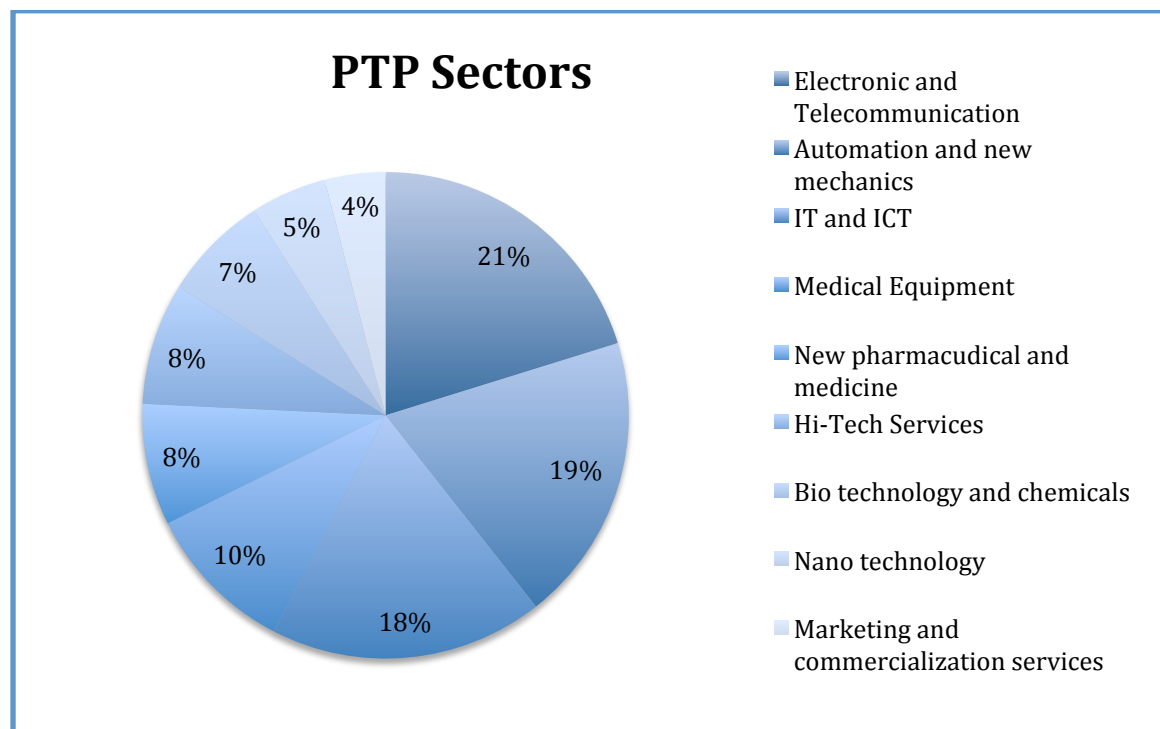
After Digikala, Iran’s second online classified platform Sheypoor was launched in 2012. As Pomegranate Investment group describe “Sheypoor offers a platform where users can buy and sell their products quickly and easily free of charge or browse through thousands of advertisements. Sheypoor is Pomegranate’s second largest portfolio holding.”

Foreign investments are happening in Iran through different sources, Pomegranate is a good example. They emphasise “With economy activity generally picking up, it is all happening in real time with now 55 percent of Iranians connected to the internet, which continues to be a key driver for the success of our investments.”

The government has realized that for solving the high unemployment rate issue in Iran, they have to let go of old business models and invest more in young Iranian entrepreneurs. Therefore in the past few years they have started incubators, accelerators, VCs and shared workspaces to pave the way for establishment of more startups, one example is the state run organization TCI (the Telecommunication Company of Iran). Goodarzi said “An estimated 40 accelerators are now actively engaged in the startup scene of Iran and the number is growing rapidly as major corporations are starting to establish their own VCs and accelerators to exploit the market’s underserved potential.” (Goodarzi, 2017)

In addition to government's approach towards entrepreneurship it is crucial to point out the Pardis Technology Park (PTP) in Iran. PTP is the region's paradise of technology which is located in north of Tehran and is a center for economic, research, technology and scientific activities, with the focus of expanding Iran's market and entering the international market. It consists of three kinds of establishment, the first is incubators for startups, the second is for SMEs and the third is independent research center. The PTP center gets the financial support from bank loans, government support, investment services, etc, in which they get the most investments from the private sector. According to the scientific counsellor of Iran "PTP has provided opportunities to absorb new know-how and proper investment and, concerning its location at the heart of reputable scientific, research and academic centers with cheap and abundant sources of expert labor, it provides a proper environment for small and medium-sized tech-companies, R&D units of industrial companies and research institutions to locate and professionally appear in the region." (n.n, Pardis Technology Park, 2015) The Pardis Technology Park consist of different sectors as shown in figure 8.

Figure 8: Pardis Technology Park Sectors (n.n, Pardis Technology Park, 2015)



The post JCPOA era, which will open doors for more entrepreneurial ventures to be established in the Iranian marketplace, will lead to the creation and augmentation of new start up ventures in Iran and will pave way for a number of positive consequences for the country. A major positive outcome would be more international investments. To be more precise Mehrinfar and Fadakar mentioned “The post-JCPOA area provides an opportunity for international investors to somehow enter the Iranian e-business market through foreign investment, mergers and acquisitions, joint venture agreements and through setting-up their own startups in this rich market which is still in the process of development.” (Fadakar, 2017)

Apart from investment, the banking sector was another crucial point for Iran. Presicely as Jozi explained “Sanction prevented Iranian banks from collaborating with international banks and prohibited international banks from operating in Iran. This very much affects e-commerce providers in and out of Iran. When the sanctions on the banking systems and international transactions are finally lifted, we will see Iranian startups expanding seamlessly with numerous payment methods available at their disposal.” (Jozi, 7 Changes to Iran’s Startup Scene Resulting from the Iran Deal , 2015) However lifting the sanctions will help the Iran’s banking sector, the tangible impact of it will take a few years (Saeid Babakhani, 2016). As Babakhani mentioned “many sanctions on the banking sector still remain and will likely limit the short term positive impacts.” Furthermore he added “The main stabilization factor will be the access to the Society for Worldwide Internet Financial Telecommunication (SWIFT) transactions. Ending the isolation of the Iranian banking sector from the global bank-to-bank transactions is a key issue in revitalizing the Iranian economy. Once this decisive step is taken, Iranian banks will be able to raise capital in the international markets and undertake international transactions.”

After the implementation day Iranian payment networks are getting connected to the international ones (Azali M. , 2017). Azali stated that “International airlines such as Turkish Airlines and Qatar Airways have been connected to the Shetab banking system. This means that Iranians can now book their flights directly from the airlines with Iranian debit cards. For an average Iranian, booking a flight to other countries is not an easy task, especially when you want to book a flight directly from the airlines themselves.” Azali added “Due to sanctions imposed on Iran’s economy, Iranians haven’t been able

to benefit from International payment networks such as VISA or MasterCard. This led the Central Bank of Iran to implement a local interpayment system called 'Shetab'."

This improvement may not be at its best but it is a fair initiation. Moreover Azali mentioned "Only in 2016, there were one million Iranians who booked a flight from Iran to other countries, so this is a good market. Overall, connecting the Iranian payment networks to the international ones can begin a new era for the Iranian businesses and startups."

Another positive outcome would be fewer brain-drains. As Rizvi mentioned "It is estimated that some 150,000 Iranians with tertiary education leave the country each year." With the country being more open to foreigners it may motivate some of these educated young Iranians to go back to their home country and help its economy. As Schroeder emphasizes "The young entrepreneur's greatest hope is that, in opening relationships more broadly, there will be an even greater flow of information, engagement, and then investment." (Schroeder, 2014)

International startup events would also gain an open platform in Iran as it already has, for instance with iBridge. As Ashtary mentioned "Debuting in 2014 with its U.C. Berkely-hosted conference, the formal mission of iBridge is to contribute to developing and growing the high-tech entrepreneurial ecosystem in Iran, wherever it legally can." Ashtary added "Despite challenges, the iBridge team has been pivotal in making positive strides: last Spring they convened a technology summit in Berlin, showcasing 350 entrepreneurs from Iran, and drawing in 1100 attendees from across the globe – making it the largest gathering of Iranians outside the country in more than three decades." (Ashtary, 2016)

Among international startup events, domestic events such as FinTech were held in Iran. Amir Hamouni detailed "In this event, 70 startups took part out of which 50 were in the field of banking and insurance." (Abedinpour, 2017) In addition Abedinpour added "22 investors attended the event while 18 of them were approved to be an active investor. A number of accelerators, VCs, banks and other investment related companies attended as well."

Sorena Sattari, the Vice President for Science and Technology, also mentioned that Fintech startups are revolutionizing the conceptual foundations of the economy. These startups have the power to use their innovative ideas as the means of developing different industries. "Companies demand funding to operationalize their ideas and that's what drives them to enter the stock market," he added. (As cited by Abedinpour, 2017)

Abedinpour added "According to the deputy for Development and Management of Science and Technological Resources 20 thousand innovative knowledge-based and research-based companies have been found in the country up until now."

Additionally, the JCPOA will impact tourism positively, as Hormats stated "There is a highly developed tourist sector, already gearing up to accommodate large numbers of visitors planning to see the country's spectacular ancient sites." (Hormats, 2016)

Furthermore Guttman mentioned "Welcome signs are coming in the form of relaxed restrictions on foreign visas, and government loans to build more hotels. Iran's tourism ministry estimates visitor numbers are up 240 per cent in the last year from Europe alone. The rapid rise is a direct result of Rouhani's more moderate stance, says David McGuinness, owner of London-based tour operator, Travel the Unknown. "Our Iran bookings are up somewhere in the region of 350-400 per cent up this year. I put it down to the political change and people's perceptions of Iran. Since Rouhani came in, you hear more positive things and the announcement of plans to reopen the British embassy in Iran. It's gone from being one of our niche destinations, to being one of our more significant destinations."(Guttman, Assessing the forward-looking policies of entrepreneurship development in Iran, 2015)

Another positive result of the nuclear deal would be due to education and mentorship in entrepreneur ecosystem in Iran (Jozi, 7 Changes to Iran's Startup Scene Resulting from the Iran Deal , 2015). Azali is of view that "a higher engagement rate will result in more collaboration and partnerships. More international mentors and guests will visit to witness Iran's startup scene and help in transferring knowledge and experience resulting in faster production of top talent. The international community will also obviously benefit from the Iranian talent thirsty for innovation."

Ghiabi thinks that "Putting all information together it seems that in terms of opportunity, as one of the largest emerging markets in the world, Iran's startup scene is promising.

Yet, the market needs and shows some of the greatest opportunities to more smart money accompanying with international entrepreneurship experience and innovation. It is time for smart investors to start getting involved with Iran's startup scene through strategic partnerships with Iran's private sector." (Ghiabi, 2017)

Moreover Azali stated, "Once the doors are open, international startups will enjoy a huge tech and consumer savvy market. This lightly tapped consumer market will be available to global product and services providers once the sanctions are lifted. On July 14th a deal was struck stating all financial related sanctions to be lifted. Many investors and venture capitalists have already shown their profound interest in backing in Iranian startups before the Iran Deal. The Iranian entrepreneurial ecosystem has no choice but to lift itself up to global standards in order to compete with their international counterparts. With proper mentorship and guidance from experts (Iranian startup diaspora will play a major role) Iranian entrepreneurs can be empowered to compete with the rest of the world. This will mark a new era in the Iranian startup ecosystem."

CHAPTER 3: METHODOLOGY

3.1. Introduction

The literature review points to the fact that this research needed more exploration on the impact of sanction relief on the entrepreneurship ecosystem in Iran. Therefore this chapter will present the methodology used for data collection and data analysis. Furthermore the sampling, the research gap and the limitation of the study will be presented.

3.2. Exploratory Design

For this research, in order to find the relevant empirical datasets, an exploratory study was conducted in order to understand the effects of sanction relief on the startup ecosystem in Iran. Exploratory method was used in this research because of the limitation of the previous studies on the topic. Robonson stated that “An exploratory study is a valuable means of finding out what is happening; to seek new insights; to ask questions and to assess phenomena in a new light.” (Mark Saunders, 2009) Furthermore Saunders explained “It is particularly useful if you wish to clarify your understanding of a problem, such as if you are unsure of the precise nature of a problem.”

Due to the purpose of the study, the researcher used fundamental research for the method of the paper. This paper's aim is to investigate the impacts of the sanction relief on Iran's startup scene, what kind of impacts are to be expected and how will they be implemented. Dudovskiy mentioned “Fundamental research is driven by curiosity and the desire to expand knowledge in specific research area. This type of research makes a specific contribution to the academic body of knowledge in the research area.” (Dudovskiy, 2016)

For getting more insight of the topic, the researcher conducted qualitative interviews, where four entrepreneurs participated in the one-hour long interviews. The participants were from both genders, they were all entrepreneurs in Iran, and some started their business since before the Joint Comprehensive Plan of Action and some after its implication. As Windridge explained “Qualitative research attempts to broaden and/or

deepen our understanding of how things came to be the way they are in our social world.” (Windridge, 2009)

Furthermore looking at research journals, books, articles in websites and other sources were used for the secondary data of this research, the data that have already been collected. This methodology was used to discover answers for the research questions, which are as stated below:

RQ1: Has the implementation of Joint Comprehensive Plan of Action had a positive impact on the startup ecosystem in Iran?

RQ2: What factors will help the startup ecosystem in Iran to grow after the sanction relief?

3.3. Research Gap

The data were collected to fill the research gap; what can change through the implementation of the Joint Comprehensive Plan of Action in Iran and what are the impacts of lifting the sanctions on startup ecosystem and what factors will trigger the growth of it. In order to fill this gap, after a comprehensive research on the existing literature, the researcher interviewed four successful entrepreneurs in Iran. These entrepreneurs have established their businesses in the recent years and presented an overview of their companies and the effect of JCPOA.

The previous research established that by lifting the sanctions and opening the doors to the world, more investments would happen in entrepreneurship sector in Iran, which will help and motivate young Iranian entrepreneurs to establish their own businesses. It has been stated that one of the challenges that startups in Iran face is due to funding. Although it is considered that the JCPOA will pave the way for more investment, the results are still not tangible.

Also as discussed in the literature review, young educated Iranians who leave their country for a brighter future might earn the motivation to go back to Iran and contribute to their country. Further more it was assumed that with lifting the sanctions, international companies would operate in Iran and Iran's untapped market would be accessible to them after the collaboration of International banks with Iranian banks. Also with more

moderation in Iran and ease of visa regulation more tourist would visit Iran and pave the way for more tourism industry. This research have been conducted to provide a comprehensive insight of the points mentioned earlier.

3.4. Data Collection

For the primary data collection the researcher used qualitative research and conducted in-depth interviews in person in Iran. The interviews were conducted in order to examine the effects of sanction relief on the startup ecosystem in Iran, and the interviewees were chosen depending on their social status and their businesses. Throughout the interviews, the interviewees were explained the purpose of the study and the timing and environment of interviews were scheduled beforehand.

Boyce and Neale said “The process for conducting in-depth interviews follows the same general process as is followed for the research: plan, develop instruments, collect data, analyze data, and disseminate findings.” (Carolyn Boyce, 2006)

They also added that “The primary advantage of in-depth interviews is that they provide much more detailed information than what is available through other data collection methods, such as surveys. They also may provide a more relaxed atmosphere in which to collect information— people may feel more comfortable having a conversation with you about their program as opposed to filling out a survey.”

For this paper, semi-structured interviews were used, where a set of questions was conducted earlier and asked accordingly during the interviews. The data analysis initiated with transcribing the interviews and then by focusing on the important data. Framework analysis was used by comparing and contrasting the interviewees’ answers. The next chapter provides the findings of the data collection in which the interviews were reduced to important ones, each fully analyzed and discussed by reading all the interviews thoroughly comparing and reflecting the participants answers. Finally, important themes were extracted from the findings according to most used phrases from interviewees.

3.5. Sampling

Since targeting a large number of population is very challenging and requires a long period of time, purposive sampling was used in this research for selecting a small group of people for primary data collection. As Dudovski mentioned “Purposive sampling is a sampling technique in which researcher relies on his or her own judgment when choosing members of population to participate in the study.”

In order to get the best possible insight of the startup ecosystem in Iran the researcher traveled 12.000 kilometers and a period of two weeks. Four startup owners were chosen, one with Mr. Mohammadreza Azali, the co-founder and CEO of Techrasa. Techrasa is the first content base platform in English that provides news about Iran’s tech and startup scene. As they described it in their website “Techrasa’s task is to expose the activities of Iran’s startup ecosystem with the vision of empowering and inspiring Iranian entrepreneurs.” This research used a big portion of its secondary data from Techrasa’s website.

The second interview was with Miss Nazanin Sammaknejad the co-founder and CEO of Ruban beauty online. Ruban is an online platform and e-commerce website for beauty products. With more than 30 employees, Ruban is one of the fastest growing startups in Iran. Although after the interview, the researcher realized that Ruban is not in the profiting stage however the business and its conversion is growing. According to Nazanin, what lacks in startups in Iran is the capital and investment.

The third interview was with Miss Lena Vafaey, the founder of Peeyade. Peeyade is a newly established startup where its main purpose is to introduce Tehran to the people, with creating entertainment content base website and application, they aim to explore Tehran and inspire people to get to know their city better.

The fourth interview was with Mr. Soheil Alavi the founder of Reyhoon, an online food delivery service in Iran. Reyhoon has the most traction on their field of business.

Out of the four interviewees two were women and two were men, with ages varied between 25 and 35. They are all university graduates where three of them studied abroad and went back to Iran to start their own businesses. Each interview took about

30 to 60 minutes, depending on the person's willingness to talk and the need of arising new questions. All the interviews were recorded through an audio recorder and were fully transcribed and can be seen in the appendices ABCD.

Table 2: The in-depth Interview Participants

#	Name	Gender	Studied in	Age	Field of Business
1	Mohammadreza Azali	Male	Iran	30	Content website
2	Nazanin Sammaknejad	Female	United Kingdom	34	E-commerce website
3	Lena Vafaey	Female	United States	29	Lifestyle Website/Application
4	Soheil Alavi	Male	Canada	30	Online food delivery service

3.6. Limiting Consideration

There were some limitations on this research especially since the topic is new and there has not been many material and scientific research on the topic. The Joint Comprehensive Plan of Action implemented on January 2016, since then some changes has occurred in Iran regarding the baking systems, investments and etc. Although there are still unknown aspects of what might change and what advantages will the JCPOA bring to Iran and whether it will last or sanctions will be imposed on Iran again given the circumstances, there has been some hypothesis of what is changing, which was described in previous section.

There are a few limitations of in-depth interviews such as prone to bias, limited time frame and non generalizable. (Carolyn Boyce, 2006)

In this research, the researcher was able to interview only four people so the result cannot be generalized, also since a small amount of samples were chosen given the limited time frame, it cannot represent the target population.

As Atieno explained “The main disadvantage of qualitative approaches to corpus analysis is that their findings cannot be extended to wider populations with the same degree of certainty that quantitative analyses can. This is because the findings of the research are not tested to discover whether they are statistically significant or due to chance.” (Atieno, 2009)

Another limitation is due to the time frame, where the topic of this research is broad and there is only four months period of time for collecting the all the data. Collecting data in a big population requires long period of time, therefore a small sampling was used in this research to seek new insight on the topic of the research. The researcher used qualitative approach and conducted in-depth interviews with four individual entrepreneurs in Iran. The findings of will be demonstrated in the next chapter.

CHAPTER 4: DATA ANALYSIS AND RESULTS

4.1. Introduction

Chapter four is the presentation of data analysis of the research's findings. In this chapter data analysis will be presented by analyzing the interviews, which were fully transcribed and reduced to important data using compare and contrast method. Eventually a conclusion of all the primary data will be displayed.

4.2. Data Analysis

Data Analysis in qualitative research as Alexander explained "has a two-fold purpose: (a) to understand the participants' perspective, and (b) to answer the research question. Marshall and Rossman (1999) defined qualitative analysis in terms of organizing and attributing meaning to the data." (Alexander, 2004)

This chapter will present the data analysis. The goal of this paper's data analysis is to determine the effects of sanction relief and the Joint Comprehensive Plan of Action (JCPOA) on startup ecosystem in Iran. Therefore in-depth interviews were conducted with four Iranian entrepreneurs, and the findings in this chapter will answer the research questions. Although a review of literature has defined some of the advantages of the JCPOA, this chapter will provide more precise findings on the matter with the analysis of the interviews.

In-depth interviews has been described by Alexander (1990) as "repeated face-to-face encounters between the researcher and informants directed toward understanding informants' perspectives on their lives, experiences or situations as expressed in their own words". (As cited by Colin Macdougall, 2001)

Interviewees were chosen because of their establishment of successful startups in Iran. Four people were interviewed, as shown in table 3:

Table 3: Interview Participants

#	Name	Gender	Studied in	Age	Field of Business
1	Mohammadreza Azali	Male	Iran	30	Content website
2	Nazanin Sammaknejad	Female	United Kingdom	34	E-commerce website
3	Lena Vafaey	Female	United States	29	Lifestyle Website/Application
4	Soheil Alavi	Male	Canada	30	Online food delivery service

The data analysis initiated with transcribing the interviews. Then the transcribed interviews were read thoroughly and were reduced to important data. Each participant depending on their business responded in different ways however they mostly shared the same vision on the matter. In the following, all the interviews will be presented in detail with the use of compare and contrast method.

4.3. Results

In this section the researcher will analyze the interviews. The interview questions will be presented followed by the analysis of individual answers of the interviewees and the analysis of the data and finally a discussion of each question. The interviews consisted of a total sixteen questions and answers, which can be found in the Appendices ABCD. However for the similarity of the questions the data analysis was reduced to nine questions as shown in table 4 .

Table 4: Interview Questions

#	Questions
1	Reasons for starting their businesses.
2	How did they get the funding?
3	What are the challenges startups in Iran have to face?
4	Who are their target audience and how they are reaching them?
5	Time Frame for Successful establishment
6	The startups scene in Iran before and after JCPOA
7	Growth Triggering factors in the startup scene
8	JCPOA's impact on participants' Start-ups
9	Influences of JCPOA on the startup ecosystem in Iran

Question 1: Reasons for starting their businesses

Mostly two reasons were generated from the data compiled in regard to this topic. While three of the respondents expressed passion to be the clear driving factor, one of the respondents highlighted financial freedom to be the core reason. Lena says “Passion in the exact field, I am a patriot, and believe that with hard work, our city (Tehran) and our country will have a much brighter future. But above all my passion for Tehran and the attachments that I have here, allowed me to use all my specialties to find a start-up that I thought might be able to help realize the potentials of Tehran and help develop the city in a more systematic way.” Another respondent also backed up Lena’s claim about passion being the driving factor. He quotes “Passion in the exact field and desire to run a startup.” While passion was the motive for Nazanin as well she also wants to contribute to her country and people, as she quotes “ I thought the young generation

who graduates from universities and have potential and ambitious need to be given chances. I thought I want to have a business where I can create this position and recruit young generation in Iran and teach them and train them how to become professionals, that was my main motive. And my other motive was since I knew Iranian women needs, I was determined to bring Iranian women all the products and services they deserve to have, where you can find elsewhere in the world and teach them and educate them how to take care of themselves.” However, one respondent mentioned, that running a company is amongst the only ways to create your financial freedom if it works out.

Through this question most of the interviewees shared the same perspective, being passionate in the field of their business was the driving factor for starting their own startups. Also the love for their country and seeing a brighter future derived them to contribute their passion and experiment into the business. However for Soheil it was all about independence and financial freedom. Young Iranians are motivated now more than ever to build their country. As mentioned in the literature review, with development of Internet services in Iran and through following the footsteps of the western companies, these entrepreneurs build their own startups with a hope of a better future.

Question 2: **Funding**

The majority of respondents mentioned that they used their own capital as the source of funding their businesses to start. However only just a small number of those interviewed had other sources for funding. Although the participants have ran their businesses, for the development of their companies they are looking for investors. Lena said “I started my business with my own/parents money but now I am looking for investors.” Accordingly Soheil quoted “initially I started my business with my own money, later a prominent venture capital called Sarava and Avatech accelerator, invested in my company, hopefully I can get international investment for the next round.” However only one of the interviewees did not use her own capital for the establishment of her company. She mentioned “I pitched my idea to some people whom I knew that have money; they loved the idea and got onboard. I have not raised money since then, no raise of capital, it is only my shareholders who invested in the business so far.” As speculated most of the interviewees started their businesses with their own capital as in either themselves or with the help of their families or people they knew as shareholders.

However there are other sources of investments within these startups, such as, company's sponsorships, accelerators and venture capitals.

Startups in all stages need support and investment. Venture capitals and accelerators can be named as these resources. Although the number of these resources is still limited in the country, there has been an increase of them in the past few years with the development of startup scene in Iran. As reported by Jozi "The country has rapidly developed an assortment of companies, venture capitals, and accelators, pretty much from scratch – and it does not seem to be slowing down anytime soon."

Question 3: **Challenges of startups in Iran**

While half of the respondents highlighted the lack of professionals in the field, others pointed out the restriction and regulation of the Islamic Republic of Iran as the challenges regarding the topic of this question. Mohammadreza said "we are walking on a thin line, because our website is in English therefor we have to be careful not to cross the redlines of the government restrictions."

It can be concluded that these entrepreneurs believe that the infrastructure of the whole startup ecosystem is in its early stages of development. As indicated by Soheil "The startup scene in Iran has still a long way to go, the proper infrastructure is in its infancy's days and the market is still very young and has yet to adapt itself. The government is not designed for startup model. It's pretty new to them what a startup is and their needs are." One other respondent support Soheil's view, as she believes that the main challenge is due to the pace of startups compared to the slow reactions of the government. She mentioned "Basically the main problem is that startup scene moved really fast whereas the country did not. So all of the startups faced lots of problems with the fiscal authorities and the education of the audience, which is normal for now."

In response to question 3, the majority of those interviewed indicated that the biggest issue of start up scene in Iran is lack of knowledge in the field in which it can vary from lack of professionals to lack of education in the field. Nazanin quotes "The biggest issue in Iran for startups is human resources, it is a very new scenery, they are not enough talents in the market to recruit, experienced people in this field are really hard to find, in the university there is no education for the young generation to have the attitude and

ambitious of having startup businesses.” Accordingly Lena supported this view by mentioning “The most challenging part for me was to learn all that I had to deal with on a daily basis considering how my background had no relation with business whatsoever. It is obvious that I would have had this challenge anywhere else in the world, however, I believe that having to go through these obstacles in Iran made it easier for me; due to lack of skilled professionals, unskilled professionals have an opportunity to make it”.

Most of the interviewees are of the view that the startup ecosystem is still very young in Iran; therefore there is lack of knowledge and skilled professionals in the system. However for Mohammadreza’s business there are more challenges, such as, the restrictions of the Islamic Republic of Iran, where there are rules and code of conducts that each business have to follow more than in any other country. As Aryan mentioned “There are internet limitation and censorship in the country. Iran manages one of the most high-level censorship governments in the world (Aryan, 2013).”

What can be acquired from the interviewees is that there is lack of knowledge on the whole startup scene in the country. The infrastructure is weak; there is lack of skilled professionals and human resources, lack of education in universities in the field and the government is moving in a lower pace than the startups themselves. This supports previous findings in the literature where in the SWOT analysis of the startup ecosystem in Iran, Ghiabi explained “One of the biggest threats for Iran’s startup ecosystem is its lack of knowledge of powerful industries, the workforce, investment and idea processing. To be more precise, there are people who are experts in one field and think that it is enough for establishing a startup.”

Question 4: Who are their target audience and how they are reaching them

Since all of the businesses are online businesses, the target audience has to be people who have access to Internet, mostly aged between 16 and 40. It can be established that they target their customers through online resources. Iranians are early adopters when it comes to technology, however it is dependent on their age, social class and accessibility to the Internet. These entrepreneurs reach to their customers mainly through Social Media, such as, Instagram and Telegram-the biggest social media network in Iran, which consumes 40% of Iran’s bandwidth. Because of sanctions other channels like Facebook or Google ads are banned in Iran so Telegram has become a substitute of

Facebook in Iran being a main source for multimedia content. Soheil supports this view that their target audiences are “pretty much the baby boomers age 18 to 34 who have smartphone and obviously Internet bank. The way sanctions are impacting this is the lack of tools for targeting. You cannot use Facebook & Google advertising systems to target Iranian users.” Accordingly Nazanin quoted “my target audience are Iranian women, mainly from 16 years old to 50, but more than 40 is a bit hard to reach because of their habits and attitudes towards internet, so the most conversion I get is from the people aged between 16 and 35. Mainly through Social media I reach my target audience. Social media in Iran is very strong, especially Instagram and Telegram, Facebook is not really strong in Iran because it is filtered and banned in Iran.” However for some of the interviewees businesses, the target market is more specific, Lena said “Our early adopters are people who like us, enjoy exploring Tehran and prefer to spend their weekends in the city rather than at home with family or friends.” The target audience for Mohammadreza’s business which is a content website for entrepreneurship with the mission of changing the image of Iran in International perspective, is the C-Level types, who are the most powerful members of an organization. He quoted “We try to give the data needed to the companies who want to enter Iran’s market.”

The respondent also shared a common view that with removal of sanctions, attracting their target audience would be more convenient. As Lena said “Obviously with the removal of sanctions and with uplift in the economical state of the country, everyone will have more money to spend on various activities in the city, which is why it would make it easier for us to attract our target audience.”

It is determined that all of the interviewees reach to their target audience through their website and mostly through Social Media such as Telegram and Instagram. Their target audience are people who have access to the internet and are 16 to 50 years old. Although the businesses are different from one another, they share a common way of attracting customers, their challenge is how to get the words out to the people. Internet penetration in Iran is increasing in recent years, with the development of high speed internet in the country. It is estimated that 40 million people use smartphones according to Iran’s Ministry of Communication and Information Technology. As mentioned in the literature review Azali stated “people started to rely on their mobile internet connectivity

and online businesses started to get some serious traction.” However because of sanctions other communication channels are rather impossible in Iran, for example Facebook and Google advertisement are banned in Iran, which makes it harder for online businesses to attract new customers.

Question 5: Time Frame for Successful establishment

The researcher attempted to analyze what time frame/period it took for the respondents businesses to gain firm foothold into the Iran’s business ecosystem and marketplace atmosphere. Since all of the respondents are currently in the first years of establishment of having started their companies, their businesses still lack the capacity and stability as most startups do in the first few years of their operation. Most respondents mentioned that their businesses are still on the verge of struggle; Lena quotes “We are still struggling with that, but I believe by this time next year (3 years in total) we will have made it.” Mohammad Reza explains a common sentiment shared with other respondents by quoting “We started our business in 2013, only after three months we started getting emails from outside of Iran wanting to know about the entry strategy and we started helping them to find partners in Iran and consulting them.” Nazanin mentioned how the struggle to survive and gain firm footing apply for her business as well.

While it is imperative to note that some startups have gained stability, and have established themselves successfully in the market, others are still in the struggle to survive and maintain their businesses. Nazanin mentions how her startup has been operating for almost two years now where they have numerous customers however in order to maintain their business, they need more investment to be able to have customer loyalty, good customer services, enlarge their product basket and etc. From the data gathered from the respondents, it is analyzed that timing is important when it comes to gaining foothold in the market. Not only does picking the best moment to launch a certain company plays an imperative role but the availability of startup funds, personal circumstances and right business moves will all impact how long it will take for a business to gain firm footing. It is important to give this time to the development of startups since many fail simply because they struggle in early development and are never able to take off properly.

Question 6: The startups scene in Iran before and after JCPOA

The respondents were asked to compare the atmosphere of the startup scene before and after the sanctions were imposed on Iran. Respondents highlighted a variety of different aspects of what this atmosphere showed. Lena explains the fear, tension and instability that prevailed before the JCPOA in the startup environment. She quotes “All startups knew that with the sanctions in play, their funds, activities and services would become limited. So with the removal of the sanctions the fear has become a lot less, however we still have major sanctions from the US economy which prevent us from freely using a lot of the major technology industry services (e.g. Google services, Beta testing and prototyping websites, outsourcing services, payment services)” Mohammadreza explains another perspective by highlighting that before the JCPOA, there was lack of competition as there were limited international donors and operators and it was actually beneficial for some time. He quotes “Digikala was the first ecommerce in Iran, when Bamilo came to the market with Rocket Internet funding, they shacked Digikala and they changed their whole strategy, they forced to have better discounts, better customer service and etc.” Nazanin explains that with the sanctions and the situation of market, companies were not willing to produce new products as they had no international markets to interact or do business with. Post the JCPOA, companies have started to explore unknown domains and involving themselves into new businesses because they feel a sense of security. Lack of security limits business owners from taking risks that are imperative for business success. Nazanin quotes “Because when you are insecure and do not know what is going to happen you will definitely not take the risk of starting a new business, you will not be creative and would just want to survive, but when sanctions are not there people start to build.” Soheli explains the impact JCPOA has had on young people and encouraging them to be involved in entrepreneurship. He states “Young people are much more motivated and lots of new startups are coming after JCPOA.”

Mohammad Reza mentions the aspect of businesses haven thriven or flourished because of sanctions and how JCPOA limited competition which enabled startups to prosper or succeed. He quotes “Because of lack of competition many startups in Iran thrived during sanctions.”

However Nazanin and Lena believe that in the pre JCPOA era, hope of a potentially successful future was limited as people were operating in the market, just to survive; engulfed by the tension and fear of an unknown and highly un-predictable future. On the contrary after the implication of JCPOA all the interviewees are of the view that young people are more motivated to develop new startups with the help of foreign investors and more competitors in the market and post JCPOA, the business atmosphere has improved in terms of business prospects, hope and optimism. Hormats supports this claim by quoting “Years of sanctions have forced Iranian to create their own internet companies and services-and provided an incentive to establish a wide variety of homegrown information technology firms.” However it can be considered true that sanctions limited startups’ growth. Factors such as lack of entrepreneurship knowledge, lack of investment, lack of government support, lack of education and most importantly being cut off from the international market made the Iranian economy paralyzed and the business atmosphere dull.

Question 7: Growth Triggering factors in the startup scene

Respondents were asked to give their acknowledgements and views of the factors that are currently triggering growth in the startup scene in Iran. Lena highlighted Creativity, Innovation and Passion (other than the need to make money) as key elements that trigger growth and highlighted how these factors seem missing in the startup scene in Iran. She believes the lack of these factors has a detrimental and deplorable effect on businesses and their growth potential since “a lot of money and manpower going into repetitive ideas which end up over saturating their targeted markets, leaving the customer with way too many unnecessary choices” she expresses. Mohammadreza highlights the lack of international payments due to sanctions and how they limited or prohibited providing their services outside of Iran or indulging into import or export, since many startups are unable to buy US services. He quotes “If the US financial related sanctions will be lifted, I guess Iran could be a hub in MENA region. With lifting the sanctions European companies can enter Iran more easily”. Nazanin highlights the financial and educational benefits this will trigger in the country. She quotes “I think the interest of other successful startups in Iran will help that, education in university; the financial benefits of the government can help that and the starting venture capitals in Iran.” Soheil backs Mohammadreza’s claim and highlights international VC funds and

international competition as an additional component. In addition to this, he also mentions quality of service as a factor and explains how this requires heavy funding. Lena quotes “creativity, innovation and passion are what startup ecosystem in Iran is lacking. However other interviewees believe that the absence of International companies and venture capitals is the crucial point for startup ecosystem, which is mostly due to US sanctions. As Mohammadreza mentioned “Our main problem is US sanctions, because we don’t have international payment, we can’t provide services for outside of Iran”. With the absence of international companies, competition is rather low in the country. On the other hand Nazanin is of the view that the government plays a major role in the ecosystem, where it should provide financial benefits for startups.

Corresponding to existing literature interviewees believe that international competition and education in entrepreneurship and international investments alongside passion and motivation are the triggering factors of growth in startup ecosystem in Iran. As Schroeder emphasizes “The young entrepreneur’s greatest hope is that, in opening relationships more broadly, there will be an even greater flow of information, engagement, and then investment.” (Schroeder, 2014)

Question 8: JCPOA’s impact on participants’ Start-ups

Respondents were asked to explain how the JCPOA and the lifting of the sanctions affected their startups. Respondents identified and expressed the positivity surrounding the significant opportunities that JCPOA created and how they would aid not only Iran’s economic growth and normalization but also affect their startup ventures positively as well. Lena quotes “It has most definitely been positive; we see it every day in people's lives whether it is from an economical perspective or an element of happiness or hope. However, there is still a lot of work that needs to be done, we still have problems attracting foreign investors and we still have plenty of website restrictions and international Internet businesses that are not willing/allowed to offer services to Iran.

Therefore it is quite evident that foreign investment is another area where Iran is also expected to see gains because of the JCPOA. It is therefore imperative to note that the benefits Iran received from the deal are spread out to multiple sectors as most of these startups work on different business models in a variety of business fields. Research data

gathered from the interviews on the other hand proves that JCPOA has aided international business opportunities since more international companies are exploring business opportunities in Iran. MohammadReza quotes “We launched two months before JCPOA, after JCPOA we met at least 5 companies in Iran and tons of companies outside of Iran wanting information about startup ecosystem in Iran.” Nazanin also highlights the positive impact of JCPOA on the purchasing power in Iran. She quotes “Of course it had positive impact, because when it happened, what came afterwards other than purchase power that was changed, when you are exposed to international market and you have corporation with other markets you have to keep up with them so you learn from them more easily.” She explains the impact this has on education since with business development opportunities; this has an impact on education since people are exposed to international markets and a variety of sources and this increases their exposure, disclosure and experience. This in turn has an effect on enhancing a positive business atmosphere in Iran. Soheil highlighted a different perspective and claimed that JCPOA had no impact on his start up.

As a whole, research seems to agree that all businesses benefited from the implication of the Joint Comprehensive Plan of Action, except one. Lena is of the view that the most dominant effect was instigating a sense of hope in people with these new opportunities and new market place exposure. Nazanin believes the positive impact of this includes; international competition, education and the government understating of the importance of startups. This also shows that vendors operating nationally such as Soheil who operate an online food business within Iran, wasn't directly influenced or directly impacted by JCPOA. In short, the most positive effect of JCPOA in Iran was the rise of optimism and sanguinity amongst Iranian people. It instilled in them a feeling that Iran will no longer be isolated and will connect to the world again. As Hormants cited “Young Iranians are greatly interested in American culture, entrepreneurialism, and innovation. The vast majorities' welcomes the nuclear deal because they hope it will lead to an opening to the West- and particularly to the United States-enabling more contracts and travel. Many also recognize that additional foreign investment will provide a substantial increase in employment opportunities.” It is imperative to note that despite the opportunities and optimism that JCPOA has promoted, Iran's financial and business

system continues to face fundamental economic challenges of problems centered on corruption, weak bank liquidity, non-performing loans and lack of banking initiatives.

Question 9: Influences of the JCPOA on the startup ecosystem in Iran

The researcher attempted to investigate the influence of the JCPOA on the startup ecosystem in Iran. JCPOA enabled and attracted foreign investors, as well as skilled professionals and specialists. Lena quotes “JCPOA enabled the option of using international technology. Also, It created businesses/platforms where foreign professionals would train Iranian managers and workers.” Lena also highlighted how this enabled or paved way for foreign companies to invest more into the business ecosystem of Iran and this enabled and benefited Iran with the creation of Jobs, more management skills, trainings, professional drills and management skills. Mohammadreza quotes “With lifting the sanctions European companies can enter Iran more easily. With the finance related sanctions being lifted, I guess Iran could be a hub in MENA region.” Nazanin held responsible the lack of market play and lack of new entrants in the marketplace a major consequence of the sanctions. She quotes “When there are no sanctions, big companies enter the market, when they enter they bring their know how, their capital, education and people, and they will help the startup scene grow much faster. For example Rocket Internet entered the market in Iran which boosted the startup scene in Iran, and Rocket Internet has the knowledge for working for ages in Europe so when they come to Iran they bring their knowledge so first of all people will learn from them and second the competition gets hot and other companies will do their best and raise themselves up.”

In short, Nazanin explains how competition in the market and the market play of known and popular brands in the market, helps the economy and aids the growth of more entrepreneurial ventures. As a consequence, the startup scene sees growth. Soheli explains that investments in the marketplace of Iran, specifically the startup scene and initiatives, by local and international investors were definitely influenced by sanctions.

In conclusion, all the interviewees agree on the point that foreign investment will have the most positive impact on startups in Iran. They are all also of the view that if the international companies enter Iran, they will bring knowledge, capital and experience which will help the startup ecosystem improve, progress, flourish and develop further.

As mentioned in the literature review a positive result of the nuclear deal would be due to appearance of international companies in Iran. As Jozi mentioned “more international mentors and guests will visit to witness Iran’s startup scene and help in transferring knowledge and experience resulting in faster production of top talent. The international community will also obviously benefit from the Iranian talent thirsty for innovation.” This view corresponds to all the interviewees where they believe the implication of JCPOA will result in more foreign investments and the transfer of knowledge and experience. Additionally Abbaszadeh mentioned, “Although International Sanctions limit access to e-commerce software, exclude the country from online money transfer systems, prevent advertising on global social media and, most significantly blocked almost all foreign investment. After sanctions and new situation, all shows that Iran has a very high potential for investment and still is the world’s biggest untapped market.” (Abbaszadeh, 2015). This view of Abbaszadeh is supported by all respondents who claim that Iran’s market potential and the startup growth and prosperity is heavily influences by sanctions and the uplifting of these sanctions can pave way for a recovered future, improved marketplace and tremendous growth opportunities for the startup scene.

4.4. Analysis and Findings

The data analysis of in-depth interviews painted the startup scene in Iran; how the startups operate, how they get their funding, what challenges they have to face and finally the factors that will trigger their growth. This chapter will also highlight the impact of Joint Comprehensive Plan of Action on the startup ecosystem in Iran by pointing out the factors most mentioned by the interview participants.

After analyzing the interviews, the researcher combined all the answers and by collecting the most phrases used by the participants distracted the themes shown in below. The table 5 will is an outlook of the findings.

Table 5: Themes extracted of Data Analysis

Startup ecosystem in Iran	Impacts of JCPOA on Startup ecosystem
Motivation	Education
Funding	Investment
Challenges	Competition

4.4.1. Startup Ecosystem in Iran

MOTIVATION

The analysis of the interviews shows that entrepreneurship in Iran is growing really fast, as mentioned by Hormats “Years of sanctions have forced Iranians to create their own internet companies and services-and provided an incentive to establish a wide variety of homegrown information technology firms.” The interviews revealed the inspiration and drive of these entrepreneurs for starting their businesses. While financial independence is one of key factors, passion in their field of business with the motivation of contributing to the development of their country can be extracted as a theme of reasons that motivated them to start up a company or indulge in the market place.

Accordingly, Nazanin said “I thought the young generation who graduates from universities and have potential and ambitious need to be given chances. I thought I want to have a business where I can create this position and recruit young generation in Iran and teach them and train them how to become professionals, that was my main motive.”

The motivation of the young people in Iran for starting their own businesses has been elevated with the development of the technology and Internet penetration in Iran especially after the implication of JCPOA, however they have to face some challenges according to the regulation and limitation of the government. One of the challenges can

be due to investment in entrepreneurship; most of the startups in Iran use their own capital to start their company.

FUNDING

While some of these entrepreneurs started their businesses with their own capital or with the support of their families, others got the financial aid through the accelerators and venture capitals or else through individual investors. Since Iran's banking system is not connected to the international banks, foreign investment is what entrepreneurship ecosystem in Iran lacks. However there is a hope that the sanction relief will open the doors for foreign investors. As Abbaszadeh stated "Although International Sanctions limit access to e-commerce software, exclude the country from online money transfer systems, prevent advertising on global social media and, most significantly blocked almost all foreign investment. After sanctions and new situation, all shows that Iran has a very high potential for investment and still is the world's biggest untapped market." (Abbaszadeh, 2015)

CHALLENGES

Iran with the population of over 80 million in which more than 60 percent of them are under the age of 35 with high education creates a huge consumer market. As it is shown in the analysis of the interviews, most of their target audiences are people with the age of 18 to 35 with the access to Internet, which can indicate that Iran has a good consumer market. Since all of their businesses are Internet based startups, they mostly reach out to the customers through their websites, applications and most importantly Social media. However not all of the social media channels are accessible in Iran, for instance because of sanctions Facebook and Google advertisement system are banned in Iran. As Soheil said "The way sanctions are impacting; this is the lack of tools for targeting. You cannot use Facebook & Google advertising systems to target Iranian users." Accordingly Lena said "there is still a lot of work that needs to be done, we still have problems attracting foreign investors and we still have plenty of website restrictions and international Internet businesses that are not willing/allowed to offer services to Iran." This limits the networking that social media now in the world can provide and how it can aid marketplaces, economies and businesses.

One of the challenges in the startup scene in Iran is due to lack of knowledge and lack of experienced people in entrepreneurship. As Nazanin said “The biggest issue in Iran for startups is human resources, it is a very new scenery, they are not enough talents in the market to recruit, experienced people in this field are really hard to find, in the university there is no education for the young generation to have the attitude and ambitious of having startup businesses.” Moreover on disadvantages of entrepreneurship in Iran Nazanin added “basically the problem is that startup scene moved really fast whereas the country did not. So all of the startups faced lots of problems with the fiscal authorities.” Accordingly Soheil added, “The government is not designed for startup model. It’s pretty new to them what startup is and their needs.”

4.4.2. Impact of Joint Comprehensive Plan Of Action on startup ecosystem in Iran

INVESTMENT

Foreign investment is one of the most crucial topics while analyzing the startup ecosystem in Iran. Most of the interviewees are facing difficulties finding investors for their businesses. As entrepreneurship is a fairly new concept in Iran, and with the high interest rate of Iranian banks, Iranian people and even venture capitals are very hesitant to invest in a startup. As Soheil said “VC’s are really money oriented and want return very fast. You got to make money very early unlike twitter and other business models. The government is not designed for startup model. It’s pretty new to them what startup is and their needs.” They all share the same view that sanction relief will ease the way for startups to get the needed funds, which can be linked to previous literature, as Hormats mentioned “The removal of these sanctions opens up a wide range of possibilities for investment in and trade with Iran. There is optimism in many quarters of Iran and among foreign businesses that sanctions relief will sweep away Iran’s now considerable economic problems and lead to profitable investment opportunities.” (Hormats, 2016)

COMPETITION

International enterprises cannot operate in Iran due to the sanctions. After sanction relief there is a hope amongst Iranian entrepreneurs that international companies will enter Iran, which will lead to more competition. Mohammadreza believes that “because of the

lack of competition many startups in Iran thrived. It was good for some time because they started their businesses but now is the time for competition.” All the interviewees shared the same vision that where there is competition businesses will grow. As Nazanin said “when there is no sanction big companies enter the market and competition gets hot and when there is a competition in the market and big brands are in the market always the market evolves.” The previous study lacks the importance of the presence of competitors in the market as a growing factor for startup ecosystem in Iran.

EDUCATION

As highlighted in the precedent analysis, entrepreneurship is still raw and is it's in early stages of development in the Iran, there is not enough education surrounding it. There is a lack of training, education, skill and expertise needed for this to flourish. The ecosystem lacks professional people in the field, knowledge of new technology and university education.

As mentioned in the literature review by Cuervo “The study and teaching of entrepreneurship and the role played by professors dedicated to teaching and research on this topic are of growing importance, as reflected by the boom in courses in entrepreneurship in the United States in the last few years.”

It can be indicated from the interviews that they all believe that more professional people and education in the field will help the development of the startup ecosystem in Iran. Nazanin is of the view that “when there is no sanctions big companies enter the market, when they enter they bring their know-how, their capital, education and people, and they will help the startup scene grow much faster.” Lena also believes that “attracting foreign investors and more importantly, foreign skilled professionals, enable the option of using international technology, and creating businesses/platforms where foreign professionals would train Iranian managers and workers” will help the startup scene in Iran to grow. This factor can be linked to the literature review, another positive result of the nuclear deal would be due to education and mentorship in entrepreneur ecosystem in Iran (Jozi, 7 Changes to Iran's Startup Scene Resulting from the Iran Deal , 2015). Azali is of view “a higher engagement rate will result in more collaboration and partnerships. More international mentors and guests will visit to witness Iran's startup scene and help in transferring knowledge and experience resulting in faster production of top talent. The

international community will also obviously benefit from the Iranian talent thirsty for innovation.”

CHAPTER 5: CONCLUSION

5.1. Summary

This study intends to allocate the impact of Joint Comprehensive Plan of Action on startup ecosystem in Iran. Therefore after collecting data from the previous studies, in-depth interviews were conducted with four entrepreneurs in Iran. The participants answered the interview questions to present how they started their businesses and their view on the startup ecosystem and the effect of lifting the sanctions.

5.2. Discussion and Conclusion

After years of negotiations, the Joint Comprehensive Plan of Action (JCPOA) was implemented on January 2016 signed by the United States and the P5+1 members (Germany, France, United Kingdom, China and Russia) to lift the nuclear related sanctions on Iran. (Micheal Schwarts, 2017) The JCPOA also known as Iran deal was implemented with the agreement that Iran would stop its nuclear activities and in return the international sanctions would be lifted. This agreement infused hope and optimism in Iran in regard of connecting to the world and paving the way for trade and cooperation between Iran and West. Although Iran got access to some of its previously frozen assets, not much has changed in terms of trade and international banking systems post sanction era. As mentioned by Schwartz "While the JCPOA created significant opportunities for economic growth and normalization, the Iranian public has not yet seen many tangible economic benefits."

After collecting and analysis of the data, three themes were extracted from the interviews due to the startup scene in Iran. First theme that was extracted points to motivation. There are young, educated and motivated people in Iran who aim to enrich their country by providing services for the people. Motivation is one of the most driving factor for starting a business, although there is optimism and motivation amongst young Iranians now, hope of a potentially successful future was limited as people were operating in the market, just to survive in the pre JCPOA era.

Second theme that was extracted is funding, most of these young entrepreneurs established their businesses with their own/family capital in order to further develop their companies, they faced challenges according to the need of more investments. As it had been discussed in the analysis, although most of these companies have been operating with their own money on the seed-stage of their ventures, they have difficulties for improving their businesses as they seek for more investment. It can be pointed out that although the ecosystem is growing and more investments are happening now in Iran, finding investment for newly established businesses is rather challenging.

The last theme extracted was challenges according to the startup ecosystem in Iran. The most challenging part for these entrepreneurs is the lack of a firm infrastructure in entrepreneurship sector. All the participants in the interviews pointed out that the ecosystem lacks professional people in the field. Since the whole concept is in its' infancy days it lacks knowledge and experienced people and most importantly lacks the government support.

According to the literature and analysis of the interviews, the most important factors effecting the startup ecosystem in Iran can be pointed out as; foreign investment, more competition, education in the entrepreneurship sector, international banking system, reverse brain-drain and finally development of tourism industry.

All the interviewees agreed on the point that foreign investment will have the most positive impact on startups in Iran. Since the startup scene is rather a new topic in Iran alongside the high return rate of Iranian banks, investors are hesitant to invest to the new ideas with the risk of unforeseeable future. However, in the past year the investments have increased in the startup ecosystem, both domestically and internationally. First domestic investments arose with the establishment of various venture capitals and accelerators such as Sarava, to help the early stage startups grow, followed by government support, where the government realized the importance of entrepreneurship as a growing factor for the country's economy.

Furthermore, after the nuclear deal international companies and investors are considering to enter the untapped market of Iran and invest in Iranian startups. Some international companies such as; Rocket Internet and Pomegranate have already

invested in startups in Iran, which drove more attention to the entrepreneurship ecosystem. Because of sanctions Iranian banks were not allowed to connect to SWIFT, which prevented investors and companies to collaborate with Iranian companies. After sanction relief according to the Central Bank authorities, “29 Iranian banks are now connected to SWIFT“, which will pave the way for more trust and eventually more investment and trades between Iran and the rest of the world. This will definitely bring more exposure to Iranian entrepreneurs resulting in more growth. To be more precise as Babakhani mentioned, “Improving the banking industry is the first and most important step for the Iranian government to increase the impact of the JCPOA throughout all industries.“

The interviewees are also of the view that JCPOA opens the door for international companies to enter Iran, which will lead to more competition. The lack of competition before the JCPOA limited international donors and operators and was beneficial for some time, where the young Iranians imitated international companies’ business models and established their own tech companies. However for the further development the lack of competition prevented the ecosystem to grow. When the international companies enter Iran, apart from the competition they will bring knowledge, capital and experience which will help the startup ecosystem improve, flourish and develop. As mentioned by Jozi in the literature the JCPOA will lead to more “international mentors and guests will visit to witness Iran’s startup scene and help in transferring knowledge and experience resulting in faster production of top talent.“ With experts bringing their know-how, new technologies and experiences in entrepreneurship, the startup ecosystem in Iran will thrive.

Another positive outcome of the JCPOA can be pointed out due to the reverse brain-drain. Iran has one of the highest rankings in brain-drain of 150.000 per year, however the optimism of the post JCPOA era resulted in returning of these educated young Iranians back to their own country with the hope of a better future. Corresponding to the interviews, 75 percent of the participants have studied abroad, however now they are all entrepreneurs in Iran.

Finally, it can be pointed out that the JCPOA had a positive impact on tourism in Iran. The moderate stance of the current president which led to the historical nuclear deal,

also helped the tourism industry. The nuclear deal resulted in alternate view of the world towards Iran, as Iran being a more moderate country with highly educated people who want to connect to the world which attracted more tourists. One of the important growing factor for each economy is tourism industry, which will also help the entrepreneurship sector as more people visit the country and the demand for new businesses arises.

In conclusion it can be designated that, economists and entrepreneurs play a vital role in innovation and evolution of the economy and the implication of Joint Comprehensive Plan of Action had a positive effect on the startup ecosystem in Iran and also on the economy as a whole. It can be pointed out that the government has a crucial role in the development of the startup ecosystem and with more moderation it can gain the lost trust from the West and attract more foreigners to offer more investment and more education.

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APPENDIX A

Lena Vafaey's INTERVIEW

1. Please tell me a little bit of your background.

I was born in Tehran, studied Math & Sciences in high school and attended The University of British Columbia in Vancouver, BC, to complete a bachelor's degree in Geotechnical Engineering. After my undergraduate years, which were mostly spent on travelling and experiencing various cultures and cities, I then attended Columbia University in NYC for a short Architecture program. I then got accepted to the Pratt Institute Graduate School of Architecture and Urban Design for a Masters degree in Architecture.

I had only completed 1 of the 3 years that were designated to the program, when I decided to quit school and find Peeyade.

I have always been passionate about cities, culture, art, humans and interactions, which is basically what our work at Peeyade is focused on.

I am a patriot, and believe that with hard work, our city (Tehran) and our country will have a much brighter future.

2. Why did you decide to find a startup? What was your motivation?

I guess the last part of the previous question explains it all. My passion for urban planning, design, architecture, art and culture, and exploring cities were what drove me to find Peeyade. But above all my passion for Tehran and the attachments that I have here, allowed me to use all my specialties to find a start-up that I thought might be able to help realize the potentials of Tehran and help develop the city in a more systematic way.

3. Which fields of business are you involved in? And how did you set up your company? How long have you been in the business?

Currently I am involved mainly in strategy, sales and marketing, content development, and technology.

We started off by developing content for locals, interesting feed that will guide them through the city, on an instagram page. We then added the technology part of the business and developed our application and website. We THEN developed our business plan, which was quite tricky and took months and months to finally reach a good potential. We have now added our sales and marketing department. All of this has happened in the past 2 years (mainly in the past year).

Since I was a newcomer to the business industry all of the above were developed throughout various trial and error attempts. However I believe that due to us being amateurs, we were able to bring alot of creativity into the business, a factor that has become a competitive advantage for us today. Also, The fact that we more passionate about our cultural goals made our path abit bumpy but gave us a very strong purpose, a purpose that will always prevent us from giving up easily.

4. How did you get the funds needed to start?

I was lucky to have personal donors (parents) who believed in the business and agreed to fund it for the first 2 years. We are currently looking for investors and the odds of getting one have been proven to be promising.

5. Tell us about your experience with the Iranian startup scene.

- Is it easy to enter the market?

I believe that it is relatively easy to enter the Market considering how the market is not yet saturated and that there is alot of room for creativity. Our experience with creative and innovative content showed that the response from the market to such concepts was quite good.

- Were there any obstacles you had to face, starting an entrepreneurship venture in Iran? What was the most challenging part?

The most challenging part for me was to learn all that I had to deal with on a daily basis considering how my background had no relation with business whatsoever. It is obvious that I would have had this challenge anywhere else in the world, however, I believe that having to go through these obstacles in Iran made it easier for me; due to lack of skilled

professionals, unskilled professionals have an opportunity to make it.

- Is it easy to deal with the governmental restrictions and regulations?

Since Peeyade is considered a media application, we obviously have to deal with a lot of restrictions towards our content, which is never pleasant but has always been a main priority for us to keep within the guidelines.

- How much has your business evolved post sanctions?

The sanctions have affected the whole industry. I think the most important effect of them all has been the element of "hope" and a reason for young entrepreneurs to have the will to continue. I don't believe that we have yet experienced the economical effects of removing the sanctions, because it takes time.

6. Who do you see as your target audience? How are you reaching them? Do sanctions have an impact on this?

Our early adopters are people who like us, enjoy exploring Tehran and prefer to spend their weekends in the city rather than at home with family or friends. We also have attracted audiences from the art scene and of course, students. We are reaching them from various channels, online or offline, depending on where they spent most their time and money. Obviously with the removal of sanctions and with an uplift in the economical state of the country, everyone will have more money to spend on various activities in the city, which is why it would make it easier for us to attract our target audience.

7. How long did it take your business to have a firm footing in the entrepreneurship scene?

We are still struggling with that, but I believe by this time next year (3 years in total) we will have made it.

8. Has the implication of JCPOA (Joint Comprehensive Plan of Action) had a negative or positive impact on your entrepreneurship venture? Please explain.

It has most definitely been positive, we see it everyday in people's lives whether it's from an economical perspective or an element of happiness or hope. However, there is still

alot of work that needs to be done, we still have problems attracting foreign investors and we still have plenty of website restrictions and international internet businesses that are not willing/allowed to offer services to Iran.

9. How was the startup scene in Iran before JCPOA and after that in your point of view?

Before the JCPOA there was alot of fear and tension. All startups knew that with the sanctions in play, their funds, activities and services would become limited. So with the removal of the sanctions the fear has become alot less, however we still have major sanctions from the US economy which prevent us from freely using alot of the major technology industry services (e.g. Google services, Beta testing and prototyping websites, outsourcing services, payment services, etc..).

10.What factors in your opinion will trigger growth in the startup ecosystem in Iran?

Creativity, Innovation and a solid purpose/passion (other than the need to make money). Unfortunately these 3 are key elements that are not well practiced in the startup scene in Iran, which is why we are witnessing alot of money and manpower going into repetitive ideas which end up over saturating their targeted markets, leaving the customer with way too many unnecessary choices.

11.What impact do you think have the sanctions had on the startup scene in Iran?

Not sure. Our business started towards the end of the sanctions.

12.How can the start up scene in Iran be influenced by JCPOA?

Attract foreign investors and more importantly, foreign skilled professionals. Enable the option of using international technology.

Create businesses/platforms where foreign professionals would train Iranian managers and workers. Allow foreign companies to invest more and start their own businesses in Iran which will benefit us greatly since it will create jobs and help many to learn their techniques and managements skills.

APPENDIX B

Soheil Alavi's INTERVIEW

1. Please tell me a little bit of your background.

My name is Soheil Alavi, I am a founder of Reyhoon. I studied Digital Media arts in Toronto and graduated in 2009. Reyhoon is my forth startup and the first one in Iran.

2. Why did you decide to find a startup? What was your motivation?

It is in my blood. And also if you are motivated enough, you know running a company is the among the only ways to buy your financial freedom if it works out.

3. Which fields of business are you involved in? And how did you set up your company? How long have you been in the business?

Reyhoon is 2.5 years old. I got into an accelerator program in Iran called Avatech. I served as the CEO and after building the operation, sales & product team, now I am focusing on marketing.

4. How did you get the funds needed to start?

a little help from Avatech accelerator, my own money and later got a funding from a prominent VC in Iran called sarava Pars, also the investor of Digikala, Takhfifan & CafeBazar and for next rounds international funding.

5. Tell us about your experience with the Iranian startup scene.

It is still has a long way to go. The proper infrasture is in it's infancies days. The market is very young and has yet to adopt itself.

- Is it easy to enter the market?

It depends on the market, if it has a barrier to entry or not. But it is obviously easier than other saturated countries since the market is fertile.

- Were there any obstacles you had to face, starting an entrepreneurship venture in Iran? What was the most challenging part?

It's highly risky for VC's to fund startups in Iran, hence it is making it difficult to convince startups on growth. VC's are really money oriented and wants return very fast. You got to make money very early unlike twitter and other business models.

- Is it easy to deal with the governmental restrictions and regulations?

Nope. It's not designed for startup model. It's pretty new to them what startup is and

their needs. Unlike California state that has been optimized to have less fraction of running companies.

- How much has your business evolved post sanctions?

It is soon to tell since most of the sanctions specially for tech companies has not yet lifted. Google Analytics is still filter in Iran

6. Who do you see as your target audience? How are you reaching them? Do sanctions have an impact on this?

Pretty much the baby boomers age 18 to 34 who has smartphone and obviously Internet bank. They way sanctions is impacting on this is the lack of tools for targeting. You can not use facebook & Google advertising systems to target Iranian users.

7. How long did it take your business to have a firm footing in the entrepreneurship scene?

Almost a year

8. Has the implication of JCPOA (Joint Comprehensive Plan of Action) had a negative or positive impact on your entrepreneurship venture? Please explain.

So far not a harmful effect on our businesses and has improved as mentioned above

9. How was the startup scene in Iran before JCPOA and after that in your point of view? Much more motivated and lots of new startups after jcpoa

10. What factors in your opinion will trigger growth in the startup ecosystem in Iran? Quality of service which also requires heavy funding. Intl VC funds, intl competition

11. What impact do you think have the sanctions had on the startup scene in Iran?

The knowledge of new tools in this new age has not spread to the country. Somehow lots of them before sanction were doing better while there was no competition, but after due to the international VCs and activities that started they are also growing well and competition has made them to move towards an international scene.

12. How can the start up scene in Iran be influenced by JCPOA?

By more investments in this sector,

Sure sanctions will cause less interest to start a business, less local and international investors to join the startups

APPENDIX C

Nazanin Sammaknejad's INTERVIEW

1. Please tell me a little bit of your background.

I studied in Iran for my bachelor degree I studied mathematics. From the day I went to university I started to work as a part time at a company that my dad owned, then I moved to England for my masters degree, I studied International Business management and then when I came back to Iran I started to work for Unilever as an assistant brand manager, then I got expatriation to regional team in Istanbul. I worked there for a while then I came back to Iran again, and I started working for L'Oreal as marketing director. Managing the team and actually for the first time L'Oreal decided to have people in Iran to manage all the marketing and sales on their supervision and according to their brand strategies and images, so I was hired as a marketing director to have a team and to change the brand positioning and etc.

2. Why did you decide to find a startup? What was your motivation?

Actually I worked as a marketing person in Iran for 10 years, the products that I worked for was mainly for women both in Unilever and L'Oreal. I worked on beauty products and as a marketing person to do my job I had to study a lot about habits and attitudes of Iranian women, so I had that know how and Iran's market, both from the product perspective, competition perspective and also the trends of the market. So I got to the point in L'Oreal that I made a team and then I realized that I need to do something more, and by more mainly I meant to be an Entrepreneur so I can create jobs for young students who graduates. Because I believe in Iran the main problem is that in universities you do not get trained for the work place and when you graduate it is hard to find job because every company is looking for people with experience. So I thought this young generation who graduates from university and have potential and ambitious need to be given chances. So I thought I want to have a business where I can create this position and recruit young generation in Iran and teach them and train them how to become professionals, that was my main motive. And my other motive was since I knew Iranian women needs, I was determine to bring Iranian women all the products and services they deserve to have, where you can find elsewhere in the world and teach them and educate them how to take care of themselves. These were my two motives of starting my business. Now in my office most of the employees are under 25 years old

and they came with no experience what so ever so I spent so much time teaching them all the stuff and train them.

3. Which fields of business are you involved in? And how did you set up your company? How long have you been in the business?

My business is online ecommerce and content, it is mainly beauty for women. So basically in the content we teach women how to take care of themselves, from how to do hydration, how to do sports, how to diet, up to how to implement makeup and get the look that they want so all the things that women want in order to feel more beautiful. Also I import beauty products which are not in Iran and which I found gap for those products, so I go abroad import them and sell them online. It is almost two years that I started my business.

4. How did you get the funds needed to start?

I pitched my idea to some people whom I knew that have money, they loved the idea and got onboard, they are business men in this business. One of them is a big importer, actually importer of L'Oreal in Iran they have the subsidiary of L'Oreal in Iran, the other one lives in France whom has lots of experience in online businesses and has shares in different online businesses in Europe. So I became partner with them, I have not raised money since then, no raise of capital, it is only my shareholders who invested in the business so far.

5. Tell us about your experience with the Iranian startup scene.

The biggest issue in Iran for startups is human resources, it is a very new scenery, they are not enough talents in the market to recruit, experienced people in this field are really hard to find, in the university there is no education for the young generation to have the attitude and ambitious of having startup businesses, so the main issue that we have is human resource the second issue is the speed of startups especially online businesses in Iran has been very fast where the structure of the country and the laws and regulations can not keep up with it. So this is one of the main challenges we have, the laws that implement to the conventional type of businesses cannot be implemented for online businesses and startups, the fiscal authorities do not have laws and regulation and process for startups because they do not understand it yet. So basically the main problem is that startup scene moved really fast whereas the country did not. So all of the

startups faced lots of problems with the fiscal authorities and the education of the audience, which is normal for now.

- Is it easy to enter the market?
- Were there any obstacles you had to face, starting an entrepreneurship venture in Iran? What was the most challenging part?
- Is it easy to deal with the governmental restrictions and regulations?
- How much has your business evolved post sanctions?

6. Who do you see as your target audience? How are you reaching them? Do sanctions have an impact on this?

My target audience are Iranian women, mainly from 16 years old to 50, but more than 40 is a bit hard to reach because of their habits and attitudes towards internet, so the most conversion I get is from the people aged between 16 and 35. Mainly through Social media I reach my target audience. Social media in Iran is very strong, especially Instagram and Telegram, Facebook is not really strong in Iran because it is filtered and banned in Iran.

Yes actually the biggest impact that sanction had for us was the purchase power, when sanction happened the economy was not doing very well so the purchase power of people decreased a lot which of course had impact on our business since we have an ecommerce business.

7. How long did it take your business to have a firm footing in the entrepreneurship scene?

I do not think we have a firm footing yet, we are struggling to survive and maintain what we are doing.

8. Has the implication of JCPOA (Joint Comprehensive Plan of Action) had a negative or positive impact on your entrepreneurship venture? Please explain.

Of course it had positive impact, because when it happened, what came afterwards other than purchase power that was changed, when you are exposed to international market and you have corporation with other markets you have to keep up with them so you learn from them more easily they education of the people in the country increased

because they had access to different sources and also what happened is that the government, they understood the importance of the startup so they managed to have lots of benefits for startups in Iran because when you are in peace with the world then you are in contact with them and you want to keep up with them, first you learn from them second you want to compete with them so give benefits to companies and startups in Iran so they can grow and compete with the international startup scene as well, for example now after JCPOA the big ecommerce companies in Iran are working really hard and very good because they have hopes that one day the giant ecommerce companies of the world like Amazon comes in Iran and buy them, or for example Rocket Internet entered the market in Iran which boosted the startup scene in Iran, and Rocket Internet has the knowledge for working for ages in Europe so when they come to Iran they bring their knowledge and they know how and so first of all people will learn from them and second the competition gets hot and other companies will do their best and raise themselves up. So when there is a competition in the market and big brands are in the market always the market evolves and without sanctions there will be huge opportunities and great atmosphere for the businesses and people to develop themselves to learn more and to be able to compete with them.

9. How was the startup scene in Iran before JCPOA and after that in your point of view?

With the sanctions the situation of companies and people were on survival, but after sanction relief they think about building new stuff because they feel secure, that is the main positive point that happened. Because when you are insecure and do not know what is going to happen you will definitely do not take the risk of starting a new business, you will not be creative and would just want to survive, but when sanctions not there people start to build.

10. What factors in your opinion will trigger growth in the startup ecosystem in Iran?

I think the interest of other successful startups in Iran will help that, education in university; the financial benefits of the government can help that and the starting venture capitals in Iran.

11. What impact do you think have the sanctions had on the startup scene in Iran?

12. How can the start up scene in Iran be influenced by JCPOA?

When there is no sanctions big companies enter the market, when they enter they bring their know how, their capital, education and people, and they will help the startup scene grow much faster.

APPENDIX D

Mohammadreza Azali's INTERVIEW

1. Please tell me a little bit of your background.

I did my bachelors on computer engineering, hardware and I was into AI. I wasn't supposed to be a journalist not at all... but when I was a student I started writing for "Donyaye Eghtesad" the biggest financial newspaper in Iran and "Tejarat Farda" as well they call Tejarat Farda's Magazine, the Economist of Iran.

2. Why did you decide to find a startup? What was your motivation?

I wanted to leave the country for the US. I was studying for my GMAT and was working for Donyaye Eghtesad at the same time. One day I went to Donyaye Eghtesad to get my paycheck, the CEO saw me and we started talking and he offered me to write about Tech! So I started writing about Tech but when I learned more about startups, I knew I wanted to have a startup.

3. Which fields of business are you involved in? And how did you set up your company? How long have you been in the business?

In 2013 I got familiar with all the high profile people in the startup ecosystem. I started talking to Mohsen Malayeri the CEO of AvaTech and I told him I have this dream to build a media about Startup and Tech with international level in mind and I wanted to do it in English so he said: "yeah that's a great idea. I can give you the work space that you need." So I gathered the team but It didn't work so I signed to organize the Sharif startup weekend, there I met Hamed and Alireza the cofounders. And they happened to live in Iran they have studied abroad and came back to Iran, so I found the ones that I needed because I needed someone who could like talk fluently and write in English actually. So

TechRasa started as a tech blog and after 3 months we started receiving emails from outside of Iran.

4. How did you get the funds needed to start?

First of all we started with our pocket money, we didn't need a lot of money since we needed a small place and a laptop to write about startups in Iran, it's all about writing content and market research. Then when we started to attend at events, some of these events would sponsor us. Also when we write articles or reports about a company they will sponsor us and get us the needed funding.

5. Tell us about your experience with the Iranian startup scene.

- Is it easy to enter the market?
- Were there any obstacles you had to face, starting an entrepreneurship venture in Iran? What was the most challenging part?
- Is it easy to deal with the governmental restrictions and regulations?
- How much has your business evolved post sanctions?

we are walking on a thin line because our website is in English, we know the redlines and are careful not to cross them. We have been fine so far and now after 1 and a half year we have been invited to Presidential Palace for science and technology, Dr.sattari contacted us. It's a good thing that they are paying attention to this sector.

We are helping them to define the strategy to produce good content about Iran's startup ecosystem.

6. Who do you see as your target audience? How are you reaching them? Do sanctions have an impact on this?

We started with Telegram Channel (the biggest social media in Iran), our target audience is C-level types. We try to give the data needed to enter Iran's market. And change the image of Iran in International eyes.

7. How long did it take your business to have a firm footing in the entrepreneurship scene?

We started our business in 2013, only after three months we started getting email from outside of Iran wanting to know about the entry strategy and we started helping them to find partners in Iran and consulting them.

8. Has the implication of JCPOA (Joint Comprehensive Plan of Action) had a negative or positive impact on your entrepreneurship venture? Please explain.

Positive,

We launched two months before JCPOA, after JCPOA we met at least 5 companies in Iran and tons of companies outside of Iran wanting information about startup ecosystem in Iran.

9. How was the startup scene in Iran before JCPOA and after that in your point of view?

Because of lack of competition many startups in Iran thrived. It was good for some time because they started their business but now is the time for competition.

Digikala was the first ecommerce in Iran, when Bamilo came to the market with Rocket Internet funding, they shaked Digikal and they changed their whole strategy, they forced to have better discounts, better customer service and etc.

10. What factors in your opinion will trigger growth in the startup ecosystem in Iran?

US sanctions, our main problem is us sanctions, because we don't have international payment, we cant provide services for outside of Iran, we cant buy from outside of Iran, many startups in Iran cant buy the us services. If the US financial related sanctions being lifted, I guess Iran could be a hub in MENA region. With lifting the sanctions European companies can enter Iran more easily

11. What impact do you think have the sanctions had on the startup scene in Iran?

Foreign investment: jeopardize their investment, the first mover will gain most.

Rocket Internet from Germany invested in Iran but they started before the sanctions. Sold their share to MTN, MTN would be the biggest player in startup ecosystem in Iran.

They extracted 1 billion \$, now they are investing in other sectors, Iranian net 300 million.

12. How can the start up scene in Iran be influenced by JCPOA?

With lifting the sanctions European companies can enter Iran more easily If the US financial related sanctions being lifted, I guess Iran could be a hub in MENA region. If US sanctions lift, Digikala and café bazar (with 33 m users) would help amazon and

apple store to enter the market, they would be acquired by Amazon or apple store. Because working in Iran is really different from everywhere else. For example We can't advertise on Google and Facebook and that's where Telegram comes in. That's why Telegram is a phenomenon in Iran the biggest social media in Iran, and it is designed for Iran's market. The startup ecosystem is growing in Iran, sanctions can lower the pace but it will not stop it.

AFFIDAVIT

Under the penalty of perjury, I, Bahareh Sammaknejad hereby declare under oath, that this master thesis has been independently authored by me, that I have used no other sources or aids other than those quoted, and that I have denoted all direct and indirect citations thereof within the text. This manuscript has never before been published or submitted to this or another academic institution for examination.

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