

Effects of Banking Facilities on Private Sector Investment, Given the Specifications of the Iranian Banking System

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Received: 22 Jun 2009

Accept: 5 Sep 2009

Abstract

In this research, a model is designed to assess the effect of banking facilities over private sector investment. In this model, private investment is a function of non-oil GDP, and with a time lag, of import of capital; goods, investment of public sector and the real facilities granted by the banking system to the private sector. The effects of the model indicate a meaningful effect of the real facilities to the private sector. Meanwhile, the model is tested for its ability to explain independent variables and complies with the real values of the variable in the assessed years with a 5% error level.

Keywords: banks' facilities, private investment, econometrics, Islamic banking.

JEL: G32; E22; G11, G24; O16; R42

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1. Introduction

General welfare and implementation of social justice are among the top goals of the Islamic economic system and are achieved after reaching economic development. (1) Paying proper attention to Islamic banks (as the most important financial institution and an effective instrument in reaching development) is very crucial. (2) Islamic banking can facilitate social justice as the first objective of Islamic economic system.

In this regard, in order to measure the effects of bank facilities on development in the 1984-2005 period, investment as a macroeconomic variable has been used since investment is the engine of production, continuous GDP growth, increase in production capacities and increased exploitation of present resources. One of the most important resources of investments is banking facilities and using idle savings.

2. Research Hypothesis

In the 1984-2005 period, Islamic banking, and as a result, banking facilities had an effective influence on investment.

- 1- Economic development has two objectives: increase of welfare and wealth and eradication of poverty and job creation, both of which are in line with social justice.
- 2- Economic development means: changes in social institutions, increasing productivity of present facilities, changes in the composition of production and the relative shares in production process, as well as changes in views in addition to quantitative growth (economic growth.)

3. Methodology

This research exploits library resources and case studies in Iran. It also uses the model used for assessing private sector investment in Iran, using time series data (1984-2005) by using econometric methods.

4. Statistical Resources

The needed information in this research are taken from domestic journals and the data and information provided by Central Bank of Islamic Republic of Iran and the Ministry of Economy and Financial Affairs.

5. Literature on the Subject

Most researches on the effects of banking facilities on investment are estimations of variables and functions related to private sector investment, in which banking credits are important explanatory variables in the model estimations. Among these researches are:

- 1- Karshenas (1990) has pointed to the important effect of the volume of bank facilities on private investment, using explanatory variables of public investment, volume of bank credit to private sector, and the reserves of capital from the previous period. He has assessed the function with the time series data of CBI, and the IMF statistics for 1961 to 1977, having achieved a +0.36 coefficient for banks facilities to private sector. According to his calculated coefficient, the volume of banking credits has had a big effect on private investment in Iran.
- 2- Khalili-Araqi (1998) In a study on effects of public investment on private investment on machinery, has concluded that both production level and the volume of bank volumes are two important variables on private investment.

- 3- Robina Keshish Banousi (1999) in a research titled “Effects of Bank facilities on investment and production in the Iranian economy, with emphasis on industrial, mineral and agricultural sectors” she has used the variables of balance in the real facilities, non-oil GDP changes, inflation rate, formation of fixed gross non-oil capital and previous period as explanatory variables and formation of gross non-oil capital as dependent variable. According to this research, changes in the balance of real facilities are significant and meaningful and that there is a meaningful relation between the variable of balance of real facilities and formation of gross non-oil capital (with a coefficient of +0.16.)
- 4- Hamidreza Talebi (2000) in his M.A dissertation titled “Analysis of real and nominal variables on private investment in the Iranian economy in the 1960-1994” has concluded that there is strong relation between the effect of financial currents, the real bank facilities to private sector and investment in this sector.
- 5- Mostafa Salimi-Far & Masoud GhaVI (2003) IN A research titled “effects of bank credits on private investment and analysis of its results” have designed a model for private investment in Iran, in which private investment is a function of public investment, GDP, inflation rate, loans and bank facilities to private sector. The model points to a meaningful effect of bank facilities on private investment in Iran.

6. The concept of investment and its resources

Economists do not agree on the concept and importance of investment, and on its dimensions and roles. In this research, investment means costs that increase the amount of capital goods like factories, machinery, technical facilities or the goods in warehouses. In fact, other forms of investment like that on human resources are not considered here. Investment is generally done by utilizing foreign resources, banking

facilities, attraction of idle capitals, using the existing liquidity in society and using extra liquidity in essential investments.

7. Islamic Banking and Features of Iranian Banking

What the Islamic banking aims at is social justice. In fact, Islamic banking is based on sharing risks, physical exchange of goods, direct engagement in business, rents and construction contracts (using different Islamic-based deals.) Also, Islamic banking is based on asset management in order to increase public income.

There are three known methods of Islamic banking:

- 1- The customer gives his saving to bank with the intention of real participation in loss or profit. The receiver of loans invests it with the intention of sharing loss or profit with the depositor. The bank acts as an intermediary, collecting a collateral and letter of attorney from both sides, and finalising the contract.
- 2- Banking operations of different types and without intervention in the necessities of each type (which are set by Sharia.) Operations are within guidelines set by Sharia.
- 3- In the third method, deposits are considered non-permanent therefore losses to deposits should be avoided at all costs. On the other hand, the loan taker should provide adequate guarantees to settlement of loans to banks. (This is not in the contract but based on Fatwa.)

In Iran, after the victory of the Islamic Revolution and establishment of Islamic Republic, the need to establish an Islamic economic system was discussed as a basic necessity. (1) In order to improve the banking system and eradication of usury from banking operations, following changes were made:

- Nationalization of banks (1979)
- Ratification of the bill on banking management (1979)
- Bank's merger (1979)

- Establishment of a guaranteed interest rate for deposits and charges for loans (1979)
- Drafting and ratification of non-usury banking bill (1982, 1983)
- Implementation of non-usury banking law (1983)

So, the dominant Islamic banking in Iran is of the third type, given the contents of the non-usury banking law. In this law,

- 1- The principle is sharing profits and losses so both the lender and the taker share the risks involved. Therefore, the fall in risks encourages private investment.
- 2- Because the capital is provided by banks, the spread of production and financing and the zero costs of capital in many contracts like legal participation and civil participation, the costs of products are decreased leading to an increase in demand, production rise and therefore economic prosperity.
- 3- In non-usury banking, non-existence of interest rates effects investment in two ways and increases it by a) encouraging investors by reducing the cost of investment and b) elimination of money whirlpool and direction of deposits to investment.
- 4- Because of the Iranian economic structural features, non-development of capital markets and an advanced stock market and the low costs of borrowing from banks (relative to capital returns) banks finance projects of private sector, so an increase in bank facilities will lead to increasing investment.

- 5- Iranian banks review the cases of projects and companies before granting loans so that loans are granted to the most profitable projects. After the payment, they also supervise over project performances to ascertain return of the capital. Therefore, capital is invested in a way that assures the highest return for all people concerned, which in turn leads to highest rate of saving and increased investment.
- 6- In non-usury banking, since banks are partners in profits of loan applicants, in inflationary circumstances, the amount of profit increases and the rightful interests on depositors are taken by banks and given to them. In other words, this form of banking moderates earnings and income and people with low to medium incomes can be cushioned against inflation, proportional to their deposits.

Non-usury banking in Iran and its method of financing has the biggest positive effect on private sector investment because an increase in private investment, due to its higher efficiency and the higher rate of incremented capital output ratio (ICOR) compared with the public sector, leads to increased productivity and profits. This will strengthen private sector and will rise production and income, In addition, Islamic economic system pays much attention to the just distribution of income (through distribution before and after production and re-distribution.) Therefore, the two factors of increased production (as a guarantee for higher rate of production in economy) and the just distribution of income (as a means to facilitate public use of resources), together with formation of other social, cultural and political institutions, will facilitate and speed up the process of economic development in the Islamic country.

8. Introducing the Model of Private Investment in Iran

Investment in the economy, especially in its present situation, is of utmost importance. Yet, due to higher productivity and efficiency of the private sector than the public sector, as well as the higher rate of capital needed in the private sector (which shows the ratio of investment in previous periods to production increase in later periods) many economists believe that higher private sector investment will lead to economic growth, more employment and national income and ultimately economic development. In addition, in developing countries like Iran, the majority of investments are done by the public sector. These cannot be explained with any model of investment behaviours. Therefore, this research relies only on private investment.

That said, the dependent variable in this research is private sector investment and the independent variables (chosen on basis of the theoretical and history of the research) include banking facilities granted to private sector, non-oil GDP, non-oil GDP with a time lag, import of capital goods, inflation rate, public sector investment, volume of liquidity, oil revenues and private sector investment with a time lag.

After several tests in the final designed model, the effects of independent variables on the dependent one were tested using the OLS method. The model, after elimination of independent variables without any meaningfully significant effect, is as follows:

Dependent and explanatory variables are

INP t : private sector investment,

GDP t-1 : non-oil GDP with a time lag

WKS t: import of capital goods

ING t : public sector investment

TAS t : banking facilities to private sector.

Since the data on banking facilities were not available for all years and the only data are on the balance of facilities for each year, in order to

calculate the facilities, total new facilities and a third of previous year's facilities were considered as the total. All variables are calculated based on fixed prices. (Base year: 1997)

9. Model estimation and Result Analysis

Considering the tests, in order to study the co-relation, linearity and co-accumulation, the model is acceptable for the function of private sector investment. In addition, given the output of E-view program and the given statistics, the final model is as follows

Output of E-view program

As the table shows, all variables, both in signs and in meaningfulness, are acceptable. In addition:

- 1- Banking facilities to private sector has a positive and meaningful relation with investment in this sector. For every Rls. 100 increase in banking facilities to private sector in the said period, the investment by the sector increases by Rls. 27.
- 2- The sign of the co-efficient of the GDP with a time lag variable in the function of Iranian private sector investment in positive at 0.35. Theoretically, and based on the principle of acceleration, gross investment has direct relation to changes in the production rate and national income. The sign of variable on GDP also confirms the harmony with theoretical basis.
- 3- Some macro-economic theories consider public investment as complementary to private investment. In this regard, government can facilitate private investment by investing on infrastructures and production of public goods. Yet, other theories hold that in developing countries, public sector does not strengthen private investment but does so in its place. The negative sign of the model confirms the second theory on the effect of public investment on

private investment.

- 4- Because Iran is not industrially advanced and imports almost all its capital goods, an increase in the import of capital goods leads to an increase in private investment. The sign on the co-efficient of the import of capital goods in the estimated model above confirms this issue.

In order to test the model for its explanatory ability of the independent variables, the dependent variable of private investment were calculated with real figures (of explanatory variables of 1984-2005.) Results show that the calculated figures for private investment conform to real figures of the said variable with an error level of only 5%. In addition, the model prediction on private investment in 2006 was also calculated and the result shows conformity with realities with a 10% error level.

10. Research Limitations

- 1- All research has its own limitations. This research was limited by the following:
- 2- Because the model is looking into reviewing the role of Islamic banking in Iran in economic development, and since the onset of non-usury banking law is 1984, therefore, due to unavailability of seasonal information on variables, our time series has 22 observations.
- 3- Because time series (dependent variable and explanatory variables) have a strong inclination toward time, the reliability of variables were checked and showed a weak reliability of the time series.

Table (1): Statistics on Macro Economic Variables (1984-2005)

Dependent Variable: INP				
Method: Least Squares				
Date: 01/21/08 Time: 15:55				
Sample(adjusted): 1365 1384				
Included observations: 20 after adjusting endpoints				
Convergence achieved after 7 iterations				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-16298.50	5191.137	-3.139677	0.0072
TAS	0.267742	0.078245	3.421827	0.0041
ING	-1.238421	0.251441	-4.925299	0.0002
GDP(-1)	0.346640	0.049953	6.939258	0.0000
WKS	2.891621	0.452718	6.387242	0.0000
AR(1)	0.250277	0.192680	1.298922	0.2150
R-squared	0.983654	Mean dependent var		56317.15
Adjusted R-squared	0.977816	S.D. dependent var		23748.92
S.E. of regression	3537.205	Akaike info criterion		19.42339
Sum squared resid	1.75E+08	Schwarz criterion		19.72211
Log likelihood	-188.2339	F-statistic		168.4974
Durbin-Watson stat	2.322582	Prob(F-statistic)		0.000000
Inverted AR Roots .25				

Table (2): The Performance of Many Economic Variance 1984-2003

Milliard Rails

Year	Public Investment	Gross Domestic Product Deflated By Price Index	Balance of Banks Facilities	Balance of Bank Facilities Deflated By Price Index of 1997	Banks Facilities	Banks Facilities Deflated By Price Index of 1997	Inflation Rate (Percent)	Capital Goods Imports	Private Sector Investment
1984	24.271	181.829	3.591	53.597	1.354	16.231	0.12	3.867	63.951
1985	21.434	185.522	4.253	59.899	2.232	30.38	0.06	2.421	49.477
1986	24.432	169.804	5.461	48.327	2.912	20.121	0.28	2.209	38.763
1987	19.665	164.497	5.461	48.327	2.912	20.121	0.28	2.209	38.763
1988	13.139	151.657	6.582	45.394	3.739	22.941	0.28	1.869	33.797
1989	12.414	160.255	9.698	56.711	6.235	34.71	0.18	2.915	38.004
1990	18.336	181.171	13.157	70.736	7.754	39.949	0.09	4.363	39.065
1991	20.069	202.426	18.183	81.175	10.936	42.973	0.2	9.911	63.947
1992	24.468	212.2	23.469	84.117	13.594	42.152	0.25	8.212	56.622
1993	36.496	213.844	30.575	89.139	17.867	46.714	0.23	5.085	36.233
1994	32.294	217.76	37.72	81.468	21.277	36.275	0.35	2.771	30.095
1996	32.878	240.762	50.313	59.052	30.794	36.103	0.23	3.807	41.587
1997	30.366	251.005	59.362	59.362	32.62	29.865	0.17	4.661	53.399
1998	29.506	258.404	76.353	62.533	44.342	30.589	0.18	6.002	56.980
1999	34.236	265.426	108.124	70.783	67.689	40.435	0.2	4.51	57.269
2000	33.597	277.274	142.91	81.745	83.003	44.592	0.13	4.834	61.671
2001	35.82	292.512	192.711	97.669	114.812	54.463	0.11	7.127	72.942
2002	40.804	316.149	265.07	113.123	160.861	61.95	0.16	9.668	81.022
2003	44.206	335.144	372.868	134.254	227.357	74.799	0.16	11.226	90.763
2004	41.923	352.363	515.288	157.259	310.096	86.743	0.15	12.105	102.436
2005	46.205	373.562	722.047	193.788	439.53	111.026	0.12	9.221	106.536

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