INTRODUCTION

The Islamic Revolution of 1979 in Iran constitutes an important turning point in the annals of its economic development. After overthrowing the Shah’s anti-people regime, the new government that took over sought to build a vibrant socio-economic and political set up in the country. In pursuit of its cherished objectives, it initiated a set of policy measures and programmes. However, before such measures and programme could fructify, the country had to bear the brunt of a war that was imposed on it by a neighbouring country, Iraq, and which lasted for roughly eight years, causing lots of problems in its aftermath on the socio-economic front. At the same time, slump in the international market price of oil, of which Iran is one of the largest producer in the entire Middle East region, involved many far reaching economic implications for the country’s economy. Under these circumstances, the development of the farm sector was perceived to be of critical significance for the overall growth of the national economy.

It needs to be pointed out at the very outset that Iranian economy, at present, is predominantly an oil based economy. Accordingly, as a source
of employment and income generation, the oil related economic activity is of critical significance to Iran. In spite of this, however, agriculture constitutes an important component of its overall economic activity. For instance, a preponderant majority of the rural households in Iran continue to earn their livelihood from agriculture. The performance of this sector is therefore of considerable significance in the progress of the overall economy in that the socio-economic well-being of the teeming millions in the countryside of Iran is inextricably correlated with what happens in this sector.

Recent years have witnessed a growing realisation among research workers that for initiating itself and becoming self-sustained over a period of time, it is imperative for the development process to start itself in the rural areas in general and the agricultural sector in particular. Such a realisation is probably the outgrowth of the prevalent belief that the core problems of widespread poverty, growing inequality, persistent demographic pressure, rising unemployment, etc. owe their roots to the stagnation and often retrogression of economic life in rural areas, where agricultural sector seems to be ruling the roost in one form or the other. Obviously, such a view has emerged in sharp contrast to the traditional view which envisions a largely passive and, at best, only a supportive role for agriculture in the process of overall economic development of an economy. It is, nevertheless, important to reiterate that remarkable transition in development thinking has occurred during the past couple of decades and agricultural development has come to be viewed as the *sine qua non* of national economic development. To support such an assertion,
it has come to be maintained over the years that without agricultural and rural development, the growth in the non-agricultural sector either would be stultified or, if it succeeded, would generate such severe internal distortions in the economy that the problems of widespread poverty, inequality and unemployment would tend to become even more compounded.  

Needless to mention, it is quite obvious, therefore, that the agricultural sector, apart from being a source of surpluses to support the growing industrialisation, is also a dynamic source of growth, employment and better distribution of income. The development of the farm sector is also essential for providing food for a growing non-agricultural labour force, raw materials for industrial production, progressively growing savings and tax revenues to support the development of the rest of the economy, to earn foreign exchange (or save foreign exchange when primary products are imported), and above all to forge and strengthen the highly significant demand and supply side inter-sectoral linkages to make the overall development process self-propelling. In a sense, the development of the farm sector not only supplements the development of the non-agricultural sectors of the economy, but also conditions the latter.

The foregoing analysis suggests that the overall economic development of a developing economy considerably hinges upon the growth of its agricultural sector. Viewed from this angle, the development of the farm sector is needed on a significant scale and sustained basis in
most contemporary economies in which agriculture continues to play an important role in one way or the other, and in which, demographic pressures have tended to pose several formidable problems. It is not surprising, therefore, that post-Second World War period has witnessed an increased emphasis on the need for agricultural modernisation in developing economies across the world. This coupled with the evidence emanating from the development experience of quite a number of already developed economies has tended to reinforce the view that modernisation of agriculture is capable of making a substantial contribution to the process of overall economic development.7

Phases of Agricultural Development

Broadly speaking, the process of agricultural transformation, in terms of time horizon, can be delineated in three phases,8 viz. Phase I, II and III. Alternatively, these phases can be labelled as the initial phase, the intermediary phase, and the final phase. Accordingly, the countries, aspiring for economic development in general and the agricultural transformation in particular, have to address themselves to such problems as might be confronted by them depending upon the phase they are passing through. For example, the initial phase envisages the undertaking of a wide variety of measures such as ensuring an expansion of area under cultivation (though the saturation limit in this regard might finally impose a drag), striking a balance between competing demands on resources, adopting a set of technological and institutional changes needed to ensure an increase in the
purchasing power of the peasantry and improvement of the traditional inputs on an extensive scale. The setting-up of an agency for the distribution of various non-traditional farm inputs among the farmers, effecting improvements in the system of agricultural marketing, development of extension services for disseminating useful information pertaining to the agricultural sector need to be undertaken in this phase. Besides, setting up of research institutes and universities for the adaptation of imported non-traditional technology to suit the local agro-physical requirements of the importing country, investment in human capital and control of population (so that the present and potential gains associated with the initial phase itself are realised) are the measures required to be undertaken in this phase. In fine, in this phase changes in attitudes and institutions necessary to later technological advance get introduced. These changes, though not sufficiently complete or well-integrated to do more than provide rudimentary pre-conditions for agricultural development, do help develop a decision-making environment conducive for further agricultural development.\footnote{The intermediary phase involves the intensification of the measures undertaken in the initial phase. Besides important efforts need to be made regarding the minimisation of the imbalances or unevenness in the matter of adoption of the new agricultural technology across different regions and different farm size classes within each region, the development of dryland farming.
techniques, the undertaking of flood control measures, the provision of subsidised farm inputs including credit facilities, the changes in the institutional set up covering especially tenurial system and tenurial arrangements, and a well co-ordinated incentive price policy. Also needed are the efforts in this phase as may be useful for effectively dealing with the problem of unemployment, which may be caused by the displacement of labour owing to the adoption of the capital intensive modern technology. Simultaneously, an efficient mechanism also needs to be devised for the effective mobilisation and siphonning off of the resources (savings, taxation etc.) from the agricultural sector to the development of the non-agricultural sector. Thus agriculture in this phase plays a crucial role in overall economic development.¹⁰

And finally, in the final phase, when inter-sectoral linkages between the farm and non-farm sectors become fairly strong, further efforts are needed to be directed towards tackling the farm problem (i.e. the problem concerning poverty of the peasantry amidst plenty), and the instability problem (largely caused by transmitting of cyclical fluctuations of the industrial sector to the agricultural sector). The necessary corrective measures visualised, in this regard, could be the buffer stock operations, price supports for agricultural commodities, direct income transfers, control of cyclical fluctuations in the non-agricultural sectors of the economy, control over production through shifts in the cropping pattern, shifting of labour force from the agricultural to the non-
agricultural sector of the economy, encouragement to exports of agricultural products and control over imports of agricultural commodities through an amalgam of export bounties and import subrogation measures, so on and so forth. Furthermore, since determining the size of the agricultural sector in terms of dependence of population on this sector involves a trade-off between various social, economic and political considerations, a balance needs to be struck between these mutually competing considerations.

The successful completion of the process of agricultural transformation, as referred to above, considerably depends, inter alia, upon the role played by the government in formulating, and more importantly, in implementing its agricultural policy. It is indeed a well documented fact that to this end, the governments in almost all developing countries have had to undertake necessary steps in bringing about land reforms, providing physical farm inputs such as fertilizers, pesticides, agricultural implements, etc., adequate credit facilities, means of assured irrigation and electrification of rural areas. In addition, they have taken upon themselves the task of making propaganda through demonstration or otherwise for bringing about overall development, area planning, provision of facilities of education, research and training of manpower and formulating and earnestly implementing an appropriate policy for agricultural development. In fact, the pace, progress and pattern of agricultural development critically
depends upon the net outcome of the interaction between a host of environmental, institutional, technological and infra-structural factors. Needless to overstress, all such factors interact amongst themselves in varying forms and content, to influence the growth performance of the agricultural sector anywhere and everywhere including Iran.

Agriculture in the Iranian Economy

An overview of the Iranian economy reveals that in spite of a phenomenal decline in its contribution towards Gross Domestic Product, oil industry continues to be a dominant component of its national economy. However, a major problem being encountered in respect of the growth of this industry in Iran is that it has not been able to develop significant linkages either with the agricultural sector or with the industrial sector. Consequently, it has remained largely isolated from rest of the economy. It is also equally important to note that although development of the oil industry and its increasing importance has tended to overshadow the growth of the farm sector in the Iranian economy, the latter sector, however, has always been playing a significant role in the country's overall economic development. In this regard, there is enough supportive evidence to indicate that even in the intervening period falling between the Second World War and the Islamic Revolution of 1979, the primary thrust of the Iranian agricultural policies had been towards raising the level of farm productivity (both in terms of per unit of land cultivated and per
man employed) as also the volume of total agricultural production. Besides, the narrowing down of income disparities within the farm sector, in the inter-sectoral income distribution, control of un- and under-employment problems, progressive structural transformation of the economy, correction of the balance of payments disequilibrium (caused largely by the heavy imports of foodgrains) and to control the growing inflationary pressures in the economy, are said to be the other major goals which the planners and policy makers sought to attain during that period.18

These cherished goals, especially those pertaining to the farm sector, were sought to be achieved, inter alia, by means of various policy instruments, such as land policy, farm-input policy, price policy, so on and so forth. The success achieved in this regard had, nonetheless, did not measure up to the expectations of the planners and the policy-makers owing to strategic, tactical and human constraints.19 The net outcome had been that the haphazard implementation of various policy measures led to an exceedingly sluggish agricultural growth performance, which in turn, tended to contribute towards the aggravation of areas of confusion and conflict on the eve of Islamic Revolution in 1979.20

Nevertheless, we should not ignore an important fact that it is possibly due to great economic and political significance of the farm sector in Iran that it has been proclaimed to be an area of top priority by the post-Islamic Revolutionary government in its development policies. And distinctively enough, the post-Islamic
Revolution era has witnessed the continuation of the same goals and objectives of the State Agricultural Policies as were laid down for the pre-revolution period. For such reasons perhaps, the development of the farm sector has been proclaimed to be one of the major concerns of the planners and policy-makers in Iran both in the pre- and post-Islamic Revolution periods.

To be more precise, the government of Iran seems to have shown a keen interest in the agricultural development during the post-Islamic Revolution era. The government has veered round to the view that agriculture should play a more dynamic role in the future economy of the country and contribute substantially to the improvement of the rural as well as the overall welfare of its people. In this regard, it is important to note that the government, with the sole purpose of giving a fillip to the production of some major crops (wheat, barley, paddy, pulses, cotton, sugar beet, potatoes, onions, pistachio; etc.), has been providing financial facilities at preferential rates, support prices for agricultural commodities and subsidies on the use of various farm inputs. Consequent upon these developments, the farm sector in Iran has registered a substantial growth in the post-Islamic Revolution period. For example in 1990, agricultural sector had the highest share in Iran’s Gross Domestic Product. It accounted for over 27 per cent of Gross Domestic Product at 1982 constant prices, and accounted for nearly 24 per cent of active labour force and roughly 28 per cent of total employed labour force. According to the latest census of 1991-92, about 42 per cent of active labour force resided in the rural areas where agricultural work continues to be the prime activity for a vast
majority of the population. Again, the agricultural and allied activities like animal husbandry and cottage industry like carpet-weaving, etc. accounted for over 79 per cent of the total non-oil export earnings of the country in the said year. It is thus clear that the farm sector is of strategic importance to Iran.

It has been argued in some academic circles that oil, being a depletable resource, cannot be depended upon endlessly. In contrast, the agricultural sector, because of its production involving a relatively shorter gestation period, provides a good alternative to the oil sector in diversifying the economy and it is a more reliable source of economic diversification. That a country like Iran with large and rapidly growing population needs security in food supply can scarcely be overstressed. It cannot afford to continue to feed its nearly 60 million population through imports for ever. The compulsions of increased agricultural development, therefore, get strikingly revealed. The agricultural economy of Iran will have to support a vast and growing population even though oil industry can continue to play its role in the overall economic growth of the country. The responsibility of the farm sector in providing food, raw materials, employment, etc. cannot be overemphasized.

The dynamics of demographic situation, as portrayed above, clearly shows that in the foreseeable future, in any attempt to effect improvements in the levels of living of the rural people in Iran, there is scarcely any escape from concentrating resources and efforts on the development of agriculture. This fact was realised by the post-revolutionary government. In accordance with this realisation, a high emphasis has been laid on the
growth of the agricultural sector, which is obvious from the fact that in 1991 the share of farm sector investment to the total investment doubled from a paltry figure of just 4 per cent in 1976 to about 8 per cent (at 1982 constant prices). As a result, the share of agricultural sector in the Gross Domestic Product of Iran increased from 8.6 per cent to almost 27 per cent during the same period. Despite this remarkable growth in the share of the agricultural sector in the country’s GDP, a characteristic feature of the farm sector in Iran, as it is elsewhere in many other developing countries like India has been the presence of regional inequalities. While the Northern part of the country happens to be fairly developed agriculturally, the Southern part of Iran, in contrast, seems to be lagging much behind in this regard.

The impressive agricultural growth recorded in Iran during the post-Islamic Revolution era becomes all the more magnified, when viewed against the background of numerous adverse circumstances that have been confronting it in the historical retrospect for a fairly long period of time. It is possibly due to the functioning of a wide variety of socio-economic and political factors that the Iranian economy has passed through the great turbulent times. First, the colonial exploitation of Iran spanning over a fairly long period of time had virtually led to its economic ruin. Second, the presence of Allied Powers during the Second World War also led to its severe and extensive economic exploitation in the subsequent period. Third, there occurred widespread plundering of the Iranian economy during the Shah
regime. *Fourth*, the anti-Islamic Revolution forces also jeopardised the functioning of the Iranian economy quite substantially. The fallout of the then prevailing political turmoil was indeed very delirious for the country’s economy in that it created an environment of widespread uncertainty all around. *Fifth*, barely had the country absorbed the shock of these forces in various manifestations in the post–Islamic Revolution period when a war was forced upon it by its neighbouring country, Iraq, lasting over nearly 8 years with several socio-economic repercussions. *And finally*, Iran has had also to experience some important distortions or imbalances in its economy owing to several other constraints such as drop in oil revenues, overvaluation of the exchange rate, etc.

As was likely to happen, all the afore-mentioned developments culminated into meagre growth performance and lopsided development in all the sectors of the Iranian economy. The farm sector was no exception in this regard. This, coupled with a very rapid rate of growth of population of around 3 per cent per annum, further aggravated the problem. As has been said earlier, the emergence of this phenomenon transformed the country into a net importer of foodgrains on a substantial scale. The available data indicate that the value of food imports more than doubled i.e. it increased from US $ 1212.1 million in 1974 to US $ 2657.4 million in 1987.\(^\text{31}\) In view of the involvement of a huge amount of import expenditure on foodgrains, the growth of
the farm sector, as referred to above, should by no means be construed to mean that the country has achieved self-sufficiency in the production of foodgrains. On the contrary, it rather more forcefully reinforces the imperativeness of assigning a greater priority to the farm sector for purposes of raising the level of farm productivity and the volume of overall agricultural production in general and that of foodgrains in particular. In short, in the matter of the need for laying greater emphasis on the development of the farm sector, some of plausible arguments which merit due consideration can be summarised as under:

First, the oil industry, given to itself, might not succeed in coping with the unemployment problem that might emerge especially as and when oil stocks get depleted. In any case, it might prove to be too inadequate to catch-up with the likely unemployment problem, notwithstanding massive public investments which may be made in this regard unless agricultural production is pushed up on a significant scale. Second, the agricultural growth experience witnessed thus far, on account of several negative developments, has not satisfactorily measured up to the needs of the rapid population growth experienced thus far. Third, the agricultural sector has to play a more dynamic role in the future, both in the improvement of the rural sector and that of the overall economy of Iran. Fourth, the rural economy of Iran will be required to support a larger population than it has hitherto been doing and also provide the growing labour force with gainful employment and reasonable sustenance. And finally, the increase in agricultural production is also required for forging and strengthening the
inter-sectoral demand and supply linkages, which condition the pace of acceleration of the sectoral as well as overall growth.

Fortunately for Iran, in some of its parts, a modern sector has tended to develop in agriculture which, over the last couple of years, has thrown up an incredibly large surplus of foodgrains of wheat as well as paddy. It is important to note that this development has occurred mainly though the adoption of High Yielding Varieties of seeds and the technologically superior farm practices i.e. by following a proper combination of seeds, water, fertiliser, pesticides, etc. As a consequence, farming in Iran has tended to become relatively more dynamic. Experience in India and elsewhere also shows that if cultivation is done on scientific lines, it can substantially augment the requirement of labour, particularly in the irrigated areas where intensity of cropping can be increased. Soil conservation, land improvement and mixed farming can also lead to growing absorption of workforce in the agricultural and allied sector of the economy. In fine, a stable and consistently growing commercial agriculture is capable of making the employment–earning structure more diversified, more remunerative and more sustainable than it would otherwise be. Such a model holds great promise in Iran also.

Some significant growth in agricultural production, having been already achieved in some parts of the country and necessitating its extension to areas at a low keel in this regard or largely bereft of it, unequivocally suggests that the government of Iran must take a positive lead in giving a real push to agricultural development in all parts of the country in general and the laggard
areas in particular. Any lapse to this might exert a deleterious impact on the overall growth of the economy leading thereby to the accentuation of inequalities in the matter of agricultural development across regions, and finally culminate into lopsided pattern of development.

In view of what has been said above, it is not surprising therefore that one witnesses some significant changes in the agricultural sector during the post-Islamic Revolution period. The level of farm productivity in some major crops such as wheat, paddy etc., as well as the volume of overall agricultural production are said to have recorded noticeable rise during this period. This significant increase in the level of agricultural productivity and the volume of production is, inter alia, attributed to a wide variety of factors. These factors are said to have greatly improved the pace and pattern of agricultural transformation in Iran. Has it really been so? This question can be answered by looking at the pattern of agricultural growth in Iran during the post – Islamic Revolution period.

The Present Study

In view of what has been said above, this study attempts to examine the process of agricultural development in Iran during the post-Islamic Revolution period. In addition, the following factors, amongst others, evoked our interest in the present study:

First, as pointed out earlier, agriculture is the mainstay of a considerable chunk of Iranian working population in the
countryside. As such, a study on the theme of agricultural development would help us in ascertaining if the process underway in this regard is of some consequence or otherwise for those whose economic fortunes are closely tied with the growth of the farm sector.

Second, for obvious reasons, the farm sector in Iran has not fascinated adequately the planners, policy makers and very many social scientists and other researchers. Moreover, it has been observed of late that with disjointed bits of information, which characterize the existing studies, a scientific comprehension and a thorough understanding of the functioning and performance of the agricultural sector in Iran is not possible. Viewed in this light, a comprehensive study focusing primarily on the theme of the pattern of agricultural development is expected to be quite informative, exceedingly rewarding and immensely useful. The present study thus seeks to address itself to the question: What has been the pattern of agricultural growth performance in Iran during the post-Islamic Revolution era, in terms of its rate, structure and character? In other words, it would be interesting to know if the process of agricultural development in Iran has experienced acceleration or retardation during the period under reference.

And finally, an appraisal of the growth performance of the farm sector in Iran would enable us to know if it is taking place in the desired direction or otherwise. Such an exercise assumes considerable significance owing to the possibility of the
emergence of several socio-economic and political implications associated with the process of agricultural modernisation. Hence, the need for a study envisaged in the present mould cannot be overlooked in a casual manner. However, in the event of the said process moving in the wrong direction, the study would hopefully help the planners and policy-makers in Iran to take the necessary correctives in the matter of the ongoing process of agricultural development.

To be more specific, the study, *inter alia*, seeks to probe:

(I) the growth of infra-structural facilities for agricultural development, such as irrigation, credit, marketing, power, etc;

(II) the pattern of institutional development, covering in particular, the issues pertaining to the land reform and agricultural price policy including input subsidisation and ensuring of the support prices to the Iranian peasantry in respect of several agricultural commodities;

(III) the growth of technology-in-use over time, with particular reference to improved seeds, chemical fertilisers, pesticides and farm mechanisation;

(IV) the time profile of the cropping pattern;

(V) the time profile of output expansions and growth rates, during the post-Islamic Revolution period i.e. the
temporal growth of area, production and productivity levels of major individual crops as well as of overall crop output; and

(VI) the regional disparities in the pattern of agricultural development.

**Plan of the Study**

As pointed out earlier, an attempt has been made in this study to examine the process of agricultural transformation during the post-Islamic Revolution era in Iran. The study is organised into nine chapters.

Chapter I being exploratory in nature, focuses on the nature and scope of the present study. Besides, an attempt has also been made in this chapter to straighten out the issues proposed for exploration in study as also to spell out its plan in terms of chapter scheme.

Chapter II provides general introduction to the socio-economic features in Iran. In particular, an attempt has been made in this chapter to peep into the economic structure of Iran in terms of growth performance of sectoral incomes, labour force utilisation and some other important indicators. An attempt has also been made to examine the role of the government in the development of factors that have tended to contribute to the growth of the agricultural sector in Iran.
Chapter III, presents a synoptic review of some of the empirical investigations as have been carried out on the theme of agricultural development in Iran. The idea is to grasp the salient features of Iranian agriculture as brought out by the existing empirical research in the area.

Chapter IV deals with the procedural details concerning the data base, concepts and definitions of the variables used in the study and the methodological framework.

Chapter V presents an overview of the temporal growth of infra-structural facilities in Iran. In particular, the main aim is to focus on the issues pertaining the growth and structure of irrigation, institutional farm credit, agricultural marketing, power, etc.

Chapter VI deals with the institutional factors such as land reform/tenurial measures and their impact on the size distribution of land holdings, agricultural prices, farm subsidies and their implications for Iranian agriculture in the post-Islamic Revolution period.

Chapter VII endeavours to look into the temporal growth of the HYVs of seeds, intake of chemical fertilisers, plant protection chemicals and other farm inputs.

Chapter VIII constitutes the crux of problem under consideration. As such, it attempts to study the overall as well as regional pattern of agricultural development in terms of certain
key indicators like cropping pattern, growth of area, production and productivity. An attempt has also been made in this chapter to decompose the output effect into area and yield effects in respect of various crops covered in the study.

The essence of the study is given in the last chapter (Chapter IX). Apart from recapitulating some major findings and overall conclusions, some policy implications and a few plausible suggestions, as emerging from our analysis, for the consideration of planners and policy-makers of Iran are also given in this chapter.
NOTES AND REFERENCES


2. In a sense, the traditional view about the passive and only supportive role of agriculture in the process of overall economic development can be attributed to Adam Smith, David Ricardo and Thomas Robert Malthus. Earlier, the Mercantilists like Thomas Mun also seemed to be echoing such a view. Subsequently, the growth of industrial capitalism in the 17th and 18th centuries also saw many scholars like John Locke, Sir Dudley North, David Hume and some of others propagating such a viewpoint. Against this, the physiocrats like F. Quesnay, Turgot, etc., laid more emphasis on the development of agriculture. The modern view which lays stress on the growth of the agricultural sector can therefore be traced back to the physiocrats. For further details in this regard, see Eric Roll (1973), "A History of Economic Thought", Oxford University Press, Calcutta, see especially Chapters II – V, pp. 54-250. In more recent times, the traditional view seems to have found favour with W. Arthur Lewis, Gustav Ramas and John C. H. Fei and many others.


5. In recent years, it has become increasingly evident that for the growth process to become self-propelling, it is necessary that mutually supportive interactions take place between agriculture and industry. For an elegant discussion

6. It is important to note that this view is similar to that of David Ricardo who viewed the problem of diminishing returns in agriculture as crucial. He believed that a limitation on the growth of farm output sets the upper limit to the growth of the non–farm sector and to capital formation for purposes of economic expansion. For a modern variant of this view, see Ansley J. Coale and Edgar M. Hoover (1958) "Population Growth and Economic Development in Low Income Countries: A Case Study of India's Prospectus", Princeton University Press, Princeton, New Jersey, p. 139.

7. For example, this is what has emerged from the growth experience of quite a number of high income economies such as Japan, Taiwan, Denmark, United State of America, etc.


11. It needs to be noted that these and many other corrective measures have been suggested by a large number of research workers. However, the appropriateness of a particular measure or a combination of measures depends, to a large extent, on the prevailing situation in the country concerned.

12. The role of the government regarding the formulation and implementation of an agricultural development strategy has been invariably focused upon by quite a number of studies. In fact, in the entire exercise of developing the agricultural sector, the state or the government has to assume a very critical role simply because the individual farmers, owing to numerous constraints operating on their part, are not in a position to carry out the envisaged programme of agricultural development in tune with the overall growing requirements of the economy.


19. Rassul Mohammad Rezai (1978), Ibid. p. 18


30. In India, quite a number of empirical studies have been done on the theme of regional disparities in the growth of farm sector. In contrast, in Iran research studies of this genre have not as yet appeared on any significant scale. The present study attempts to move in this direction.