
Munich Personal RePEc Archive

The Crowding Out and Crowding In Effects of the Government Fiscal Policy on the Real Estate Investment and Public Prosperity in Iran

Jariani, Farzaneh

10 January 2021

Online at https://mpra.ub.uni-muenchen.de/105506/
MPRA Paper No. 105506, posted 25 Jan 2021 02:52 UTC

The Crowding Out and Crowding In Effects of the Government Fiscal Policy on the Real Estate Investment and Public Prosperity in Iran

Farzaneh Jariani

Corresponding author: Farzaneh Jariani, Graduate of Theoretical Economics, Tarbiat Modares University, Tehran, Iran. Jariani_farzaneh@yahoo.com

The Crowding Out and Crowding In Effects of the Government Fiscal Policy on the Real Estate Investment and Public Prosperity in Iran

According to the Keynesian Model, the effectiveness of fiscal stabilization policy will rest on the size of fiscal multipliers and one of the most important and effective factors on the fiscal increasing coefficient can be the same crowding out & crowding in effects of the government fiscal policy on the private sector's investment on the real estate which it has been taken into consideration over the last few decades. Since, there is an interaction among the governance variables, government and investment and therefore an active private sector's investment is known as a very significant strategy in the direction of retaining the economic sustainable growth and with regards to this important matter in this study, we have taken into account the simultaneous effects of economic indexes, prosperity index, economic freedom index, governance index and comprehensive sanctions on the real estate investment and Iranian people's welfare applying the Multilevel GLM method from 1985 to 2019. Results of such study show that the government's macro policy makings have had a crowding out effect on the private investments on the real estate meanwhile the private investments on the real estate, bad governance and low and non-inclusive economic growth have lead to the small participation of manpower and losing the social capital and generally speaking, the failure of ensuring the social welfare and prosperity.

Keywords: Keynesian Model, Fiscal Policy, Real Estate, Crowding Out, Crowding In

Subject classification codes: E62, G3, H2, H31, H32, H54, O3, O42, O53

Introduction:

In the Keynesian Model, the effectiveness of fiscal stabilization policy which is done with the aim of stimulating the total demand, it will depend on the size of fiscal multipliers which is assumed positive and adequately in the basic models. In reality, there are most of the economic factors which may put some negative effects on the size of fiscal multipliers and the said factors include the economic institutes,

macroeconomics status in one specified period of time, the foreign trade and ending the actions taken by the microeconomics actors. One of the most important factors analyzed both theoretically and experimentally over the last few decades is the crowding out effect of private investments expenditures with performing the fiscal expansion policy through increasing the government's expenditures which this can directly lead to the fiscal multipliers reduction. Accordingly, the government's fiscal expansion policy will cause the crowding out effect of private investments (Balcerzak and Rogalska, 2014). In other words, having increased the government's expenditures and incomes, both transaction demand for money and interest rate will increase and reciprocally the private sector's investment will decrease as well that is contrary to the fiscal contraction policy which causes a reduction in the interest rate and then increasing the private investments and crowding in effects.

There are two different viewscores on the effects of increasing the government's expenditures on the process of investment. A traditional viewscore which argues that the government's expenditures increase may cause a crowding out in the private investments. The government's expenditures are financed through the taxation and or through an increase in the debts and liabilities and the demand increase for the goods and services, interest rate increase, increasing the price of capital and so may cause a reduction in the private investments. A non-traditional viewscore argues that the government's expenditures increase may cause stimulating the investment. The crowding in happens when the economic sources become unemployed and then the employment decreases.

Such situation may happen in many of the developing countries for example the government's expenditures for the infrastructures can cause some private investments. There is evidence that the first viewscore remains for the both countries namely the

developed country and developing one and the second viewscore is only for the developing countries (Ahmed and Miller, 2000).

The public investment enjoys a crowding in effect in the short term and in the long run it puts a crowding out effect on the private investment. But both effects are infirm (Xiaohua, 2006). The public investment puts a crowding out effect on the private investment in the real estate. The most important reason of the crowding out effect is the direct intervention of public investment in the housing development projects which this has caused a competition between the government investment and private one in terms of lands, credit funds and other cases. The macro-government investment in building the affordable housing for the low income people has also caused a demand reduction in the real estate markets which this can crowd out the private investment in the said industry (Xin, 2010).

Increasing the real estate price, those companies which are now the land owners apply for collecting the loans as more investment and therefore the land investment especially the commercial lands can reduce the amount of other investments. This approach may create a fiscal constraints gap between the land owner enterprises and landless establishments that the consequence thereof shall be the resource transfer and the investment efficiency reduction. Such method may be done during the crowding out process (Chen et al., 2015 and Chen et al., 2016). The banks active in the housing sector will increase the housing loan and consequently, the commercial loans will reduce and decrease. The loan retention companies are of the less remarkable investment. The banks provide the profitable opportunities of housing sector with loans and presenting such loan is not based on the demands (Chakraborty et al., 2018).

The results of reviewing the consumable divided fiscal expenditures (Consumption, Capital Formation and the budget deficit) on the private investments in

the developed countries and developing ones show that the elasticity of private investment is positive (Crowding in Effect) with regards to the capital formation expenditures in both the developed countries and developing ones but the crowding in complementary effect in the developing countries is more than the developed ones and respectively the private investments elasticity is negative (Crowding out Effect) in both groups of the foregoing countries with regards to the government's consumption

expenditures that such replacement or transfer effect is assumed bigger in the developed countries. Furthermore, the budget deficit effect on the private investments is negative (Crowding out Effect) in the developed countries while this effect is considered positive (Crowding in Effect) in the developing countries (Mahmoudzadeh et al., 2017).

The active private investment can be assumed as the most important strategy for retaining the economic sustainable growth in the post-global crisis period. The private investment compared to the public one holds some features such as the flexible mechanisms, high efficiency, excellent potentials, powerful sustainability, tending to innovation and entrepreneurship, drastic employment effects and so forth (GU et al., 2010).

Also, there is an interaction among the governance variables, government and investment. In the countries with good governance, the negative effect of foreign direct investment on the domestic investment (Crowding out Effect) is approximately assumed two times more than the countries with the normal and tolerable governance. Such feature is indicative of the government's intermediation (Morrissey and Udomkerdmongkol, 2012). Among the features and particularities of countries in the Middle East and North Africa region, the main problem is the institutional variables infirmness including welfare or prosperity, democracy, economic freedom, government

accountability, political stability, government effectiveness, quality of regulation, rule of law, control of corruption (Transparency) (Zolfaghari and Jariani, 2021). The economic freedom and control of corruption can cause an economic growth, welfare or prosperity and macroeconomics stability of the countries in the Middle East and North Africa region (Heydari and Jariani, 2020). The most important solution for the sustainable development in the countries of MENA region can be the use of social capital (Civil participation and participation of the entire social processes) and the economy quality (Equipping the economy for the production of sustainable wealth and complete employment) (Zolfaghari and Jariani, 2020). Regarding Iran, we can say that after occurring the Islamic Revolution and appearing and expanding the political conflicts and disputes among Iran, America and the allies thereof and consequently exerting the various sanctions to Iran since 1979 this country has experienced the implications and consequences arising out of exerting such sanctions more than four decades and has paid a severe penalty in the field of business. Accordingly, the sanction variable has invariably been among the inseparable variables of Iran's macroeconomics more than three decades (Dizaji and Jariani, 2018).

Therefore, with regards to the foregoing explanations, according to the Keynesian Model, the effectiveness of fiscal stabilization policy depends on the size of fiscal multipliers and one of the most important factors on the fiscal multipliers which has been taken into consideration over the past few decades is the crowding out & crowding in effects of the government's fiscal policy on the private sector's investment. Since, there is an interaction among the governance variables, government and investment and an active private investment is known as one of the most important strategy in retaining the economic sustainable growth therefore and in this study, the simultaneous effect of some indexes or indicators are perused on Iran's real estate and

prosperity investment such as economic freedom, the Legatum prosperity, good governance and comprehensive sanctions because this important matter was not taken into account in the former studies.

Iran's Status:

We have shown and demonstrated Iran's investment of the private sector of all buildings in urban areas, operational balance, government's expenditures and interest rate, indicators of good governance and also Legatum's prosperity index in the charts (1) to (4).

The chart (1) shows that the real estate private investment process has been almost fixed since 1985 to 2005 but this process has experienced an uptrend since 2005 (Starting the Comprehensive Sanctions). The said trend was a downtrend in 2016 (The Lifting of Iran's Economic Sanctions) but it experienced a slight uptrend again. The budget operational balance has almost faced with a downtrend since 2002 but that operational balance deficit has been intensified after the said year namely until 2019.

The chart (2) shows that the government's expenditures have approximately faced with an uptrend namely from 1985 to 2019. The real interest rate (Starting the Comprehensive Sanctions) has increased in 2006 and then it has severely decreased in 2013 (The Nuclear Agreement between Iran and P5+1 Group) but it has reached to its peak in 2016 (The Lifting of Iran's Economic Sanctions). This rate after a slump in 2017 (Starting the U.S Sanctions) has faced with an uptrend again.

The chart (3) shows that with regards to the range of changes of each one of the indexes and indicators of governance which is something between -2.5 (Infirm) up to 2.5 (Strong), therefore the Iran's entire scores are located in the negative part of the said chart considering the remarkable fluctuations. Order of scores of every one of the said

indexes and indicators and based on the ascending trend of the recent years namely from the strongest to the infirmest will be as disclosed below:

Government Effectiveness, Rule of Law, Control of Corruption, Political Stability and Absence of Violence/Terrorism, Regulatory Quality, Voice and Accountability

The chart (4) shows that Iran's score for Legatum's prosperity index has been placed in a range about 40 to 70 percent and every one of the indexes and indicators has had a very fixed trend and process. The considered indexes and indicators namely in order from the highest to the lowest are as follows:

Living Conditions, Health, Education, Safety and Security, Social Capital, Natural Environment, Economic Quality, Investment Environment, Enterprise Conditions, Governance, Market access and Infrastructure, Personal Freedom

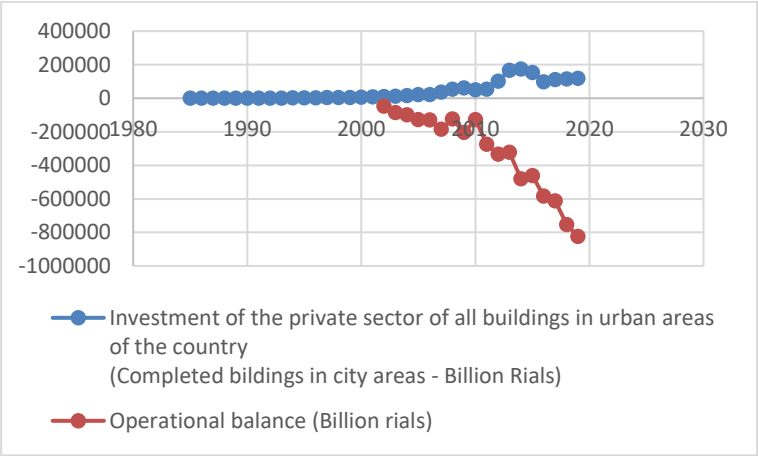

Chart 1: Real Estate and Operational Balance

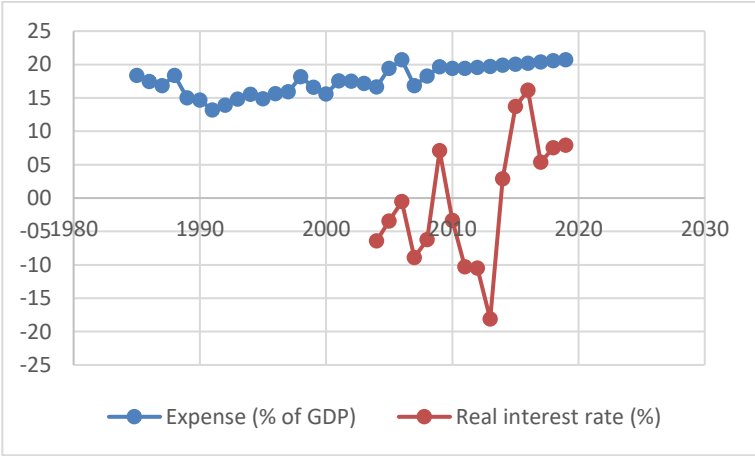

Chart 2: Government Expenditure and Interest Rate

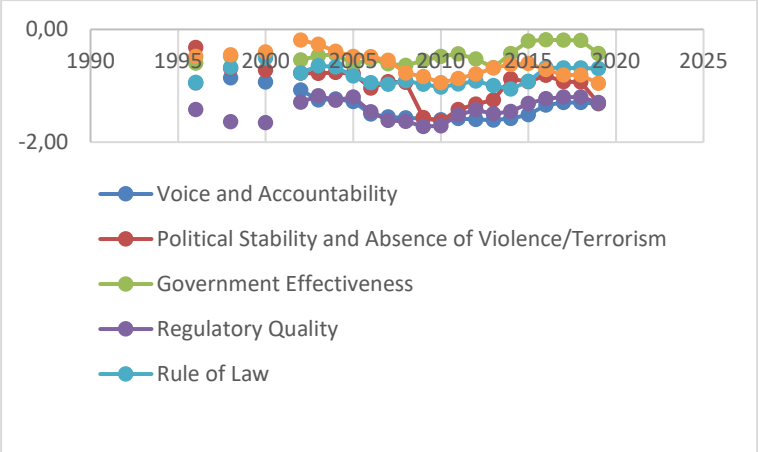

Chart 3: Indicators of Good Governance

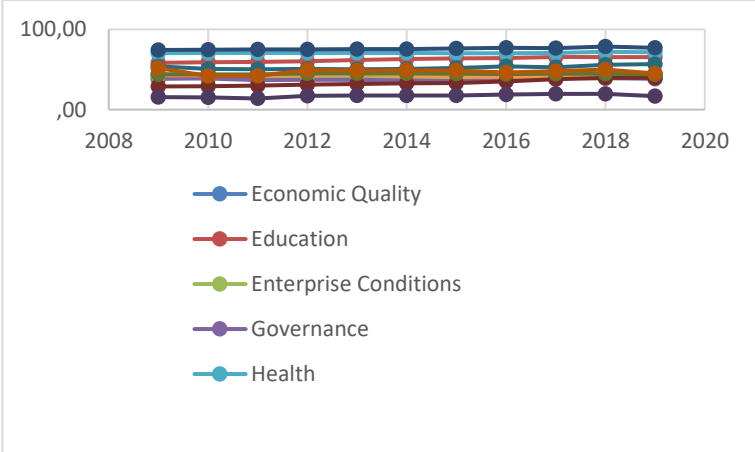

Chart 4: Legatum Prosperity Index

Literature Review

Iran:

Using the annual data of Central Bank of Iran during 1959 to 2012 and through Johansen co-integration test Mehnatfar (2015) has come to this conclusion that the government's investment is of a positive and significant importance based on the Johansen common cumulative approach. Also, the government's investment increase will for sure lead to an increase in the process of private investment and as a complementary relationship. The government's expenditures have also a very negative and significant effect and the inflation will put a small effect on the private investment which is insignificant.

Applying the co-integration and vector error correction, Karimi Takanlou (2014) has dealt with studying about financing the budget deficit within the time interval of 1970 to 2012 through the crowding out and crowding in effects and the effectiveness thereof on the private sector's activity in the economies of Iran and Algeria as two countries from the Middle East and North Africa region (Due to the economic structure and both countries' dependency into the oil) and the above-named person has also confirmed the crowding out effect in both Algeria and Iran.

Other Countries:

Using the detailed data related to the land transactions of the companies which are land owners themselves and the methods of estimating the OLS and 2SLS within the time interval of 1998 to 2012 in China, Chen et al., (2016) surveyed how the shocks may put effects on the real estate investment. In this study two other channels were studied in addition to the collateral channel as follows:

The real estate price increase will cause more investment in the commercial lands which are irrelevant to the main occupations of establishments and this matter can reduce other relevant investments (Speculation Channel) and the real estate price increase will cause a reduction of investment among those companies which have no lands compared with the land owner companies (Crowding out Channel). Through such channels they understood that the real estate shocks will lead to a remarkable replacement and transfer of capital in and among the establishments or enterprises as follows: A 1 percent increase in the land price will cause a loss and damage for 5 to 8 percent more than the losses related to the total factor productivity because of misusing the capital.

Studying the effects of foreign direct investment and the role of institutions on the domestic private investment and using the GMM method within the time interval of 2009 to 1996, Farla et al (2016), have come to this conclusion that the foreign direct investment will put a positive effect on the total investment of country and it can also enjoy a positive effect on the economy of developing countries as a policymaking with the aim of stimulating the capital inflow. An interaction between the foreign investment and governance has a negative effect on the domestic investment and this will cause the economic rent seeking and some serious and long-term implications and consequences on improving the domestic industry.

Using the data of companies, real estate and the patent (Invention Registration) and IV and OLS within the time interval of 2003 to 2010, Shi et al. (2016) showed that the real estate price will put a negative effect on the research and companies development and patent there in China and this matter is indicative of a strong crowding out effect.

Eden and Kraay (2014) have surveyed the effects of government's investment on the private investment in 39 low income countries using the OLS and 2SLS methods

and from 1980 to 2012. The results of such analysis can show some evidence of "Crowding in" as follows: One additional dollar of the government's investment can almost increase two dollars of the private investments and 1.5 dollars of the production. In most of the considered countries, the government's investment efficiency goes beyond the global interest rate but the investment efficiency gets lower than the global interest rate for those countries which are now of a higher government's investment rate.

Using the GMM method and total dependent variable and gross fixed capital formation for 46 developing countries from 1996 to 2009, Farla et al. (2014) came to this conclusion that the results of estimations will depend on both the dependent variable (A proxy for the domestic investment) and the method of estimation in order to study the effects of foreign direct investment (FDI) on the domestic investment and the role of institutions and governance on such relationship and Furthermore, they did not find any strong witness based on the existence of a positive relationship between "good governance" and higher levels of investment. They showed that in some cases the existence of interaction between the foreign investment and governance can put a negative intermediary effect on the investment.

Using the pooling approach and data within the time interval of 1991 to 2010 and related to 25 countries which were recipients of the financial aids in Asia and Latin America, Bakhtiari et al.(2013) came to this conclusion that the official development assistance will put a positive and significant effect on the government's investment expenditures but it will no longer put an outstanding effect on the government's current costs and expenses, They have also shown that official development assistance (ODA) may cause crowding out the government's income and public loans.

Using the advanced system generalized method of moments (GMM) and for perusing the crowding out effect of foreign direct investment (FDI) on the domestic

private investment and the interaction thereof with the governance, Morrissey and Udomkerdmonkol (2012) applied for studying 46 developing countries within the time interval of 1996-2009 and then they came to this conclusion that FDI can crowd out the domestic private investment and accordingly such event can be done more stronger and powerful in the countries with the "good governance".

Using the OLS method and the fixed and random effects methods within the time interval of 1975 to 1985 for 39 countries (23 developing countries and 16 developed ones), Ahmed and Miller (2000) came to this conclusion that the government's expenditures which are financed through collecting the taxes can create more crowd out for the private sector's investment compared with financing through the debts and liabilities and consequently the costs of social security, welfare and prosperity will decrease.

Iran's Economic Freedom, Prosperity and Governance Indicators:

The numeral 49.2 has been considered as Iran's economic freedom score in a report based on the economic freedom indicator of the Heritage Foundation (2020) namely Iran has changed its economy to the 164^{th} scores and in the list of 2020. The total grade thereof is due to a slump in the monetary freedom score which is indicative of an increasing inflation and such grade 1.9 shows a decreased score. Iran ranks 13^{th} among 14 countries of the Middle East and North Africa so the total score of Iran is much lower than the regional and global average. Iran's economy has been in the mostly unfree economy place for four years and since 1996 but it has fallen down to the repressed economy place afterwards. The negative remarkable growth, gross domestic product (GDP) in 2018 in relation with the strict U.S sanctions against Iran all have been considered worse than bad. The strong beneficiary groups that are predominantly in relation with the security and religious institutions they now disagree with following

up the economic freedom and enjoying the new connections with the global economy. The economic sustainable growth will be definitely assumed not only as a short-term opportunity but also as a long-term goal for Iran with regards to its excessive reliance to the oil.

According to the report issued by Lagatum's Institute (2019), Iran since 2009 stands in the rank of prosperity index. This country acts very strongly in the educational and living conditions but it is infirm in the individual freedom. Most of Iran's progress and development has occurred in the market access & infrastructure compared to one decade before.

According to Azadi, P. (2019), Iran's most significant challenges is because of its destitution in assessing Iran's governance quality during the past half century in order to present a framework for describing the governance and the relationship thereof with Iran's economy. Because of the low growth and non-inclusive over the last few decades, the stress signs have become multiplied in Iran's economy and society. The vast poverty and increasing inequality, the low participation of manpower and uptrend of unemployment and job-scarce, human capital flight, efficiency decrease, banking crisis and retirement, public liabilities increase, losing the social capital and serious environmental problems all these are among the challenges that Iran is now facing with. In addition to afore-mentioned matters, the corruption has changed to a systematic process and then a descending spiral which reinforces itself overtime. Accordingly, the necessity of performing a transformational approach in relation with the reduction of actions taken by the political institutions, transparency improvement and accountability will be assumed essential.

The summary of results of the foregoing studies concerning Iran and also the developing countries and developed ones can be indicative of the existence of

relationship and interaction among the governance variables, government and private investment and we can expect the realization of crowding out effects of the private investment after increasing the government's expenditures. Also, the results of studying the indexes and indicators related to Iran's governance show that this country has involved the economic stress due to the single-product economy and dependent on the oil, exerting the strict sanctions and the existence of corruption which these can express and clarify the crowding out effects of private investment on the real estate and consequently the Iranian's prosperity downfall.

Since none of the performed studies related to both crowding in and crowding out effects have not yet dealt with the efficacy of some variables including economic freedom, governance and prosperity together with the economic variables on the private investment in Iran's real estate but in this study, we have taken the efficacy of considered variables on the crowding in and crowding out of the private investment on the real estate and consequently the People's prosperity as an index for Iran's economic sustainable growth from 1985 to 2019 into account.

Theoretical Foundations and Experimental Model:

Since we have not assessed the efficacy of government's fiscal policy on the crowding in and crowding out of private investment in the real estate and also the effects of private investment on the Iranian people's prosperity in our former studies which were relevant to the private investment in Iran's real estate sector, therefore the goal of such study is to peruse those two said events using the considered institutional, economic and real estate variables.

The theoretical foundations of such study are based on the research main idea (Morrissey and Udomkerdmonkol, 2012) which this has recently had a very important share in the relevant literature and includes: separating the effects of governance

distinctive aspects on the investment. The considered authors have established a panel of 46 developing countries during 1996-2009 which provide some information regarding the different types of investments and various aspects of the pubic governance. They have performed the advanced system generalized method of moments (GMM) for the dynamic panels (Blundell & Bond, 1998) to estimate the domestic private investment model. The explanatory variables include FDI, a number of governance variables, an interaction term between governance and FDI. In this research, the negative marginal effects of fiscal direct investment (FDI) on the domestic private investment shows that such efficacy has been more than double in those countries that were of relatively better indexes of governance therefore the result is that FDI has caused the crowding out the domestic private investment and such event is more powerful in the countries with good governance. In the research done by Morrissey and Udomkerdmongkol, 2012 the interpretation of an interaction term starts from this assumption that the having partnership with the foreign investors may isolate the domestic ones through the unfriendly capital. So, the foreign direct investment may to some extent compensate and amend the negative effect of bad governance on the domestic investment especially in the unfavorable regimes.

The experimental model which is based on the model used by Farla et al., (2014) for assessing the relationship between the foreign direct investment and domestic investment is as follows:

$$DPI_{i.t} = \beta_0 + \beta_1 DPI_{i.t-1} + \beta_2 FDI_{i.t} + \beta_3 GROWTH_{i.t} + \beta_4 PUBLIC_{i.t} + \beta_5 WGI_{i.t} + \beta_6 WGI_{i.t} \times FDI_{i.t} + \varepsilon_{i.t} \quad (1)$$

DPI is domestic private investment as a fraction of GDP, FDI is FDI as a percentage of GDP, PUBLIC is public investment as a percentage of GDP, GROWTH is past GDP

growth, and WGI is one of several indicators on governance and institutions. The β_s are parameters (to be estimated), and ε is a disturbance term with the usual characteristics. Their interest is β_2 in the parameter (at zero WGI, positive for crowding in and negative for crowding out), the β_5 parameter (expected to be positive at zero FDI, indicating a relation between investment and "good governance"), and the β_6 parameter (which may be either negative or positive, depending on the nature of the mediating effect).

Research Method and Data:

In this study, the Multilevel GLM method has been applied which fits with the Multilevel Mixed-Effects Generalized Linear. Such method prepares the various types of distributions as a condition for responding to the normally distributed random effects:

$$y_{it} = \delta l y_{it-1} + X'_{it}\beta + \alpha_i + \varepsilon_{it} \qquad \varepsilon_{it} \epsilon N(0.\delta_\varepsilon^2) \tag{2}$$

in which y_{it} : the private investment for the real estate and prosperity, X'_{it} : a set of the explanatory variables which are effective for the real estate and prosperity, δ and β: estimated coefficients and ε it : random disturbance.

We apply the model (2) for two times: 1. Estimating the model of government's fiscal policy on the real estate private investment in Iran and 2. Estimating the effect of real estate private investment on the Iranian's prosperity.

The model time interval of this research is from 1985 to 2019 and then the data are divided into five groups which respectively include: real estate index, economy indexes, governance indexes, economic freedom index and Lagatum's prosperity index. The related data have been derived from the databases of Ministry of Roads & Urban Development of the Islamic Republic of Iran, Central Bank of the Islamic Republic of

Iran, Statistical Center of Iran, World Bank, Heritage Foundation and Legatum's Institute.

It should be noted that in the real estate private investment model and also the prosperity model there was found no possibility of using the entire governance indexes due to the lack of convergence in the estimation results.

	Symbol	Sources
Dependent variable		
Investment of the private sector of all buildings in urban areas of the country (Completed billdings in city areas - Billion Rials)	cobu	Ministry of Roads & Urban Development Islamic Republic of Iran (MRUD)
Independent variables		
Real Estate Index:		
- Urban housing access index	uhai	MRUD
- The share of housing costs in the household expenditure basket	sheb	
Economic Index:		
- Population growth (annual %)	popg	WDI
- Urban population growth (annual %)	upg	WDI
- GDP growth (annual %)	gdpg	WDI
- Operational balance (Billion rials)	ob	CBI
- Expense (% of GDP)	exp	WDI
- Inflation, consumer prices (annual %)	inf	WDI
- Real interest rate (%)	rir	WDI
- Gold coin price index growth	gcpg	MRUD
- Stock market index growth	simg	MRUD
- Comprehensive sanctions	comsanc	-
Good Governance Index:		
- Voice and Accountability	voac	WDI
- Political Stability and Absence of Violence/Terrorism	pos	
- Rule of Law	rula	
Index of economic freedom	Iofe	Heritage Foundation
Legatum prosperity index:		
- Overall prosperity index	opi	Legatum Institute
- Economic Quality	eq	
- Education	ed	
- Enterprise Conditions	ec	
- Governance	gc	
- Health	he	
- Investment Environment	ie	
- Living Conditions	lc	
- Market Access and Infrastructure	mi	
- Natural Environment	ne	
- Personal Freedom	pf	
- Safety and Security	ss	
- Social Capital	sc	

Model Estimation Results:

Before estimating the government's fiscal policy effects model on the real estate private investment, the Phillips – Perron Test for Unit Root was done to ensure the stationary mood of considered variables that the results thereof have been inserted in the Table (1):

Table (1): Results of the Unit Root Test

Variables	Result	Variables	Result
cobu	0.000	iofe	0.000
uhai	0.000	comsanc	0.002
sheb	0.000	opi	0.000
popg	0.000	eq	0.000
upg	0.000	ed	0.000
gdpg	0.000	ec	0.000
ob	0.000	gc	0.000
exp	0.000	he	0.000
inf	0.003	ie	0.000
rir	0.029	lc	0.007
gcpg	0.045	mi	0.000
smig	0.000	ne	0.000
voac	0.000	pf	0.000
pos	0.003	ss	0.025
rula	0.000	sc	0.000

The results of the Government's Fiscal Policy Effect Model Estimation on the Real Estate Private Investment using the Multilevel GLM method have been included in the Table (2):

Table (2): Results of the Government's Fiscal Policy Effect Model Estimation on the Real Estate Private Investment in Iran

Variables	Result	Variables	Result
Uhai	-3.76* (0.000)	Rir	-6.80* (0.000)
Sheb	-4.01* (0.000)	Gcpg	-13.72* (0.000)
Popg	2.83* (0.005)	Smig	0.80 (0.423)
Upg	-6.85* (0.000)	Pos	2.28* (0.023)
Gdpg	-6.49* (0.000)	Iofe	-8.72* (0.000)
Ob	-6.29* (0.000)	Comsanc	-3.07* (0.002)
Exp	3.32* (0.001)	Cons	5.85 (0.000)
Inf	-2.76* (0.006)	-	-
Prob > F	0.0000	Number of obs	16

*p<0.05

Table (3): Results of the Real Estate Private Investment Model Estimation on the Iranians' Prosperity

Variables	Equations												
	Opi	Eq	ed	Ec	gc	he	ie	lc	Mi	ne	Pf	ss	sc
cobu	-5.22* (0.000)	-3.35* (0.001)	1.77** (0.076)	-9.09* (0.000)	-3.63* (0.000)	-5.92* (0.000)	-4.78* (0.000)	0.94 (0.347)	-208.46* (0.000)	-8.88* (0.000)	-2.19* (0.029)	2.10* (0.035)	-5.22* (0.000)
popg	-0.53 (0.595)	2.07* (0.038)	2.36* (0.018)	11.77* (0.000)	2.45* (0.014)	6.74* (0.000)	4.91* (0.000)	0.07 (0.946)	364.00* (0.000)	8.44* (0.000)	1.56 (0.118)	-4.49* (0.000)	-0.53 (0.595)
upg	9.10* (0.000)	0.73 (0.468)	-3.21* (0.001)	-5.30* (0.000)	1.84** (0.066)	-2.47* (0.013)	-2.09* (0.037)	-0.55 (0.580)	-246.17* (0.000)	2.57* (0.010)	1.73** (0.084)	2.08* (0.037)	9.10* (0.000)
exp	6.70* (0.000)	3.51* (0.000)	-1.38 (0.167)	7.97* (0.000)	3.74* (0.000)	5.06* (0.000)	4.44* (0.000)	-1.26 (0.209)	197.77* (0.000)	9.39* (0.000)	2.52* (0.012)	-1.37 (0.172)	6.70* (0.000)
inf	6.48* (0.000)	3.34* (0.001)	-2.16* (0.030)	7.93* (0.000)	3.93* (0.000)	5.85* (0.000)	6.00* (0.000)	-0.76 (0.449)	205.05* (0.000)	9.40* (0.000)	2.24* (0.025)	-1.91 (0.157)	6.48* (0.000)
voac	-6.62* (0.000)	-3.60* (0.000)	1.64 (0.101)	-8.43* (0.000)	-3.44* (0.001)	-4.62* (0.000)	-4.05* (0.000)	1.53 (0.127)	-160.78* (0.000)	-10.25* (0.000)	-2.62* (0.009)	1.96** (0.051)	-6.62* (0.000)
Pos	4.30* (0.000)	1.86** (0.063)	-4.42* (0.000)	1.00 (0.316)	-0.60 (0.551)	3.47* (0.001)	1.69** (0.091)	0.44 (0.657)	-2.53* (0.011)	2.98* (0.003)	0.37 (0.711)	1.71** (0.087)	4.30* (0.000)
rula	2.26* (0.024)	0.24 (0.808)	-0.66 (0.508)	-6.64* (0.000)	-3.10* (0.002)	-6.95* (0.000)	-5.70* (0.000)	0.16 (0.872)	-262.79* (0.000)	-0.90 (0.368)	0.02 (0.981)	4.42* (0.000)	2.26* (0.024)
comsanc	-4.89* (0.000)	-2.30* (0.022)	0.77 (0.443)	-9.02* (0.000)	-3.51* (0.000)	-3.85* (0.000)	-4.37* (0.000)	2.48* (0.013)	-193.07* (0.000)	-8.87* (0.000)	-2.47* (0.013)	2.83* (0.005)	-4.89* (0.000)
cons	-7.21 (0.000)	-3.30 (0.001)	1.89 (0.059)	-7.36 (0.000)	-3.75 (0.000)	-4.05 (0.000)	-3.84 (0.000)	1.72 (0.086)	-160.57 (0.000)	-9.01 (0.000)	-2.64 (0.008)	1.64 (0.101)	-7.21 (0.000)
Prob > chi2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Number of obs	11	11	11	11	11	11	11	11	11	11	11	11	11

*p<0.05, **p<0.01

Results of the Model Estimation (1):

The effects of the government's fiscal policy on the real estate private investment (Table 2) show that:

(1) Government's expenditures can put a negative effect on the real estate investment and interest rate puts a negative effect on the real estate investment, therefore, the government's expansionary policy can have a crowding out effect on the real estate investment. (Keynesian Model; Balcerzak and Rogalska, 2014; Mahmoudzadeh et al., 2017; Xin, 2010; Xiaohua, 2006; Ahmed and Miller, 2000)

(2) Operation balance can put a negative and crowding out effects on the real estate investment. (Mahmoudzadeh et al., 2017; Karimi Takanlou, 2014)

(3) Good governance (Political Stability) has a positive and crowding in effects on the real estate investment. (The Heritage Foundation, 2020; Farla et al. 2016 Morrissey and Udomkerdmongkol, 2012)

(4) Comprehensive sanctions are of negative and crowding out effects on the real estate investment. (The Heritage Foundation, 2020)

(5) Urban housing accessibility index, housing cost share from the household's costs basket, urban development, GDP growth, inflation, gold coin cost and economic freedom indexes growth are of an inverse relationship with the real estate investment namely they have a crowding in effect on the real estate investment in case of reduction, but they have a crowding out effect on the real estate investment in case of increase.

(6) Exchange index growth will not put a significant effect on the real estate investment but it has a positive relationship with the real estate investment.

Results of the Model Estimation (2):

Real estate investment effects and other indexes on the prosperity indexes (Table 3) are as disclosed below:

(1) Real estate private investment is of a negative effect on the total index of prosperity, economy quality, entrepreneurship, governance, health, investment environ, accessibility into the market, infrastructures, environment, individual freedom and social capital but a positive effect on the education, security and safety.

(2) Population growth is of a negative effect but security and safety have a positive effect on the economy, education, entrepreneurship, governance, investment environ qualities, accessibility into the market, infrastructures and environment.

(3) Urban development can put a negative effect on the education, entrepreneurship, health, investment environ, accessibility into the market, infrastructures and it also puts a positive effect on the total index of prosperity, governance, environment, individual freedom, security, safety and social capital.

(4) Government's expenditures are of a positive effect on the total index of prosperity and on the economy, entrepreneurship, governance, health, investment environ qualities, accessibility into the market, infrastructures, environment, individual freedom, security, safety and social capital.

(5) Inflation has had a negative effect on the education and a positive one on the total index of prosperity and on the economy, entrepreneurship, governance, health, investment environ qualities, accessibility into the market, infrastructures, environment, individual freedom and social capital.

(6) Objection and accountability has had a negative effect on the total index of prosperity and on the economy, entrepreneurship, governance, health,

investment environ qualities, accessibility into the market, infrastructures, environment, individual freedom and social capital and also a positive effect on the both security and safety.

(7) Political stability has had a negative effect on the education and also accessibility into the market and infrastructures and a positive one on the total index of prosperity and on the economy, health, investment environ, environment, security and safety and social capital qualities.

(8) Rule of law has had a negative effect on the entrepreneurship, governance, health, investment environ and also accessibility into the market and infrastructures, environment and a positive effect on the security and safety and social capital.

(9) Comprehensive sanctions has had a negative effect on the total index of prosperity and on the economy, entrepreneurship, governance, health, investment environ qualities, accessibility into the market, infrastructures, environment, individual freedom and social capital and also a positive effect on the living conditions and both security and safety.

By categorizing the foregoing indexes and indicators into three classes of real estate index, economy indexes, governance indexes and comprehensive sanctions, the shared effects of every one of them on the prosperity indexes will be as follows:

- Real estate index has had a positive effect on the education, security and safety but it has not had any effects on the living conditions.

- Economy indexes have had a positive effect on the governance and environment, but they have not had any effects on the living conditions.

- Governance indexes have had a positive effect on the security and safety and negative

effect on the market accessibility and infrastructures but they have not had any effect on the living conditions.

- Comprehensive sanctions have had a positive effect on the living conditions, security and safety but they remained effectless on the education.

With regards to the above-mentioned results and since Legatum's prosperity index is calculated based on the macroeconomics indexes (Economic growth and accumulation of material wealth), social prosperity (Happiness, life satisfaction, hoping to enjoy a better life in the years to come) accordingly we can get to this conclusion that Iran's macro policy makings within the considered time interval have led to the low and non-inclusive economic growth which it had not been in the direction of ensuring the social prosperity (Azadi 2019). Meanwhile and with regards to the poverty of Iran's government in terms of governance and the relationship thereof with Iran's economy(Azadi 2019) the confirmation possibility or rejecting the idea namely the separation of effects of governance distinctive aspects on the investment (Morrissey and Udomkerdmongkol, 2012) and also the failure of the existence of a strong witness based on the existence of a positive relationship between a good governance and the higher levels of investment (Farla et al, 2014).

Conclusion:

This research was completed with the aim of perusing the Iran government's fiscal policy on the growing out and growing in processes of the real estate private investment and also the effects of real estate investment on Iranians' prosperity within the time interval of 1985-2019. Surveying the former studies in the said field shows that none of the various researches which were accomplished in this regard could deal with the simultaneous effects of economic indexes, prosperity index, economic freedom index,

governance index and comprehensive sanctions on Iran's real estate investment and also the Iranians' prosperity.

Results deriving from the charts are indicative of this matter that the government's expenditures and interest rate within the considered time interval have had an uptrend and the government's operation balance has had a downtrend over the past two decades but the real estate private investment has experienced an uptrend. Also, the governance indexes within the afore-said period of time had remained invariably negative so that the maximum privilege has belonged to the governance effectiveness and the minimum one has belonged to the government's accountability. The privileges and advantages of Legatum's prosperity index had been something between 40-70 percent that the maximum privilege has belonged to the health and the minimum one has belonged to the individual freedom. Results arising out of the models estimation demonstrates that the government's macro policy makings has had a crowding out effect on the real estate private investment while the real estate private investment, bad governance, low and non-inclusive economic growth all have led to the manpower's small participation and consequently losing the social capital and generally speaking the failure of ensuring the social prosperity.

The Proposed Scenario:

Happiness, life satisfaction and hoping to have a better life in the future can be a guarantee for a positive and progressive economic growth. In other words, enjoying the efficient and effective social capital (Intellectual Wealth) together with accumulating the material wealth will improve the entrepreneurship, innovative activities and then creating a dynamic society. Such conditions will be possible in case of the existence of an accountable and efficient government. Thus, the most appropriate strategy for changing Iran into a rich and strong country is the government's transparency and

accountability and the interaction thereof with the private sector and people in the direction of social participations and also the betterment of foreign policies in order to upgrade the educational quality, health, improving the living conditions and human capital.

References

2019 Legatum Prosperity Index™ (www.prosperity.com)

2020 Index of Economic Freedom (https://www.heritage.org/index/country/iran)

Ahmed, H. and Miller, S.M., (2000). Crowding-out and crowding-in effects of the components of government expenditure. *Contemporary Economic Policy*, *18*(1), pp.124-133.

Azadi, P., (2019). Governance and Development in Iran, Working Paper 8, Stanford Iran 2040 Project, Stanford University.

Balcerzak, A.P. and Rogalska, E., (2014). Crowding out and crowding in within Keynesian framework. Do we need any new empirical research concerning them? *Economics & Sociology*, *7*(2), pp.80-93.

Bakhtiari, S., Izadkhasti, H. and Tayebi, S.K., (2013). Crowding out Effect of Foreign Aid in Selected Developing Countries: Panel Data Evidence. *Iranian Economic Review*, *17*(2), pp.35-50.

Central Bank of the Islamic Republic of Iran, 2020, Available at: https://cbi.ir/simplelist/1418.aspx.

Chakraborty, I., Goldstein, I. and MacKinlay, A., (2018). Housing price booms and crowding-out effects in bank lending. *The Review of Financial Studies*, *31*(7), pp.2806-2853.

Chen, T., Liu, L.X. and Zhou, L.A., (2015). The crowding-out effects of real estate shocks–evidence from china. *Available at SSRN 2584302*.

Chen, T., Liu, L.X., Xiong, W. and Zhou, L.A., (2016). The speculation channel and crowding out channel: Real estate shocks and corporate investment in China. *Peking: Peking University Working Paper*.

Dizaji, S.F., and Jariani, F., (2018). Impact of sanctions on bilateral trade of agricultural products between Iran and MENA region and the EU countries. *MPRA Paper No. 89438.*

Eden, M., and Kraay, A., (2014). "Crowding in" and the Returns to Government Investment in Low-Income Countries, The World bank.

Farla, K., De Crombrugghe, D. and Verspagen, B., (2014). Institutions, foreign direct investment, and domestic investment: crowding out or crowding in?. *World Development*, *88*, pp.1-9.

GU, S.Z., PAN, D.K. and YI, S.C., (2010). Private Investment as Complement to Public Investment: An Important Choice in Post-Crisis Period [J]. *Contemporary Finance & Economics*, *3*.

HERITAGE FOUNDATION (WASHINGTON, D.C.), & WALL STREET JOURNAL (FIRM). (1995). *The index of economic freedom*. Washington, D.C., Heritage Foundation.

Heydari, H., Jariani, F., (2020). Analyzing Effective Factors of Capital Outflow from the Middle East and North African Countries (MENA). *MPRA Paper No. 104547*.

Karimi Takanlou, Z., (2014). Can Budget Deficits Financing, Crowed Out Private Sector? Comparative Study of the Cases of Iran and Algeria. *Iranian Economic Review*, *18*(3), pp.1-25.

Mahmoudzadeh, M., Sadeghi, S. and Sadeghi, S., (2017). Fiscal spending and crowding out effect: a comparison between developed and developing countries. *Institutions and Economies*, pp.31-40.

Mehnatfar, U., (2015). Public Expenditure Impact on Private Investment in Iran: Crowding out or Crowding in. *Quarterly Journal of Applied Theories of Economics*, *2*(1), pp.143-162.

Ministry of Roads & Urban Development Islamic Republic of Iran, 2020, Available at: https://irandataportal.syr.edu/data

Morrissey, O., & Udomkerdmongkol, M., (2012). Governance, private investment and foreign direct investment in developing countries. World Development, 40(3), 437–445.

Shi, J., Wang, Y. and Wu, W., (2016). The crowding-out effect of real estate markets on corporate innovation: Evidence from china. In *Asian Finance Association (AsianFA) 2016 Conference*.

Statistical Centre of Iran, (2020). Available at: https://www.amar.org.ir/english/Main-Indicators.

World Bank, (2020). Worldwide Governance Indicators, Availabel at: https://datacatalog.worldbank.org/dataset/worldwide-governance-indicators

Xiaohua, Y., (2006). An Econometric Analysis of China's Public Investment and Economic Growth and A Comment on the Crowding-out Effect of Public Investment on Private Investment [J]. *Journal of Shandong University of Finance*, *5*.

Xin, D.O.N.G., (2010). Will Public Investment Result in" SOE In and Private Enterprises Out"? A Study Based on Panel Data of Real Estate Industry in China [J]. *Contemporary Finance & Economics*, *10*.

Zolfaghari, M., & Jariani, F., (2020). Water-Energy-Food Nexus in the Middle East and North African Countries (MENA), *MPRA Paper No. 104583*.

Zolfaghari, M., & Jariani, F., (2021). Food Security in the Middle East and North Africa (MENA). *MPRA Paper No. 105078*.