Investment and challenges of financial market in agriculture sector

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Abstract: Gaining sustainable growth in agriculture is one of the fundamental issues that governments of the countries with low and medium income are facing. Creating such growth depends on the inclination of governments in the field of poverty eradication; necessity to organizing the sufficient provision of food and attention to the key role that agriculture sector can play in comprehensive economic development of countries. In Iran also, agriculture sector due to the comprehensive impact it can have in the field of overcoming the economic – social challenges (provision of independence and food security, job creation, sustainable development and protecting environment) have a significant place and indicate to the necessity of making new investments in agriculture. Easy and fast access to financial sources is one of the necessities and perquisites of investment and development of agriculture sector. However; due to unique characteristics of agriculture sector, lack of development of financial markets of agriculture and existence of bottlenecks in procuring the required and necessary financial source s have made this sector to face severe limitations in investment. This paper shows that to create efficiency in financial markets of agriculture, the government in addition to establishing proper policy frameworks and eliminating their inefficient interventions in this sector should overcome the impediments of financial intermediation, enhancing financial structures and developing financial tools and providing sustainable financial services for making new investments and for Economic agents in this sector.

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1. Introduction

Capital as one of the most important production inputs have a significant importance in increasing the production level of economic activities and therefore increasing the efficiency of other production factors. Economic growth of businesses and investments can leads to the reformation of management system (Bodn, 1999). In agriculture sector also capital and investment is considered to be a key element of growth and development. Lack of capital in agriculture sector of the country has decreased the efficiency level of production inputs. Small efficiency decreases the expected income of agriculture projects and profitability of these activities and has made them to seen riskier and more non-economical investment (Anderson et al, 2008). The experiences of successful countries in the field of production of agricultural products show that application and use of capital equipments in various agricultural activities increases the efficiency of production factors such as management, work force and ground. This in addition to covering the expenses of production inputs and creation of proper return for investments creates excess domestic supply and develops export of agricultural products.

In this paper in addition to explaining the importance of agriculture in global economy, provides a general image of the position of this sector in the economy of the country as well as the situation and status of investors in it. Next the characteristics, markets challenges and agriculture financial inputs in developing countries will be presented and the dominant conditions on financial market of agriculture-rural of the country will be studied. A declining share for agriculture in national employment and GDP is an inevitable consequence of economic progress (Byerlee et al, 2009; Timmer, 1988; Cervantes et al, 2009). Lewis (1955) viewed economic development as a process of relocating factors of production. After that a developed agriculture financial market and the way of its financing will be introduced and in the end, some recommendations have been presented for organizing agriculture financial market.

2. Main body

The role of agriculture in global economy

Investment on infrastructure is one of the factors that can increase the productivity of agriculture by increasing the productivity of labor force, capital, and other inputs of production (Estevez, 2004; Traxler et al, 2001). any production without support of permanent markets cannot be out of risk (Hughes, 2009; Kirkpatrick et al, 2004). Creating agricultural sustainable growth and the inclination of governments for poverty eradication, the necessity of providing sufficient food depends on the key role that agriculture sector can have in comprehensive economy development of countries. Currently, food provision in the world has turned into a crisis in agriculture. Some

the reasons for creation of such a phenomenon include:
A) The growth of population and the per capita income in newly industrialized countries and populous countries.
B) The supply rate of food and its current price
C) Decreased possibility of production growth and efficiency through the existing technologies.
D) Reduction of arable land per capita
E) The lack of an appropriate policy framework and fundamental economical infrastructure for supporting sustainable investments.
F) Conflicts related to trade of agricultural products due to commercial and price policies.

The position of agricultural sector in the economy of Iran

Agricultural sector in 2004 have allocated to itself around 14% of GDP (with fixed price of 1376), more than 25% of the value of non-oil exports, more than 20% of employment, around 80% of food supply and provision of 90% need of raw materials of agricultural processing industries.

Added value of agricultural sector in 1988 reached it peak (15.9%). The average share of agricultural sector in this period was around 12.6% and the average annual growth rate of value added of this sector was around 4.5%.

During the first development plan, the value added of agricultural sector had a good growth (6.4% annually). In the mentioned period, the production share of this sector had a stable trend and the average of it went over 15.1%. in the second development plan (and in 1994), the average of annual growth of this sector (2.1%) reduced to less than one third of the growth rate of first development plan and the drawn goals such as food security and relative self-sufficiency weren't realized. In 1999, due to the occurred drought, the value added of the agricultural sector experienced the highest reduction (7.3%). In this period, the average of the production share of this sector didn't change considerably, compared to the first development plan. During the third development plan (2000-2004), the average of the annual growth rate in this sector was 4.3% and the average of its value added reached 13.9% of GDP.

Investment in Iran's agricultural sector

As we can see in table (1), during the past three decades the share of agricultural sector has been consisted of total gross capital of an average of 4.2% and its changes have been in the range of 3.8% to 4.6%. This is while in his period the average share of value added of this sector in the whole economy has been 12.9%. In addition to this, the average of the index of gross capital formation to value added has been 11.6% and 33.7% in agricultural sector and in the whole economy, respectively.

Also, during the past 30 years the gross capital formation to value added ratio have experienced some changes in agricultural sector. During 1974 to 1978, the rate of gross capital formation has been 21.5%. In the first decade after the revolution this ratio was reduced by 10.6%.

During the three economical development plans also, the mentioned ratio reduced by 9%, 7.8% and 11%, respectively.

Table (1) The status of value added and investment in agricultural sector in different periods

Time period	The period before revolution (1974-1978)	The first decade after revolution (1979- 1988)	The first plan period (1989 – 1993)	The year 1994 and second plan (1994-1999)	The period of the third plan (2000-2004)	The whole period (1974-2004)
value added share of agriculture from gross domestic production	7.7	12.6	15.1	15.2	13.9	12.9
formation from total grow capital formation	3.8	3.8	4.6	4.4	4.6	4.2
Gross capital formation to agricultural value added ratio	12.5	10.6	9.0	7.8	11.0	11.6
Total gross capital formation to gross domestic production ratio	44.9	34.7	29.4	26.7	33.0	33.7

Source: Central Bank of Islamic Republic of Iran, Economic report and balance sheets of various years.

Gross capital to value added ratio of this sector has been reduced to half. This on one hand, indicate to the high potential of this sector and on the other hand, indicate to reduced inclination toward investment in this sector which is a clear contradiction in the economy of the country.

In general, investment in Iran's agricultural sector is facing fundamental impediments and challenges including:

- Lack of security of investment at macroeconomic level
- Existence of structural bottlenecks in agricultural sector
- Little profitability in agricultural sector
- Lack of investment for creation and development of processing and complimentary industries
- Lack of appropriate and encouraging policies and plans
- Lack of guiding mechanisms for directing the source s of private sector
- Lack of provision of beds for attracting foreign investments
- Lack of development of institutions and agricultural financial market

Characteristics and challenges of agricultural financial markets

Existence of out of control conditions affects the results of agricultural financial markets' evaluation and shows the activities level less than optimized level. Hence; the awareness of financial institutions of the conditions of the borrowers is so much costly and this environment introduces the motivation of financial intermediation and diversification of operations in large areas (geographic and sectoral) for financial institutions.

In general, the challenges and bottlenecks of agricultural financial markets in developing countries are as follows:

A) Inappropriate policies and inefficient interventions of the government

Inappropriate commercial policies such as controlling the prices of agricultural products and low seasonal prices, high tariffs on export of agricultural products, over-valued exchange rates and policies governing food imports which have been adopted with the aim of maintaining the welfare level of citizens, decreases the price of agricultural products and the income of farmers.

B) Bottlenecks of financial markets and barriers to financial intermediation

In developing countries, inappropriate macroeconomic policies affect the performance of financial markets. Also, adopting sectoral policies such as price control, commercial policies and investment priorities of the government diverts the source allocation through financial intermediation. These limitations, in general, are affective on financial intermediation and transactions in agricultural sector.

Condition of the financial agricultural – rural market of Iran

Due to the weakness of capital market of Iran and lack of use of the existing financial tools in this market for agricultural sector financing, a main part of the required financial source s for investments in this sector are financed outside of the financial market and by the government. Therefore; currently the financial market of the agricultural sector is exclusively money market and lacks the capital market. Unofficial source including loan funds, local businesses, those who buy agricultural products before they will be supplied to the market, acquaintances and so on finance 42.1% of the supplied money (table 2).

Table (2) The main sources of supplying loans in financial rural-agricultural market

	Sources	Suppliers share (percent)	Excess demand (percent)
Unofficial	Keshavarzi (Agri) Bank	5.4	62.5
	Commercial banks	52.5	22.9
	Sum	57.9	52.3
Official	Loan funds	2	64.6
	Local businessmen	1.7	0
	Those who buy agricultural products before they are supplied to the market	2	0
	Acquaintances	61	0
	Others	2.4	0
	Sum	001	-

Official financial market

As we can see in table (2), in official financial agricultural – rural market of Iran from the sum of the total available funds 66.4% is financed by Agricultural Bank directly or through rural cooperatives and 33.6% is financed by commercial banks. Also, in different years and especially recent years, the share of Agricultural Bank from the total remaining of the loans granted by banking system to agricultural sector is more than 55%. In 2004, the share of Agricultural Bank from the total remaining of the granted loans is 55.3% and from commercial banks is 44.7%. Therefore state banks and at the head of them Agricultural Bank are the only active financial institutions in official financial market who are financing the financial sources required by Iran's agricultural sector.

With comparing the inflation rate and the interest rate of the granted loans to agricultural sector during the period of 1974-2004 show that with the exception of some years, the inflation rate has been more than the interest rate of the granted loans to this sector. In 2004, the interest rate of bank loan and inflation rate in agricultural sector have been 13.5% and 15.2%, respectively. In this way, the real interest rate of the granted credits to this sector in the mentioned year has been -1.7%.

Unofficial financial market

The interest rate of market credits which is not consisted of money in agricultural and rural sectors differs greatly with the interest rate of official market. In table (3), the interest rate of credits in unofficial market of 1997 has been presented.

Table (3) interest rate of credits in unofficial financial agricultural – rural market

(percent)

Sources of credit financing	Less than 1 year	1 to 2 years	2 years and more
Local businessmen	40	37	32
Those who buy agricultural products before they are supplied to the market	33	22	25
Acquaintances	36	40	36
Other	25	20	11

As we can see in table (3), the loan interest rate of unofficial sources has been estimated as 30.7% in rural areas that the share of fee cost (including capital interest and risk cost) is around 85.9% and the rest is related to marginal costs of getting loan.

Introduction of one developed agricultural-financial market

A main part of financial source required for agricultural activities in United State is financed through agricultural credit system. This system is an extensive network of institutions granting loan and providing services related to farmers throughout the

United states of America. The agricultural credit system grants loan, credit and other services to farmers, ranchers and Breeders producing aquaculture products, rural estate, agro-based businesses through affiliated banks and institutions.

a) Agricultural credit council: this council is the representative of the system and an executive sector in the United States. This council is a mechanism for extension of the position and policies of the agricultural credit system consistent with federal regulations and the actions of the state (which is affective on the credit system).

b) The executive committee of agricultural credit (FCA): agricultural credit system is under the governance and supervision of this committee. FCA is an independent factor in executive sector of the government of United States.

c) Banks and financial institutions: in agricultural credit system granting loan and providing credit services is done through affiliated banks and financial institutions. This system has 5 banks and 97 financial institutions throughout America and these are governed in cooperative way and under the ownership of the borrowers. Some of the products and services provided by this system are: Estate loans, production loans, average-term loans, mortgage loans of rural housing, leasing, life insurance related to credit, different products and services insurance such as tax planning and information record keeping.

d) Financing company: financing company is independent and state financial agencies that the main mission of it is supplying credit for agricultural credit system through publish and marketing of agricultural credit securities.

Discount bonds

Discount bonds agricultural credit is short-term debt tools with high credit degree. These bonds have variable interest rate and deadline of one to 563 days and are published daily and are sold with discount.

Dedicated bonds

Dedicated agricultural credit bonds are refundable or non-refundable bonds with high level of credit that are having high level of liquidity. Interest rate of these bonds are fixed and often paid every 6 months.

Debt bonds

Debt agricultural credit bonds are debt tools with high credit degree. These bonds are published during a month with different structures, deadlines and prices. Therefore; it is considered as the best opportunity of the agricultural credit system for responding to different and various needs of investors and sellers of the bonds.

Mother bonds

Mother agricultural credit bonds, are mutual agreements which provides the investment possibility with high credit degree for managers who are seeking to make flexible investments. The variable interest rate of mother bonds is adjusted with the reference rate on the money market (such as the rate of discount of labor bond weekly or monthly).

e) Federal agricultural mortgage company: this company has been established with the aim of attracting new capitals for financing the required estates and buildings for agricultural production units as well as providing cash flow for agricultural lenders. This company works under FCA and as per the relevant regulations and plats the role of one of the elements of the agricultural credit system of America.

Conclusion and recommendations

Economy development of the populous countries has increased the global food demand considerably and has made agricultural development to face new opportunities and challenges. This condition has been created as the result of creation of better condition in commercial transactions of agricultural products, inclination toward free trade, opening of global food markets and improvement of national and international economical environments. Hence; making new investments in agriculture sector and financing it has turned into an important issue in global domain.

During the three past decades, Iran's agricultural sector have had a value added equal to an average of around 13% and its share from the total gross capital formation have been an average around 4%. In spite of the increased share and importance of agricultural sector in the economy of Iran equal to two times, gross capital formation to value added ratio in this sector was reduced to half. Lack of an efficient financial market for agricultural sector and its lack of ability in financing the required financial sources for investment have slow down the development trend in this sector.

Macroeconomic and sectoral inappropriate policies, lack of profitability and weak institutional structures and weak agricultural financial market and inefficient intervention of the government in this market are among the most important challenges and bottlenecks of the agricultural financial market of Iran.

Due to the implementation of the policy of granting subsidized credit and determining low interest rates, in agricultural sector we have excess loan demands. In unofficial agricultural market the interest rate of loan is so much high and the farmers with low incomes have to obtain their required money in this way. Hence; the government, in addition to modifying the structure and organizing the agricultural sector should adopt appropriate policies for creating efficiency and effective performance of cost in financial markets in order to provide sustainable financial services for economical actors in this sector and improve and develop the servicing condition to farmers. For this purpose the following recommendations are provided to policy maker for modifying the structure of agricultural financial market and development of investment in this sector:

Agricultural sector of Iran requires policy and sectoral modifications in order to provide profitable investment opportunities for investors and borrowers. Elimination of price controls of agricultural products and leveling the prices of inputs - outputs with international prices are among these modifications.

Modifying the Agricultural Bank structure as the most important official institute financing financial source for agricultural sector is necessary. This is only possible through independent and strong management, financial self-reliance and replacing the financing method from foreign source (government and other banks) to local sources (based on deposit attraction), creating one various loan basket, extending the services domain and decentralization (decision making across the branches).

Currently granting bank loans with preferential rates is the only official way of financing of agriculture sector that in addition to reviewing it, other methods, and other sources of financing in this sector should be used. Publishing debt bonds and stock are other options for financing in this sector.

The government's interventions should only be made with the aim of overcoming specific inefficiencies in the agricultural – rural financial market. These interventions in line with overcoming the inefficiencies of the market including supporting the "micro credit plans and innovative plans" which should be implemented experimentally. Helping to obtain the required capital and consideration of financial encouragements for creating financial institutions who provide services farmers deprived from loan, encouraging financial institutions for extending the domain of the services provided to specific customers or regions, providing the primary cost of research and efficient methods of providing services to the targeted customer, paying subsidy as a part of the trading costs of the financial institutions granting loans to small farmers, providing non-financial services such as teaching the basic skills through cooperation of financial institutions and non-state organizations, using motivational tools to mobilize savings and to uniform the consumption and provision of cash for lending to customers are among the interventions of the government with the aim of increasing the efficiency in financial market.

Small farmers only can use traditional banking serviced and guaranteed lending, when they have documents for their properties. Therefore; their farming properties should be audited, registered and deed should be issued for them. Also, the regulations of collateral for tangible assets should be updated. Also, also in the case of lacking sufficient collateral, collective capital in the form of common liabilities should be created through supporting the voluntary formation of small and similar borrower groups.

Due to the fact that financial agreements have significant promise and also due to the fact that they are having time dimensions, financial intermediates and customers require comprehensive information for determining the risk of trades as well as a stable economical and political environment for completing the contract during a specific span of time and should have the freedom to do the necessary actions to evaluate the relevant risks.

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