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**PUBLIC
PRIVATE
PARTNERSHIP IN
AGRIL. MARKETING –
A CASE OF PUNE DISTRICT,
MAHARASHTRA**

PREFACE

PPP (Public Private Participation) is the new buzzword doing rounds in almost every sector of the economy. The different motivators for this, inter alia, are the need for mopping up private capital and the managerial efficiency of private sector. The agricultural marketing system of the country is at a critical juncture. The gradual globalization of agricultural marketing and the attendant challenges reinforce the need for bridging the existing infrastructural gaps in the sector through requisite reforms in the system. Thanks to the concerted efforts of the states and the central Government, the reforms are taking roots in different states portending to enable the agricultural marketing sector to reap the benefits of private participation.

It goes without saying that paucity of infrastructure and absence of scale in the agriculture sector constitutes the proverbial Achilles heels of agricultural marketing in India. There is a crying need for strengthening the components of agricultural marketing such as grading, standardization, transportation, storage, wholesaling and retailing, food safety and quality management etc. Private sector has the potential to play an effective role in this by participating in the process of infrastructure creation and bringing about economies of scale in agricultural marketing in the country. Since agriculture is a risky business, there is a need to understand the perception of the private sector about the issue, so that appropriate public policies could be framed to help the private players overcome their difficulties and attract them to invest in the sector. It is against this backdrop that NIAM decided to take up a research study to look into a good range of issues affecting Public Private Partnership in agricultural marketing through a sample study of the different stakeholders of Pune district of Maharashtra. The study had a sample size of 130 including farmers, traders, entrepreneurs, bankers and market secretaries in Pune district of Maharashtra.

The study reveals gross lack of awareness amongst the stakeholders about different schemes of the Government of India for promoting PPP in the sector. There is significant difference in the perception of different stakeholders like traders, entrepreneurs, farmers, market functionaries and bankers towards private participation in different agricultural marketing infrastructure projects traditionally dominated by public sector. The different factors determining investment in agri marketing infrastructure are risks and uncertainty of returns on capital, lack of entrepreneurship, lack of motivation for the entrepreneurs to invest in the sector. The study reinforces the need for expediting the introduction of reforms in the sector for ensuring increased private participation. Dr B.K.Paty, Deputy Director, and Dr Shalendra, Research Officer, NIAM were associated with the study.

It is expected that the study will be helpful for policy makers, planners and researchers etc.

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Brief Summary & Policy Suggestions

- 1) *Private investment in agricultural marketing sector can not be considered in isolation. The PPP regime in the system can only be evolved by removing glitches of the regulatory marketing system through introduction and promotion of reforms on the lines of model Act envisaged by GOI.*
- 2) *The major factors coming up as hindrances for private investment in the sector are low level of awareness about various Government schemes, low return on investment, high degree of risk in the sector due to dependence on weather. Hence, there is a need to create awareness among the stakeholders regarding various Government Schemes. Moreover, to mitigate high risk in the sector, the investment proposal/schemes should include sufficient incentives to attract private entrepreneurs.*
- 3) *Single Window System needs to be introduced to facilitate faster clearance of infrastructure projects under PPP.*
- 4) *The various means should be explored by the Government to increase incentive to the participants like higher rate of subsidy, subsidy on interest on the finance availed, longer repayment period, rebate on the taxes on the equipment bought for the projects, etc*
- 5) *Networking with ICAR and SAU for providing region specific and crop specific technical solutions to the farmers and entrepreneurs willing to invest in agricultural marketing infrastructure. .*
- 6) *The marketing extension should be an integral part of all extension agencies to enlighten about potential of the sector and take care of the technical queries of the interested stakeholders.*
- 7) *Awareness about the initiatives of the Government to create infrastructure should be intensified through a proper marketing extension mechanism by the state governments including line department.*
- 8) *Comprehensive Crop insurance policy needs to be adopted by the Government covering a wide range of risk elements. It is also suggested to improve the present crop insurance policy.*

SECTION 1: INTRODUCTION

The relationship between agricultural development and investment in infrastructure is long recognized as complementary to each other. Market infrastructure is important not only for the performance of various marketing functions and expansion of the size of the market but also for transfer of appropriate price signals leading to improved marketing efficiency. Infrastructure facilitates vertical and horizontal integration, thereby bringing economies of scale and cost efficiencies in the supply chain. Infrastructure facilities lead to reduction in marketing costs, which is crucial for increasing the realization of growers and reducing the costs to the consumer. Infrastructure also contributes to the human welfare, poverty reduction and overall growth of the economy. The changing trade environment in the wake of liberalization, privatization and globalization and increased agricultural production and marketable surplus, further emphasizes the pivotal role to be played by the infrastructure in agricultural development.

The Inter Ministerial Task Force on marketing reforms, 2002 set up by the Govt. of India has made an assessment of requirement of investment in agricultural marketing infrastructure to the tune of Rs.12, 400 crore by the year 2012. As it is may not be possible to arrange so much of funds from Government exchequer, the need of the hour is to mobilize private capital to the sector. With the involvement of private sector, besides availability of private capital, there will be optimum utilization of resources with private management expertise and sharing of risks between the private and Public sectors. This signifies the importance of introducing appropriate models of Public–Private–Partnership ventures in the sector. These mutually beneficial Public Private Partnership ventures have the potential to play a proactive role in infrastructure development in the sector through sharing of various rights and risks between the partners. It is against this backdrop that the XI plan target for investment in agricultural marketing infrastructure is envisaged at Rs 64312 crore with Rs 30625 crore to be mobilized from private sector (Annexure-I).

The term public-private partnership describes a range of possible relationships among public and private entities in the context of infrastructure and other services. The concept of PPP presents a framework that ensures involvement of the private sector, while fine-tuning the role of the government, so that different social obligations are met, successful sectoral reforms introduced and targets for public investment are achieved. An efficient PPP model ensures allocation of the tasks, obligations, and risks among the public and private partners in an optimal manner. The public partners in a PPP are government entities, including Ministries, departments, municipalities, or state-owned enterprises. The private partners could be local or international and may include businesses or investors with technical or financial expertise relevant to the project. Increasingly, PPPs may also include non-government organizations (NGOs) and/or community-based organizations (CBOs) who represent stakeholders directly affected by the project. Effective PPPs recognize that each of the partners -the public and the private sectors have their comparative advantages in performing specific tasks. The government's contribution to a PPP may take the form of capital for investment (available through tax revenue), a transfer of assets, or other commitments or in-kind contributions that support the partnership. The government also provides social responsibility, environmental awareness, local knowledge, and an ability to mobilize political support. The private sector's role in the partnership is to make use of its expertise in commerce, management, operations, and innovation to run the business efficiently. The private partner may also contribute investment capital depending on the form of contract. The structure of the partnership should be designed to allocate risks amongst the partners based on their capabilities to manage those risks and thus, minimize costs while improving performance.

Various other issues relating to Public- Private- Partnership models like role, responsibilities, strength and weaknesses of each partner, PPP model suitable for agricultural marketing infrastructure, factors accounting for successful partnership, sharing of rights and risks, etc have been discussed in Chapter 2.

Reform- A Pre-Condition for Public Private Partnership

Amongst different laws governing the marketing of agricultural produce in India, the Agricultural Produce Market Regulation Act is the most important one. This Act is implemented by the State Governments, agriculture including agricultural marketing being a state subject. The objectives of market regulation initially were to ensure correct weighing, prompt payment to the farmers for their produce and to avoid their exploitation at the hands of middlemen. Under the APMC Regulation no exporter or processor could buy directly from the farmers, thereby discouraging processing and export of agri-products. Only State Govt. could set up markets, thereby preventing the private sector from setting up markets and investing in marketing infrastructure. However, the markets originally meant for protecting the farmers from the clutches of the exploitation by middlemen ended up inhibiting the free play of market forces, pushing the interests of the farmers to the backburner.

The Inter-Ministerial Task Force on Market Reform has strongly recommended that, the effective reforms in the agricultural marketing system of the country are inescapable to enable our farmers to face challenges and avail the benefits created out of the changed trade environment on account of liberalization, privatization and globalization. Accordingly, Ministry of Agriculture, Government of India prepared a Model Act called Agricultural Produce Marketing (Regulation & Development) Act, 2003 in consultation with all the state Governments/UTs. All the States/UTs have agreed to amend their respective State APMR Act in the line of Model Act to bring about the requisite reforms in the sector. The Salient features of the Model Act are setting up markets in the private/co-op sector, rationalization of market fees, promotion of Contract farming, direct marketing and grading and standardization including setting up of a grading and standardization Bureau in each State/UT etc. The status of reform in different states/ UTs is given at Annexure-II.

Statement of the Problem

Maharashtra is one of the most progressive agricultural States of the country. It accounts for nearly 6 percent of the foodgrain production in India. The major commodities from Maharashtra contributing to Indian agriculture are Onion (15.52 percent), Sugarcane (22.10 percent), Cotton (20.42 percent) and Oilseed (15.31 percent). A total agricultural area of 20 million hectares is distributed among more than 12 million farm holdings. The State Government, taking advantage of various schemes of Central Government, has made substantial progress in developing infrastructure for agricultural marketing in the state in partnership with the private sector agencies particularly in Pune District. Pune with more than 1 million hectare area under cultivation makes vital contribution to the agriculture sector of the State. A number of new projects on agricultural marketing infrastructure are coming up in the District under Public Private Partnership. Thus, the background of the Pune district of the state was found to be quite suitable for the study. Against this backdrop, the study was proposed with the following objectives:

- a) To assess the present scenario of infrastructure development in the field of agricultural marketing in the study area.
- b) To analyze the perception of various stakeholders on investment in agricultural marketing infrastructure under PPP mode
- c) To identify the factors affecting and the constraints in the investment in agricultural marketing infrastructure
- d) To recommend the measures to promote the investment in agriculture marketing infrastructure.

Limitation of the Study

The study is having following limitations:

- (i) The study has its focus only on the physical infrastructure in the field of agricultural marketing and does not deal with institutional infrastructure.
- (ii) The definition of PPP used in the study is confined to participation of state and central government through various schemes in the process of Agricultural Marketing Infrastructure
- (iii) The PPP model considered for the study is participation of Government through various subsidy based schemes
- (iv) The findings of the study are based on the survey conducted in only one District of Maharashtra, i.e. Pune

SECTION 2. PUBLIC PRIVATE PARTNERSHIP

This section dwells on the concept of public private partnerships (PPP) and also the related issues such as relevance of PPP for infrastructure development, the driving forces pushing both public and private sectors to come together, factors responsible for the failure of partnerships, etc. The section is based mainly on the review of various national and international studies and reports on Public Private Partnerships for infrastructure development in general and those on agricultural marketing infrastructure development in particular.

Definition of Public Private Partnerships

The Canadian Council for Public Private Partnerships defines Public Private Partnerships as a cooperative venture between the public and private sectors, built on the expertise of each partner that best meets clearly defined public needs through the appropriate allocation of resources, risks and rewards. The two elements that characterize the definition given by the Council are provision of public services and sharing of risks between the partners.

The definition given by the National Council for Public Private Partnership of United States also emphasizes the provision for public service and sharing of risks and rewards between the two partners. The definition states that Public-Private Partnership is a contractual agreement between a public agency (federal, state or local) and a private sector entity. Through this agreement, the skills and assets of each sector (public and private) are shared in delivering a service or facility for the use of the general public. In addition to the sharing of resources, each party shares the risks and rewards potential in the delivery of the service and/or facility.

Gerrard states that public-private partnerships (PPPs) combine the deployment of private sector capital and, sometimes, public sector capital to improve public services or the management of public sector assets. By focusing on public service outputs, they offer a sophisticated and cost-effective approach to the management of risk by the public sector than is generally achieved by traditional input-based public sector procurement.

Most of the definitions of Public Private Partnership concentrate on the services to be provided to the public, which happens to be the biggest responsibility of the government. The PPP must not be seen solely as an infrastructure creation activity as has been highlighted in the study of ADB on PPP legislation in Thailand. The study has cited that legislation relating to Public and Private Participation (PPP) in public facilities mostly focuses on the Infrastructure Project. There have been many experiences to demonstrate that the private participation contributes not only the private funds but also the managerial and technical skills which consequently can develop quality and quantity of infrastructure services, while saving government budget. Recently, infrastructure creation in PPP mode has gone beyond construction work to cover also the services to be provided to the public.

The Brazilian law on Public Private Partnership provides following two provisions under public private partnership.

- 1 *Sponsored Concession* which is a public services or public works concession under which the private concessionaire is entitled to both a tariff to be paid by end users and financial contribution from the government or government entity.
- 2 *Administrative Concession* where the private entity provides services to the public entity or partner. The government entity makes a payment on basis of the services received from the private partner.

While understanding the concept of public private partnership, it is very important to note that PPP is different from privatization. Privatization involves

the sale of shares or ownership in a company or the sale of operating assets or services owned by the public sector. Privatization is most common and more widely accepted in sectors that are not traditionally considered public services, such as manufacturing, construction, etc. When privatization occurs in the infrastructure or utilities sectors, it is usually accompanied by sector-specific regulatory arrangements to give due weightage to the social and policy concerns related to the sale, and continuing operation of assets used for public services.

According to Gerrard, a privatized business is one that was formerly owned by the public sector and is now owned by the private sector. It may operate in highly competitive markets or it may hold a monopoly position and so requires active regulation once it is transferred to the private sector. In either case, the public sector is disengaged from the business, whereas, PPP is a business relationship between the public and private sectors that is not patterned on either of these models. Here, the business is defined by a long-term contract in which public services to be delivered by the PPP—the outputs—are specified in great detail. In its form as an equity joint venture between the public and private sectors, a PPP is a business with certain public sector obligations set out in its constitutional documents or within contracts with the public sector.

Models of Public Private Partnership

PPP Models describe the partnerships agreement between public and private sector. Some of the PPP Models relevant for agricultural infrastructure are discussed below: ^{FAO}

Build-Operate-Transfer (BOT)

BOT contracts are designed to bring private investment into the construction of new plants and infrastructure facilities. This is a scheme where governments contract turn-key projects are given to private companies to build infrastructure. Under a BOT, the private sector finances, builds and operates a wholesale market facility or other infrastructure works according to performance standards set by government.

The operations period is long enough to allow the private company to pay off the construction costs and realize a profit. At the end of the agreed period the public sector buys back or leases the completed facilities from the private investors. The government retains ownership of the facilities and becomes both the customer and the regulator of the service. BOTs, however, are less commonly found in developing countries, because of the lower potential of the private sector to mobilize capital.

Build-Operate-Own (BOO)

Under BOO, control and ownership of the project remains in private hands. The private sector entity finances, builds, owns and operates an infrastructure facility effectively in perpetuity. An example comes from water treatment plants serving parts of South Australia. The facilities were financed, designed, built and operated by a private sector firm. Yet they process raw water, provided by the public sector, into filtered water, which is then returned to the public sector utility for delivery to consumers.

Leasing

Lease contracts cover design and building or operation but not financing. The condition of the lease may specify that certain services must continue to be provided. Part of the risk is transferred to the private sector. An advantage of leasing over sale is that this allows the lessee to finance only working capital requirements rather than having to find finance to purchase fixed assets. Several of the ex-French colonies in Africa have adopted the affrimage system, where the municipality has a water facility constructed and then contracts a private firm to operate and maintain it. In some countries, governments lease the development rights to public-owned land. In Sri Lanka, for example, local governments rent municipal markets to private merchants.

Concessions

Under a concession, the government awards the private contractor (concessionaire) full responsibility for the delivery of services in a specified area, including all management activities. The concessionaire is responsible for any capital investments required to build expand or extend the business. The public sector is responsible for establishing performance standards and ensuring that they are met. The public sector's role shifts from being the provider of the service to being the regulator of its price and service quality.

Joint ventures

These take place when the private and public sectors jointly finance, own and operate a facility. Joint projects have been designed as ventures between private sector businesses and, in some cases, development organizations. This is a model initiated widely by the Government of Germany. The German Technical Cooperation Agency (GTZ), together with DEG, offers private sector businesses and organizations the chance to join a PPP on projects in developing countries. Joint venture partnerships occur by linking the increased commitment of German businesses with the technical assistance of development organizations.

Operational/service management contracts

These contracts allow the private sector to provide infrastructure-related services or to manage the operations of an infrastructure facility for a specified period of time. In the agribusiness sector, management contracts are often used for running plantations and agro-processing facilities for products such as tea, rubber and sugar. In some schemes, intricate incentives for profit sharing are included in the contract. Some international agribusiness companies provide packages of both managerial and technical assistance. In India and Chile, and many other Latin American countries, there are a number of schemes run by government where extension services are contracted out to the private sector.

Informal public-private cooperation

In developing countries, there is increasing voluntary cooperation among donors, international technical assistance agencies, national and local government, private companies (multinational or national), civil society and NGOs, in addressing social issues, providing infrastructure and providing public services. In many countries, governments leave some services entirely to NGOs, or allow them to provide services of a higher quality or a more comprehensive coverage than those provided by the public sector. Coordination includes strategic alliances, which are agreements mutually entered into by any two or more bodies to serve a strategic objective.

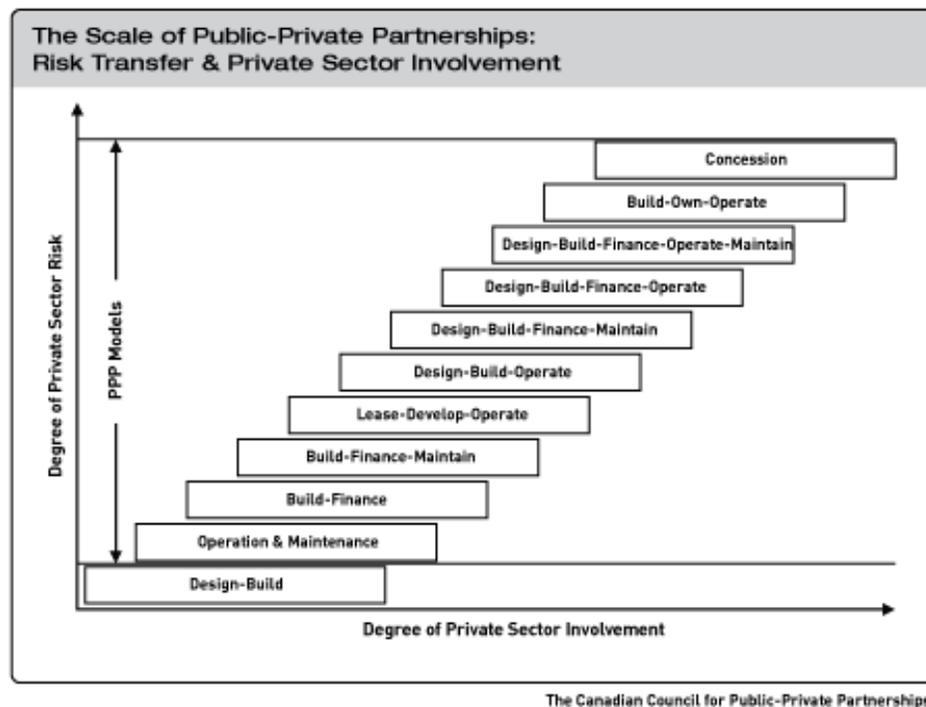
Other types

- Build, lease, transfer
- Build, lease, transfer, maintain
- Build, transfer, operate
- Build, own, operate, remove
- Build, own, operate, transfer
- Lease, renovate, operate, transfer
- Design, build, finance, operate, manage
- Design, construct, manage, finance

Scale of Public-Private Partnerships

Public Private Partnerships can be categorized based on the extent of public and private sector involvement and the degree of risk allocation. The same is depicted in the figure given below:

Figure 2.1. The Scale of Public Private Partnership – Risk Transfer and Private Sector Involvement

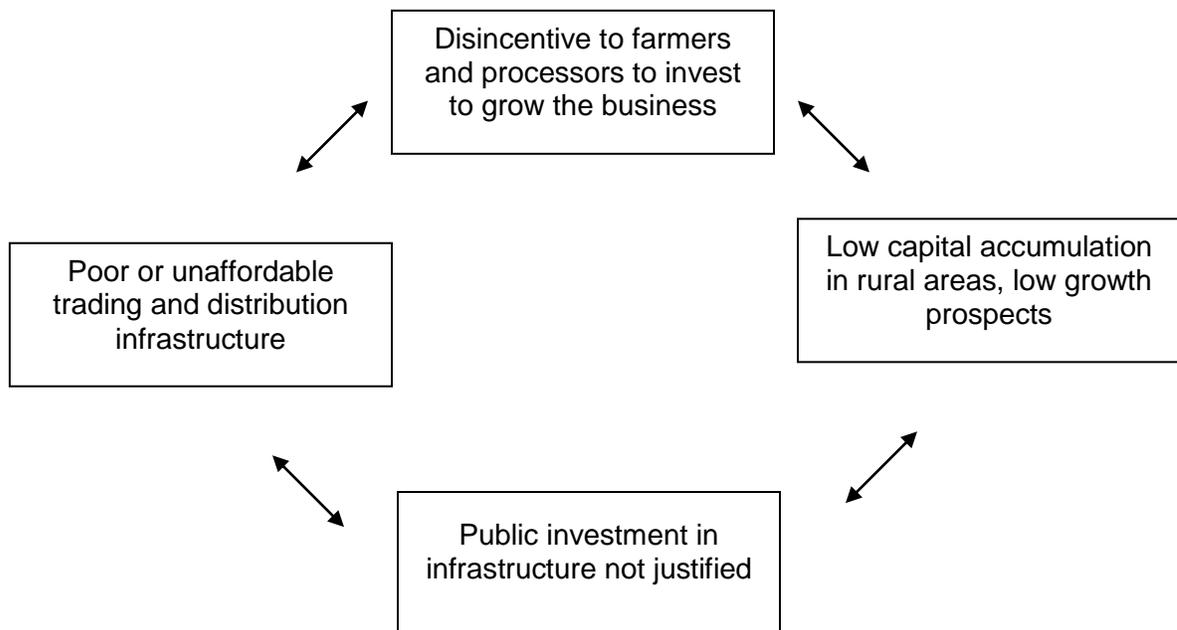


Need for Public Private Partnerships in agricultural marketing

The availability of infrastructure plays a crucial role in the development of agriculture and the economy as well. Many previous studies suggest that poor access to infrastructure or availability of costly infrastructure for handling agricultural produce is one of the biggest impediments to growth of agricultural marketing in particular and agriculture sector in general.

Absence, poor or costly infrastructure also lead to a vicious circle of low agricultural development by limiting on-farm productivity, agro-processing and market access (Figure 2.1).

Figure 2.2. Vicious Circle: Poor Infrastructure and Low Agricultural Development



In order to come out of this vicious circle, a large amount of investment in agricultural marketing infrastructure is required. Any Government from the developing world, in general, cannot afford such a huge investment because of constraints on account of public budget and risks involved in such infrastructure project. In addition to this, certain inherent weakness of Public Sector and strengths of private sectors force them to work in partnership. PPP allows the government to pass operational roles to efficient private sector operators while retaining and improving focus on core public sector responsibilities, such as regulation and supervision

Weaknesses in Public Sector Infrastructure Provision^{FAO}

The inherent weaknesses of the provision for public sector infrastructure form a major force to call for PPP mode for infrastructure creation. The state is frequently faced with particular constraints in designing, financing, constructing or maintaining infrastructure directed at the agricultural sector. These include, *inter alia*:

- Overburdened public financial resources, with insufficient funds to support the large, upfront, capital investments needed for infrastructure, and competing demands from rising recurrent expenditures from more powerful Ministries and seemingly more urgent development priorities, such as education and health;
- In low-income economies, a pattern of medium-term (one to three-year) commitments from international development agencies to fund public investment budgets, rather than the longer-term commitments to subsidies (e.g. shadow tariffs) and recurrent expenditure needed to support high risk, low return, infrastructure;
- In emerging economies more generally, public investment policies that bias productive investments to urban areas and the faster growing manufacturing and services sectors, with the assumption that trends in industrialization and rural-to-urban migration are reducing the relative economic value of public investment in rural infrastructure;
- User tariffs set too low to cover operational costs or payback capital investments, for either political reasons or reasons to do with inaccurate assessments of risk;
- Since technology is dynamic, many times engineers under government sector may not get exposed to latest development. Hence, unable to implement public works infrastructure projects to a sufficiently high specification, or to the necessary source skills, equipment and materials.

Benefits of Public Private Participation

Some of the benefits of Public and Private Sector coming together are discussed below:

Respective strengths

PPP combines the best features of the public and private sector together. The private sector can leverage its advantages in creative financing, greater operational efficiency, lower costs of distribution, more complex delivery systems, faster decision-making, management flexibility and innovation. The public sector can provide strategic direction – the choice, location and pricing of infrastructure; ensure transparency in procurement; and, above all, through capital or user fee subsidies, or commitments to purchasing agreements, enable private firms to enter large markets with guaranteed consumers.

Responsiveness to local needs

In general, agriculture infrastructure models are undergoing a transition, away from centrally controlled public sector provision, which can be inefficient and far removed from the real needs of end users, to more private sectors, demand-driven and decentralized models. If the performance incentives for private are structured correctly (universal service obligations for mobile phone network coverage, vehicle usage performance specifications for road rehabilitation, etc.), the private sector may well be more responsive; infrastructure can have a greater reach (e.g. more downstream farmers are served with irrigation); access can be made more affordable (e.g. through economies of scale and the use of targeted subsidies) and infrastructure more reliable (e.g. better maintained electricity supplies).

Reduced up-front public capital investment

Where an infrastructure project is likely to generate sufficient user fees to support the raising of capital by the private sector, this enables the conventional public financing model of infrastructure to change dramatically. Instead of the public sector making a large up-front capital funding commitment, followed by funding of operating expenditure over time, the private sector provides the capital and makes investments within the framework of a concession or long-term lease arrangement. User fees support (in theory) the recovery of these capital costs, as well as covering operational and maintenance costs and providing a profit margin. Variations on the financing of this type of concession model include commitments by the state to long-term purchase agreements (e.g. for electricity supply), and capital and operational state subsidies wrapped up and spread out as periodic service charge payments across the financing life of the project.

“Bundling” design, construction and operations

Rather than there being separate design, construction, financing, operations and maintenance arrangements, as with traditional public sector procurement of infrastructure, involvement of the private sector encourages these functions to be combined under one contractor. This form of integration, or “bundling”, of infrastructure life cycle services within a longer-term contractual framework is attractive to the private sector. Financial incentives are provided for private companies to think beyond a single stage. The approach provides an opportunity to build in features that may improve engineering quality and add value, rather than focusing the private contractor primarily on minimizing costs. Bundling such as this also promotes “whole of life costing”, including infrastructure upgradation over time. This provides the public sector with predictability in budgeting over the life of the infrastructure and reduces the risks of funds being diverted for other purposes during the period.

Cost savings

Efficiency can be higher in the private sector, with greater opportunities for economies of scale, strong project management skills, response risk management, more attuned skills, innovative technologies and lower overheads. The issue as to whether private sector is a better vehicle for management depends on a number of factors. The key factor will be whether the cost of borrowing for the private sector is higher than for the sovereign government. In the Organization for Economic Co-operation and Development (OECD) countries this is rarely the case, and is in part the reason for the engineering unions in industrialized nations for being so much against PSP in public infrastructure (notwithstanding the cost of managing risk and externalities). In developing countries, particularly those with low international credit ratings, the difference in the cost of borrowing with foreign private firms in a position to access international investment markets may be less acute. For domestic firms borrowing in local currency, however, the differential with the state is likely to be similar, if not significantly higher. This brings us to risk transfer.

Risk transfer

A key benefit for the public sector in PPP lies in the scope offered by the arrangement for transfer of risk, especially commercial risk to private sector. Capital investment in infrastructure is a long-term undertaking, carrying significant risks, including capital cost overruns, volatile demand and political and regulatory risks (e.g. around the stability of tariffs and long-term subsidies). The financing of infrastructure projects can be arranged so as to transfer most of these risks to the private sector. The risk that the infrastructure will not perform as intended can also be transferred, tied to various performance related payment mechanisms and/or subsidies. Transferring risks to the private sector carries a cost, most directly the cost of arranging third-party guarantees. Indirectly, this comes in the form of higher (risk-adjusted) interest rate spreads and requirements from lenders for safer debt-to-equity ratios.

This leads to the critical question of considering which mode of infrastructure financing is more efficient-public financing or risk-adjusted private financing?

More efficient implementation

Flexible subcontracting and procurement, quicker approvals for new capital financing, more efficient decision-making and stronger project management are some of the direct benefits of private sector participation in PPP models. The private sector, particularly larger engineering firms, may well have highly developed supply networks in the country or region able to achieve cost efficiencies through supplier loyalty and the operation of efficient ICT-driven SCM systems.

Investing in human capital

Depending on the particular expertise of the private company or consortium, significant advances in employee competency development can be made. Indeed, some state-owned companies that provide infrastructure services elect to “in-source” the private sector to bring just this type of on-the-job competency development and improve operational efficiency.

Mobilization of Private Capital

Governments face an ever-increasing need to find sufficient financing to develop and maintain infrastructure required to support their growing population. Governments are challenged by the demands of increasing urbanization, the replenishment requirements of ageing infrastructure, the need to expand networks to new habitations, and the goal of reaching previously unserved or underserved areas. Furthermore, infrastructure services are often provided at an operating deficit, which is covered only through subsidies, thus constituting an additional drain on public resources.

Greater Efficiency

The efficient use of scarce public resources is a critical challenge for governments—and one in which many governments fall far short of goals. The reason is that the public sector typically has few or no incentives for efficiency structured into its organization and processes and is thus poorly positioned to efficiently build and operate infrastructure. Injecting such incentives into an entrenched public sector is difficult, though not impossible.

Expanding reach to unaffordable projects

PPP arrangements also allow the public sector to consider otherwise unaffordable projects. In this respect, PPPs help fill the so-called infrastructure gap between what the government can afford and what people need. PPPs thus allow the public sector to leverage more financial resources by using the private sector as an intermediary.

Limited Participation of Private Sector in Agricultural Marketing Oriented Infrastructure in INDIA

In the context of India, the introduction of economic reforms and liberalization in India in early 1990s created an environment conducive to participation of private sector in infrastructure development. The report of sub-group on Public Private Partnership (PRIs & NGO), Planning Commission has defined Public Private Partnership as a mode of implementing government programmes / schemes in partnership with the private sector. The term private in PPP is often understood to stand for the private corporate sector and includes individual farming and other small-scale enterprises. This institution has a critical role to play in linking agricultural and allied sectors with national and international market to achieve the objective of faster and more inclusive growth.

As regards agricultural marketing, the opportunities for PPP were facilitated much later in early 2000s, when different states of India amended their respective state APMR Acts on the line of Model Act designed by the Central Government.

Both the Expert Committee Report (2001), and the Inter-Ministerial Task Force (2002) set up by the Government of India have made huge assessment of infrastructure requirements (Rs 12400 cr. of investment in pure marketing infrastructure by the year 2011-12). As, so much of investment can not be arranged through public exchequer, private sector investment has to be necessarily mopped up through different policy measures. As a result, Government of India has put in place a number of back-ended subsidy-based schemes to enable the marketing infrastructure units to come up through private sector and in PPP mode.

The agricultural marketing being a state subject, the Model Act/ Model rules prepared by the Central Government is not being followed in the right spirit by the different states of India. This is a major setback for attracting private investment to the sector. The issues relating to the subject are discussed below:

Limited Reform Progress

It is heartening to note that sixteen states of India have amended their state APMR Acts, though partially, in line with the Model Act, 2003 circulated by the Government of India. However, it is discouraging to learn that only eight states have so far framed the rules for implementing the provisions of their respective state APMC Act, thereby failing to take the reform process to its logical conclusion. The states that have amended their Acts are Andhra Pradesh, Arunachal Pradesh, Assam, Chhattisgarh, Goa, Gujarat, Himachal Pradesh, Karnataka, Madhya Pradesh, Maharashtra, Nagaland, Orissa, Rajasthan, Sikkim, Tripura, and Jharkhand. The states that have framed their rules are Andhra Pradesh, Rajasthan, Maharashtra, Orissa, H.P, Karnataka, M.P, Haryana (limited to contract farming only).

The states are considered to have adopted reforms if they have amended their Acts in respect of at least three areas i.e. direct marketing, contract farming, and setting up of Mandies in the private or co-operative sector. Though these areas are focused to be the key areas and counted as the minimum reforms that a state should undertake to be eligible for funds under different reforms-linked Central Sector Schemes, it is observed that many states have introduced only cosmetic changes in their Acts in these areas, stifling the very spirit of reforms in the sector. Nothing is more reflective of the situation than the fact that not a single full-fledged private sector market has so far come up anywhere in the country.

The spirit in which the Model Act was conceived is not being fully embodied in the Rules being drafted by the different States. Imposition of restrictions such as minimum distance from the Government-owned APMCs (Maharashtra), minimum investment requirement of Rs 10 crore to Rs 25 crore for setting up of private Mandis (A.P and Karnataka), compulsory registration of contract farming with APMCs themselves, private Mandis to collect market fees and share the same with the APMCs (e.g. in Orissa private market to share 5% of user fees with Marketing Board), undefined periodicity of licenses for private Mandis (H.P) are some of the worrying provisions that have crept into the Marketing Rules being adopted by different States. It seems the set of Model Rules prepared in alignment with the provisions of the Model Act, which have been widely circulated amongst the States for their guidance, is not being followed by the states.

The Model Act is captioned as Agricultural produce Market (Development and Regulation) Act, 2003. Thus, the word development was added to the title of the Act for the first time to convey the message down the line that it is time to go beyond regulation and focus on development, thereby enabling a shift in the present paradigm of agricultural marketing system.

It is observed that many states have not incorporated the word “development “ in the title of their Acts and they have simply adhered to their old title with focus on regulation and control.

It is also observed that some states, while amending their Acts in line with the provisions of the Model Act, have ended up inserting some discrepancies by introducing contradictory clauses in their state Acts. For instance, some states have not adopted section 3 of the Model Act, as per which, any individual, legal person, or organization can take an initiative to set up a new market. These states have simply retained the old provision of their respective state Act, saying that only State Government can take the initiative to set up a new market. On the other hand, these states have inserted provisions about private market through some other clause. These two clauses are contradictory to each other and may not stand the scrutiny of the court of law. Furthermore, many states have simply not incorporated other reforms-enabling provisions of the Model Act such as professionalisation of management Mandies, registration of contract farming agreement between the sponsoring company and the farmers, single point levy of market fees, setting up of marketing extension cell and Bureau of grades and standards at the state level.

State-wise reform situation has been appended to this note highlighting the differences of the provisions of the state Act from those of the Model Act. The following two tables indicate, in a nutshell, overall picture of progress of reforms in different states:

Table 2.1. Status of APMC Act Amendments in different States/UTs

Sr No	Status of Amendment	States	Remark
1	States/UTs having Amended Acts	Andhra Pradesh	26.10.05
		Arunachal Pradesh	09.05.06
		Assam	19.01.07
		Chhattisgarh	10.02.06
		Goa	06.08.07
		Gujarat	01.05.07
		Himachal Pradesh	26.05.05

		Karnataka	16.08.07
		Madhya Pradesh	15.06.03
		Maharashtra	11.07.06
		Nagaland	08.09.05
		Orissa	17.05.06
		Rajasthan	18.11.05
		Sikkim	20.04.05
		Tripura	11.05.07
		Jharkhand	2007
2	Reportedly no amendment needed	Tamil Nadu	--
3	States/ UTs with no APMC Act	Bihar	Repealed on 01.09.06
		Kerala	
		Manipur	
		Andaman & Nicobar Islands	
		Dadra and Nagar Haveli	
		Daman and Diu	
		Lakshadweep	
4.	Partially Amended	Punjab	Private Market & Contract Farming
		UT of Chandigarh	Private Market and Contract Farming
		Haryana	Contract Farming
		NCT of Delhi	Direct Marketing
5	Amendment Bills under finalization	Uttarakhand	--
		Uttar Pradesh	--
		West Benga	--
		NCT of Delhi	--
		Puducherry	--
6	Remaining States	Haryana	--
		Jammu and Kashmir	--
		Meghalaya	--
		Mizoram	--

Table 2.2. Position of different States regarding Agril Marketing Reforms

Sr. No.	Provisions of model Act	States which have adopted the suggested provision	States which amended the Act but not adopted this provision
1	Establishment of private market yard & direct purchase from farmers	A.P., Arunachal Pradesh, Assam, Goa, Gujarat, H.P., Karnataka, M.P.{not for private market - direct sale can be permitted under the bye-laws – Sect 36(2)}, Maharashtra, Nagaland, Orissa (excluding for paddy/ rice), Punjab/ UT of Chandigarh (not for direct purchase), Rajasthan, Sikkim, Tripura, T.N. and Jharkhand.	Chhattisgarh
2	Establishment of consumer/ Farmer market	Arunachal Pradesh, Assam, Goa, Gujarat, H.P., Karnataka, Maharashtra, M.P.(can be permitted under the bye-laws), Nagaland, Punjab /UT of Chandigarh (only enabling provision) Rajasthan, Sikkim, Tripura and Jharkhand	A.P. ((being set up under Exemption Clauses), Chhattisgarh, Orissa, T.N. (being set up under Executive Orders)
3	Contract Farming Sponsor shall get the contract farming agreement recorded with the prescribed officer	A.P., Arunachal Pradesh, Assam, Chhattisgarh, Goa, Gujarat, Haryana, Karnataka, M.P., H.P., Maharashtra, Nagaland, Orissa, Rajasthan, Sikkim, Tripura and Jharkhand	Punjab/ UT of Chandigarh, T.N.

4	No title, rights, ownership or possession shall be transferred or alienated or vest in the contract farming sponsor or his successor or his agent as a consequence arising out of the contract farming agreement	Andhra Pradesh, Arunachal Pradesh, Assam, Goa, Haryana, Karnataka, Maharashtra, Nagaland, Orissa, Rajasthan, Sikkim, Tripura and Jharkhand (Nomenclature as Market oriented Farming)	A.P., Chhattisgarh, Gujarat, H.P., M.P., T.N., Punjab and Chandigarh
5	Dispute Settlement Mechanism	A.P., Arunachal Pradesh, Assam, Chhattisgarh, Goa, Gujarat, Haryana, H.P. Karnataka, M.P., Maharashtra, Nagaland, Orissa, Rajasthan, Sikkim, Tripura and Jharkhand	T.N., Punjab and Chandigarh
6	Specification of Model Agreement for Contract Farming	Chhattisgarh, Goa (as may be prescribed), Gujarat, Haryana, Karnataka (as may be prescribed), M.P., Maharashtra (Rules), Nagaland, Rajasthan, Sikkim, Tripura and Jharkhand	A.P., Assam, Arunachal Pradesh, H.P., Orissa, T.N., Punjab and Chandigarh
7	<i>No commission agent shall act on behalf of agriculturist seller and no deduction to be made towards commission</i>	Madhya Pradesh, Chhattisgarh, Nagaland and Sikkim	A.P., MP, Arunachal Pradesh, Assam, Goa, Gujarat, H.P., Karnataka, Maharashtra, Orissa, TN, Rajasthan, Tripura, Punjab, Chandigarh & Jharkhand

8	<i>Registration (not licensing) of market functionaries and single registration for trade/ transaction in more than one market</i>	Assam, Chhattisgarh, Goa, H.P., Maharashtra, Nagaland, Sikkim and Jharkhand	A.P., Gujarat, Arunachal Pradesh, Karnataka, M.P, Orissa, Punjab/ UT of Chandigarh, Rajasthan, T.N., Tripura
9	<i>Market fee shall not be levied for the second time in any market area of the State by market committee/ Market fee not to be levied more than once in commercial transactions between traders or sale to consumers</i>	Chhattisgarh, Gujarat, Goa, H.P., M.P., Nagaland, Punjab/ UT of Chandigarh, Sikkim and Jharkhand	A.P., Arunachal Pradesh, Assam, Karnataka, Maharashtra, Orissa, Rajasthan, T.N. and Tripura
10	<i>Setting up of separate Market Extension Cell in the Board</i> <i>Establishment of State Agricultural Produce Marketing Standard Bureau</i>	Nagaland, Sikkim and Karnataka	A.P., Arunachal Pradesh, Assam, Chhattisgarh, Goa, Gujarat, H.P., M.P., Maharashtra, Orissa, Punjab/UT of Chandigarh, Rajasthan, T.N., Tripura and Jharkhand

Peculiarities of Indian Agriculture

The peculiarities of the agriculture sector, accounting for the unpredictability of return on investment, constitute a major hindrance for private sector participation.

These characteristics of Indian agriculture are as follows:

- 1 Seasonal nature of agriculture
- 2 Monsoon based agriculture
- 3 Production is heterogeneous in nature
- 4 Small quantity of marketable surplus
- 5 Small land holdings
- 6 Agriculture is still a mean of subsistence
- 7 Bulkiness of produce
- 8 Insect and pest infestation affecting production
- 9 Constraints in supply chain of agricultural inputs
- 10 Lack of adequate and timely finance and crop insurance for producers

Perception about Rural Infrastructure

The various studies suggest that rural households are willing to pay more for infrastructure than urban areas. Still, private sector has a perception that participating in infrastructure development in rural areas is commercially very unattractive. ^{FAO}

Institutional Constraints

The institutional capacity and the policy environment also limit effectiveness of private players in Public Private Participation in developing agricultural marketing oriented infrastructure. These constraints can be summarized as follows:

- Absence of legal framework for clear and transparent procurement procedures, including performance-based contracts;
- Governments unrealistically proposing PPPs as politically high-profile actions, with no cost to national or local budget;
- During or after contract negotiations, governments gradually taking all the risks they had hoped to transfer to the private sector;
- Unrealistic aims for private sector, i.e. full financial risk transfer with low rewards;
- Negative popular political perceptions about private sector accountability in long-term monopolistic, rapid user fee rate rises;
- Local governments and smaller firms with low capacity to negotiate or undertake a process of competitive tendering;
- Poor access to predicable and affordable finance for the private sector;
- Risks that governmental or donor funds are misused to subsidize private interests, or unfounded perceptions of risk;
- Inexperience in drawing up contracts – leading to ambiguities or clauses that are too harsh or too lax and distort the contract’s objectives;
- The importance of achieving a viable risk-adjusted return on investment for the private sector, meaning the possible neglect of the interests of the poor within the PPP payment terms;
- Infrastructure coordination “bottlenecks” – single road, warehouse, ICT system that can lead to extortion.

SECTION 3: METHODOLOGY

This section deals with the methodology followed to accomplish the objectives of the study. The section is divided into three sub-sections. The first sub-section deals with the study area, the second one describes data collection and the final sub-section deals with the statistical tools adopted to achieve the specific objectives on Public Private Partnerships.

Study Area

A considerable development with a reasonable participation of private sector has taken place in respect of agricultural marketing infrastructure in Maharashtra, one of the front-runners in agricultural marketing. The state has successfully adopted and implemented cooperative movement, reforms in agricultural marketing and various schemes of the Government to create the desired infrastructure for providing marketing support to the agricultural produce of the state. The State Agricultural Marketing Board is implementing a number of schemes of central and state government like farmers markets, onion storage structure, rural godown, cold storage and market infrastructure scheme. The Pune district of Maharashtra has been purposely selected considering its strategic position in the intra and inter state agricultural trade. It has also been taken into consideration that a number of projects have come up/ been sanctioned under various schemes of the Government of India like Rural Godown, Market Infrastructure Schemes and schemes of NHM in the District. The district is having 128 godowns with nearly half of them being constructed by the private players. Taking this into consideration, the District Pune has been selected to study various aspects related to development of Agricultural Marketing Infrastructure under Public Private Partnership. The next chapter is devoted to description of the profile of the Pune district and the infrastructure developed in the district.

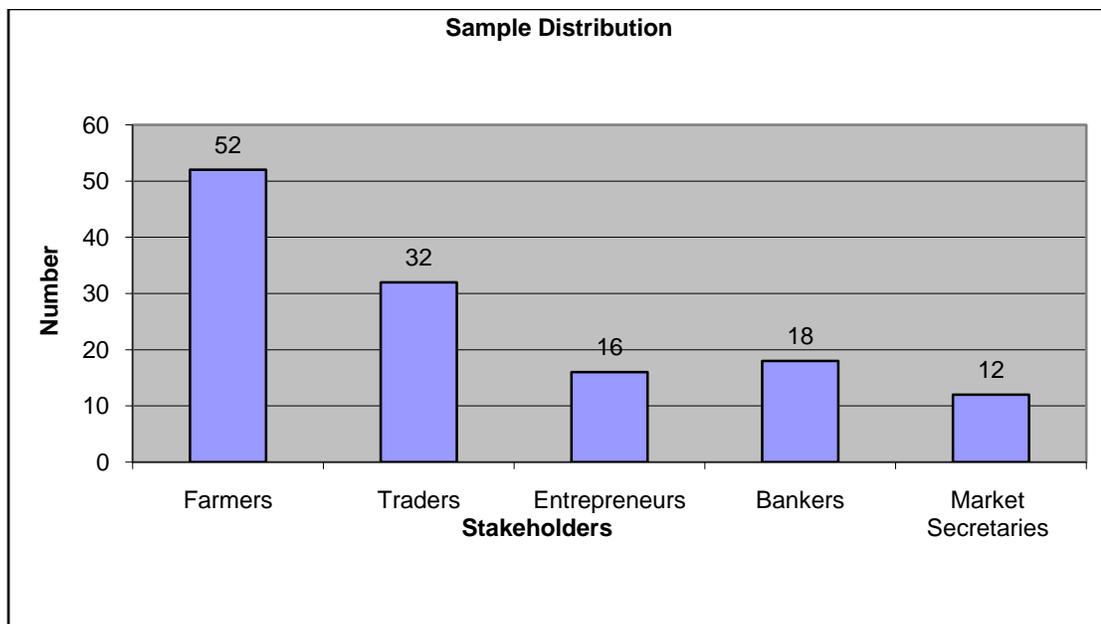
Data Collection

The study is based mainly on the primary data collected from various stakeholders through field survey. The study also utilizes the secondary data collected from Journals, books, reports and publications of various departments and websites of Government of Maharashtra, Central Government and international organizations. The primary data have been collected by conducting a field survey for the samples including various stakeholders like farmers, traders, entrepreneurs, bankers and market secretaries.

Sample Size

The study is based on the assumption that the infrastructure development is relatively more in and around (in the hinterland) the agricultural markets, particularly the Principal Markets of APMC. Based on this assumption, all the 12 APMCs of Pune District have been considered for the study. The markets have their representation through a sample of 130 stakeholders including farmers, traders, entrepreneurs, bankers and market secretaries. The Figure – 3.1 shows the sample distribution.

Figure 3.1. The Distribution of the Sample used in the Study



Statistical Tools Used

In order to achieve the objectives of the study, various statistical tools namely descriptive statistics, correlation coefficient and two sample t-test have been used.

Descriptive Statistics: Simple descriptive statistical techniques like averages, percentages, graphical analysis, etc have been used to describe the basic features of the data collected to study the perception of farmers, traders, entrepreneurs, bankers and market secretaries on Public Private Partnership.

Correlation Coefficient: It is one of the most common statistics used to find linear relationship between two variables. Correlation Coefficient is a single number that describes the degree of linear relationship between two variables. Its value varies from -1 to $+1$, where $+1$ represents the perfect correlation between two variables and -1 represent the perfect correlation but of-opposite nature, whereas zero shows absence of any relation. The tool has been applied to find out the relation, if any, in the perceptions of stakeholders on PPP with other characters like experience in the field in agricultural marketing.

T-test: The t-test has been employed to assess the difference between the means of the perceptions of two groups of stakeholders such as traders, entrepreneurs and bankers on different factors of Public Private Partnership like investment in marketing infrastructure, Government policies, and sectoral knowledge and skills. The factor, investment is based on the response of the respondents to a set of questions such as poor return, degree of risk, problem in land acquisition, seasonal nature of agriculture; the factor, Government policy is based on the response of the respondents to the set of questions such as negative perception about public organizations, discouraging funding conditions/restrictions of existing schemes, clearances from different organizations, cumbersome procedure to avail Government incentives, insufficiency of incentive, poor technical guidance from Government organizations etc; the factor, sectoral knowledge and skills is based on the response to items such as agriculture background of the entrepreneur, lack of entrepreneurial skill, lack of awareness about Government schemes etc.

SECTION 4: PROFILE OF MAHARASHTRA & PUNE DISTRICT

All the agricultural marketing activities of the district are carried out through regulated Agricultural Produce Market Committees (APMC). The responsibility to co-ordinate the functioning of these APMCs lies with the Maharashtra State Agricultural Marketing Board established under Maharashtra Agricultural Produce Marketing (Development & Regulation) Act, 1963. The Maharashtra Agricultural Produce Marketing (Development & Regulation) Act, 1963 of the State has been amended, though partially, to introduce provisions for reform measures like contract farming, direct marketing and private markets. The Board had divided the state into 7 divisional offices at Pune, Nasik, Aurangabad, Latur, Amravati, Nagpur and Ratnagiri for proper co-ordination of the activities of all APMCs in the State.

Table 4.1. Division-wise Distribution of Districts

Division	Districts
Ratnagiri	Raigad, Ratnagiri, Sindhudurg
Pune	Pune, Satara, Solapur, Sangli, Kolhapur
Nasik	Nasik, Ahmednagar, Jalgaon, Dhule, Nandurbar, Thane, Mumbai
Amaravati	Amaravati, Akola, Buldhana, Washim, Yavatmal
Aurangabad	Aurangabad, Jalna, Parbhani, Hingoli
Latur	Latur, Osmanabad, Beed, Nanded
Nagpur	Nagpur, Bhandara, Gondia, Wardha, Chandrapur, Gadchiroli

Source: MSAMB

Figure 4.1. Details of Districts Covered under Various Divisions



Source: MSAMB

The Pune District is having 12 APMC (Principal Markets) and 38 sub-markets under these APMCs (Annexure – III). The name of 12 APMCs operating under Pune Districts are given below:

- | | | |
|---------------|-----------------------|--------------|
| (i) Baramati | (iii) Bhor | (iiii) Dound |
| (iv) Indapur | (v) Junnar | (vi) Khed |
| (vii) Manchar | (viii) Nira | (ix) Pune |
| (x) Shirur | (xi) Talegaon Dabhade | (xii) Mulshi |

The major commodities transacted in the APMCs of Pune Districts are Wheat, Paddy, Bajra, Jowar, Maize, Gram, Green Gram, Soybean, Pigeon Pea, Groundnut, Groundnut Kernels, Cashewnut, Onion, Potato, Tomato, Garlic, Chillies, other vegetables, Tamarind, Banana, Jaggery and Fish.

Infrastructure Development in Maharashtra under various Schemes

Government of India has taken a number of initiatives through its various schemes to develop and strengthen the marketing infrastructure. The details of some of the schemes implemented by the Government in the state to develop agricultural marketing infrastructure are given below-

(a) Capital Investment Subsidy Scheme (CISS) for Construction/Expansion/ Renovation of Cold Storage for Horticulture Produce:

Government of India, through the National Horticulture Board (NHB), launched CISS under the overall supervision of NABARD in 1999-2000, for construction/ expansion/ renovation of cold storage for horticulture produce. Assistance, in the form of subsidy at 25 % of the project cost, is available under the scheme, subject to a ceiling of Rs.50 lakh and for not more than 5000 tonne. The subsidy to SC/ST cases is admissible at 33.33 % of eligible project cost, subject to a maximum of Rs.60 lakh. The normative unit cost admissible is Rs.4, 000 per tonne for new cold storage/expansion of existing cold storage, Rs.1, 000 per tonne for modernization/rehabilitation of existing cold storage and Rs.2, 000 per tonne for storage of horticultural produce (onion, etc.). In terms of latest instructions, cold storage units sanctioned prior to 01 April 2007 are to be dealt with by NABARD for release of subsidy. Cold storages sanctioned after the said date are to be forwarded to NHM for release of subsidy

(b) Capital Investment Subsidy Scheme (CISS) for Construction/Expansion/ Renovation of Rural Godown for Agriculture Produce

Subsidy under the scheme is available to the farmers, businessmen, State/Central Warehousing Corporations and Cooperatives. The subsidy component has been revised with effect from 26.06.08 as 33.33 % of the project cost, subject to a ceiling Rs. 62.50 lakh, to women farmers, SC/ST entrepreneurs, cooperatives, SHGs of women farmers/SC/ST entrepreneurs; 25% of the project cost, subject to a ceiling Rs. 46.87 lakh, to all categories of

farmers (other than women farmers), agricultural graduates, cooperatives and state and central warehousing corporations and 15 % of the project cost subject to ceiling of Rs. 28.12 lakh to all other categories of individuals companies and corporations. The project cost, for the purpose of admissibility of subsidy, would be as appraised by the financing bank. The eligible cost of the project for subsidy purpose will be reckoned as the lower of the actual cost or normative cost fixed at Rs. 2,500 per tonne for godowns up to 1,000 tonne capacity and at Rs. 1,875/- per tonne for godowns exceeding 1,000 tonne capacity. Subsidy would be restricted up to the capacity of 10,000 tonne and godowns having a capacity of more than 10,000 tonne would be entitled for the subsidy up to 10,000 tonne only.

(c) Scheme for Development / Strengthening of Agricultural Marketing Infrastructure, Grading and Standardization (AMIGS)

Government of India launched the captioned scheme in October 2004 with an objective to create additional agricultural marketing infrastructure; strengthen existing agricultural marketing infrastructure; promote competitive alternative agricultural marketing infrastructure through the involvement of private and cooperative sector; provide infrastructure facilities for grading, standardization and quality certification; introduce negotiable warehousing receipt system; promote direct marketing and direct integration of processing units with producers; and create awareness and providing training to farmers, entrepreneurs and market functionaries.

The scheme is reform linked and is implemented only in the States which have amended the APMC Act with provisions for direct marketing, contract farming and private markets. It is effective in the State of Maharashtra wef 05 September 2006. Assistance under the scheme is available for creation of common facilities like market yards, platforms for loading, assembling and auctioning of agricultural produce, weighing and mechanical handling equipment, etc;

facilities of assembling, grading, standardization & quality certification, labeling, packaging and value addition; infrastructure for direct marketing from producers to consumers/processing units/bulk buyers; infrastructure for e-trading and mobile infrastructure for post harvest operations

This is a credit linked back ended subsidy scheme. Subsidy under the scheme is available @ 25 percent of the eligible capital cost subject to a ceiling of Rs. 50.00 lakh. However, in case of tribal areas and entrepreneurs belonging to SC/ST and their cooperatives, the rate of subsidy is 33.33 percent of the eligible capital cost. The banks should provide a loan of at least 50 percent of the project cost.

Storage Facilities Created and Funds Released Under Different Schemes

The status of these schemes as on 31 March 2011 is as under:

Rural Godowns: 2263 *Grammen Bhandar* involving Rs 101.93 crore of subsidies with subsidy of Rs 86.53 crore already released. The storage capacity created so far under the scheme is 30.60 lakh tonnes.

Table 4.2 Agency-wise Physical and Financial Progress of the Rural Godwon Scheme in Maharashtra (Position as on 31st March 2011)

Agency Involved	Number of Projects	Capacity in Tonnes	Subsidy Involved in Rs Lakhs	Subsidy Released in Rs Lakhs
NABARD	2179	2731272	96600.90	8186.48
NCDC (New)	31	196880	507.65	432.49
NCDC (Renovation)	53	132000	84.79	34.32
Total	2263	3060152	10193.35	8653.29

Source: *agmarknet.nic.in*

AMIGS: 402 Projects involving TFO of Rs. 677.44 crore and eligible subsidy of Rs 162.73 crore have been sanctioned under the scheme and subsidy of Rs. 85.94 crore have so far been released.

Table 4.3 Agency-wise Physical and Financial Progress of the Infrastructure Development Scheme in Maharashtra (Position as on 31st March 2011)

Agency Involved	Number of Projects	TFO in Rs Crore	Eligible Subsidy in Rs Crore	Subsidy Released in Rs Crore
NABARD	360	585.09	146.27	76.53
NCDC	3	33.65	1.71	1.21
State Agencies	39	58.70	14.76	8.20
Total	402	677.44	162.73	85.94

Source: agmarknet.nic.in

Agro and Food Processing Infrastructure

Agro and food processing sector is of great importance for Indian agriculture on account of its potential contribution in the reduction in post harvest losses, better price realization, catering to the changing domestic demand for processed agro-products, enhancing the competition of Indian agriculture to meet the challenge posed by changing global agricultural.

Pune district has great potential for agro-processing industry because of its diversified agriculture. The district produces a wide variety of cereal, pulses, fruits and vegetables. Major food grain crops include jowar, bajra, paddy, wheat, maize, etc. Major vegetables grown in the district are potato, tomato, onion, peas, cucumber, cabbage, cauliflower, green leafy vegetables, etc. and fruits are grapes, pomegranate, custard apple, guava, banana, fig, etc.

Floriculture is also very popular in the district, both under open conditions and in poly houses. Farmers in the district also grow cash crops like sugarcane, groundnut, etc. The district is surrounded by some of the most fertile regions of the state which also produces some other varieties of cereals, pulses, vegetables and fruits in large quantities. All these factors make Pune district an ideal destination for the establishment of agro & food processing industries. Besides, a high level of urbanization within the district, as also the proximity to the metropolis of Mumbai/Thane, an assured market is readily available.

Both Central and State Government are committed to the development of this sector. Agencies like Maharashtra Agro Industries Development Corporation (MAIDC), District Industries Centre (DIC), Small Farmers' Agribusiness Consortium (SFAC) Agriculture Department of the State Government, etc., are playing a key role in the development of this sector. With a view to giving a thrust to this sector in rural areas, Government of Maharashtra has created a new department viz., Department of Agro Processing and Agri Business, which has its headquarters at Pune. Maratha Chamber of Commerce, Industries and Agriculture (MCCIA), Pune is involved in setting up a Food Processing Cluster with the financial assistance from Government of India. It has already established a Food Testing Laboratory as a part of the proposed Food Processing Cluster. The district is having presence of some of reputed companies in the field of agro-processing like Alfa Laval, Praj Industries, S S Engineers, Tetra Pak, Nichrome, Gits Foods, Cargill Foods, Pravin Masalewale, Chordia Foods, Dohler India, Weikfield, Dynamix Dairy, Frito Lays, etc.

Status of Agro-processing Infrastructure

1 There are 13 Co-operative Sugar Factories, 05 Co-operative Spinning Mills, 03 Handloom Weavers Societies, 03 Agro Processing Co-operative Societies and 364 Co-operative Industrial Societies. There are 1822 Manufacturer of Food Products and Beverages with an investment of Rs.106161.57 lakh which provide employment to 9299 persons.

2 In the dairy sector, there are 04 Milk Processing Plants with a capacity of 05.50 lakh liters per day. Similarly, there are 08 Milk Chilling Plants with a capacity of 02.30 lakh per day.

3 As regards poultry, there are 04 hatcheries having a stock of about 1.0 lakh parent layer birds and 12 broiler hatcheries with a stock of 04.40 lakh parents. There are two poultry processing plants with a capacity of 30000 birds/day. There are 04 feed mixing plants in the district. Besides, branded poultry feed manufactured by companies like Godrej, Japfa etc.

Status of Infrastructure Development in Pune District

The Pune district enjoys a significant position in the agriculture scenario of the state of Maharashtra, first, for being a major producer of fruits and vegetables in the state and secondly, for being an important centre of marketing of agricultural produces for the neighboring districts. Therefore, the development of proper and adequate infrastructure in the district is of great importance to facilitate efficient marketing of agriculture produce in the region.

Storage Infrastructure

Storage facilities in the form of Godowns and Cold storages are very important for ensuring better price realization by the farmers, for linking credit with marketing, for reducing post harvest losses and for avoiding distress sale. There are total 128 Godowns in Pune District including that of cooperatives, warehousing corporation, APMCs and private players. Nearly 50 percent of the Godowns have been developed by the private players. The details are as given below in Table 4.4.

Table 4.4. Details of Ownership-wise Godown in Pune Districts

S No	Ownership	Number of Godown	Percent Share (%)
1	APMCs	6	4.69
2	Cooperative	30	23.44
3	Private	60	46.87
4	Warehousing Corporation	32	25.00
	Total	128	100.00

Source: Maharashtra State Agricultural Marketing Board, Pune

Infrastructure Development under NHM

The National Horticulture Mission has sanctioned more than two crores Rupees during 2007-08 and 2008-09 to fund 93 projects in the Pune District. The projects are to develop infrastructure to support processing and marketing of horticultural produce in the District. Two-third of the projects sanctioned during 2007-08 and 2008-09 are to develop pack houses in the area, the other projects include Refer Van, Bio Control Lab, Cold Storage, Collection and Grading, Leaf Tissue Analysis Lab, Organic Farming, Rehabilitation of Existing Tissue Culture Lab, Seedling Production, Value Addition, etc. (Table – 4.5 & Figure – 4.2)

Table 4.5. Different Categories of Infrastructure Projects Sanctioned under NHM in Pune District during 2007-08 and 2008-09.

Sr No	Projects	Number	Percentage
1	Bio Control Lab	1	1.08
2	Cold Storage	3	3.23
3	Collection and Grading	1	1.08
4	Leaf Tissue Analysis Lab	2	2.15
5	Organic Farming	1	1.08
6	Pack House	62	66.67
7	Refer Van	2	2.15
8	Rehabilitation of Existing Tissue Culture Lab.	2	2.15
9	Shade Net House	6	6.45
10	Value Addition	11	11.83
11	Vegetable Seedling Production	2	2.15
12	TOTAL	93	100.00

Figure 4.2. Project Approved under NHM in Pune District

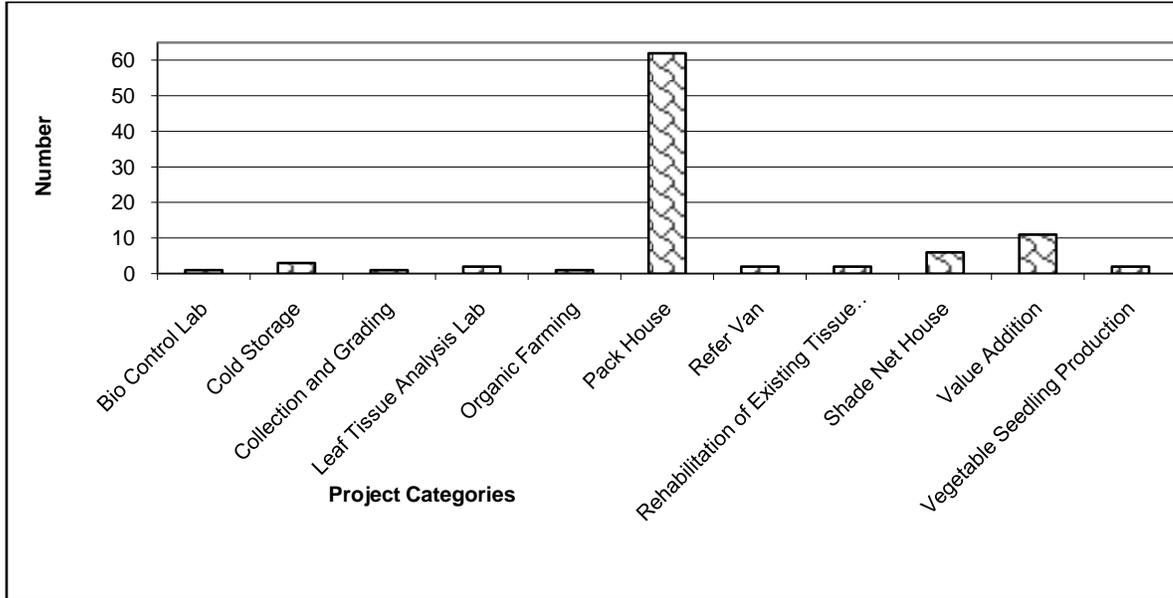
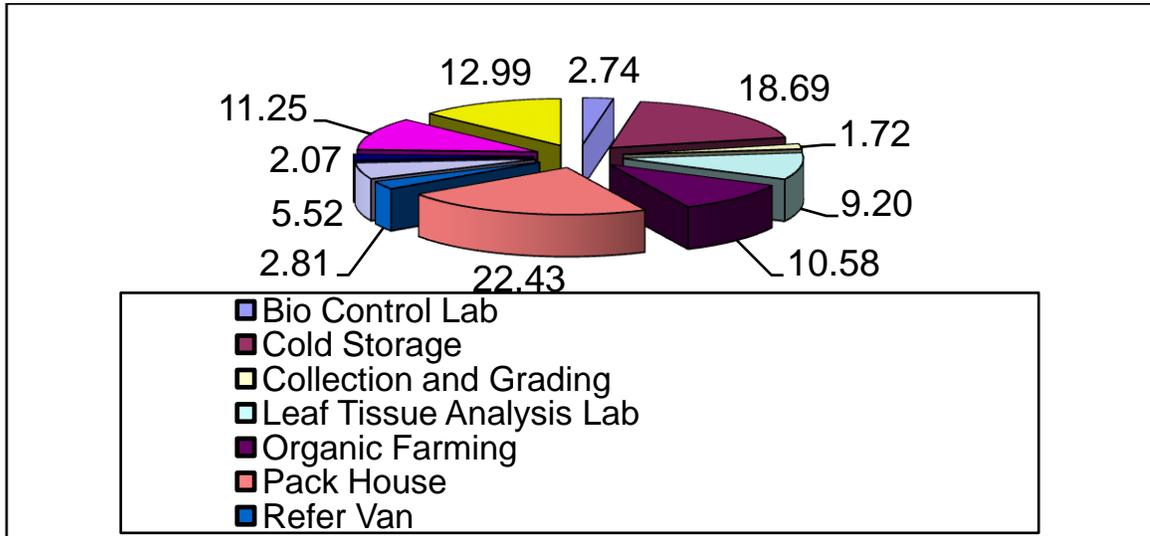


Table – 4.6 reveals the distribution of funds among different categories of projects. Though two-third of the projects are for developing the pack houses in the area, the funds diverted are only 22.43 percents. The Figure – 4.3 represents more clearly the distribution of funds with the help of pie diagram.

Table 4.6. Distribution of Funds among different Categories of Projects

Sr No	Facility	Amount (Rs lakhs)	Percent (%)
1	Bio Control Lab	5.95	2.74
2	Cold Storage	40.63	18.69
3	Collection and Grading	3.75	1.72
4	Leaf Tissue Analysis Lab	20.00	9.20
5	Organic Farming	23.00	10.58
6	Pack House	48.76	22.43
7	Refer Van	6.11	2.81
8	Rehabilitation of Existing Tissue Culture Lab	12.00	5.52
9	Shade Net House	4.50	2.07
10	Value Addition	24.46	11.25
11	Vegetable Seedling Production	28.25	12.99
12	Total	217.41	100.00

Figure 4.3. Distribution of Fund among Different Projects under NHM



SECTION 5: RESULT & DISCUSSION

Development of agricultural marketing in India requires a huge amount of investment in agricultural marketing infrastructure. The target for investment in agricultural marketing infrastructure during the Eleventh Five Year Plan is to the tune of about Rs 65000 crore. A major portion of this investment is to be mobilized from the private sector. This is where the need of partnership between Public and Private Agencies arise. In order to create an environment conducive to build partnership between public and private agencies, various modifications were suggested by the Ministry of Agriculture in the State APMR Act. Introducing these legal changes are need of the hour but not sufficient enough to make concept like PPP acceptable and viable. It is equally vital to understand the perception of various stakeholders like bankers, entrepreneurs, farmers, etc and factors responsible for the success of investment under Public Private Partnership.

The following section deals with the perception of various stakeholders on issues related to Public Private Partnership. The Table – 5.1 present the bankers perception on factors affecting investment in agricultural marketing under PPP. The table reveals that the major constraints for investment in agricultural marketing is lack of awareness amongst the potential investors about Government schemes, non-availability of successful PPP models in the sector and discouraging conditions for funds under the schemes , poor returns on investment in agricultural marketing etc. The table also reveals that agriculture background of entrepreneurs, level of entrepreneurship amongst the agriculturists and demand for infrastructure are the other driving forces of investment in agricultural marketing sector.

Table 5.1. Bankers Perception on Factor Affecting Investment in Agricultural Marketing under PPP

Sr No	Factors	Perception in Percentage (%)		
		Strongly Agree	Agree	Disagree
1	Lack of awareness about Government Scheme	33	50	17
2	Poor Return in Agril Marketing Sector	44	22	33
3	Non availability of successful PPP Model	50	44	6
4	Degree of risk associated with Agril Projects	61	33	6
5	Negative Perception about Public Organizations	33	44	22
6	Discouraging funding conditions of Schemes	33	50	17
7	Clearance from too many Govt Deptt.	67	28	6
8	Background of Agriculture	28	61	11
9	Poor level of entrepreneurship among investors	28	56	17
10	Demand of infrastructure created	22	67	11

The Table – 5.2 reveals that long gestation period of projects relating to agriculture marketing, complicated procedures for release of subsidy, problem of land acquisition etc are some of the major constrains for private investment in the sector. Overcautious nature of banks to finance agricultural marketing infrastructure projects, maybe due to poor and uncertain rate of returns, is also another important constraint for the sector calling for suitable policy measures for boosting the agricultural marketing infrastructure finance.

Table 5.2. Constraints as per Bankers Perception in Investment under PPP

Sr No	Factors	Perception in Percentage (%)		
		Strongly Agree	Agree	Disagree
1	Procedure to avail Govt incentives is cumbersome	39	50	11
2	Govt incentives are not sufficient	39	28	33
3	Poor technical guidance from public organization	39	33	28
4	Problem of land acquisition	33	50	17
5	Tight scrutiny of agriculture project by Banks	11	33	56
6	Non-availability of quality machinery/equipments	0	50	50
7	Long gestation period of agricultural project	6	83	11
8	Heavy investment	11	39	50

The Table – 5.3 shows that despite availability of funds under the different schemes for financing investment in agricultural marketing infrastructure, non-bankability of the projects, lack of expertise for project preparation and the legal framework, are some of the major factors accounting for rejection of agricultural marketing projects by banks. As regards, project preparation, though availability of PDF facility in different schemes of Government of India is a step in the right direction, sufficient awareness needs to be built amongst the stakeholders about the same.

Table 5.3. Reasons of Rejection of Agricultural Projects by Banks

Sr No	Factors	Perception in Percentage (%)		
		Strongly Agree	Agree	Disagree
SN	Factors	Strongly Agree	Agree	Disagree
1	Most agricultural project are not bankable	6	44	50
2	Lack of expertise to prepare suitable projects	39	56	6
3	Project implementation under PPP is cumbersome	28	61	11
4	Non availability of funds under relevant scheme	28	17	56
5	Non availability of suitable land	22	22	56
6	The legal framework is a bottleneck	39	50	11

The entrepreneurs feels that, as shown by the table – 5.4, lack of awareness about government schemes, overall poor return of agriculture sector, negative perception about Public Organization, cumbersome clearance procedures of Government agencies are some of the important factors affecting PPP models of investment in the sector.

Table 5.4. Entrepreneurs Perception on Factor Affecting Investment in Agricultural Marketing under PPP

Sr No	Factors	Perception in Percentage (%)		
		Strongly Agree	Agree	Disagree
SN	Factors	Strongly Agree	Agree	Disagree
1	Lack of awareness about government schemes	88	6	6
2	Poor returns in agricultural marketing sector	58	29	13
3	Non availability of successful working PPP Model	85	15	0
4	Degree of risk associated with agril projects	56	38	6
5	Negative perception about public organization	79	19	2
6	Discouraging funding condition of schemes	71	25	4
7	Clearance from too many Govt Deptts	88	6	6
8	Background of Agriculture	48	25	27
9	Lack of entrepreneur skills	54	38	8
10	Demand of infrastructure created	54	40	6

Table – 5.5 reveals that poor technical guidance by way of promotion, absence of inadequate incentives, absence of capacity utilization of infrastructure due to seasonal nature of agricultural produce are some of the other important factors to be taken into consideration for PPP in agricultural marketing.

Table 5.5. Constraints as per Entrepreneurs Perception in the Investment under PPP

Sr No	Factors	Perception in Percentage (%)		
		Strongly Agree	Agree	Disagree
SN	Factors	Strongly Agree	Agree	Disagree
1	Procedure to avail Govt incentives is cumbersome	81	17	2
2	Government incentive are not sufficient	73	21	6
3	Poor technical guidance from public organization	60	35	4
4	Problem of land acquisition	63	21	17
5	Tight scrutiny of agriculture project by banks	29	40	31
6	Non availability of quality machinery/ equipments	46	19	35
7	Long gestation period of agricultural projects	44	50	6
8	Under utilization of infrastructure due to seasonal nature of agriculture	67	23	10

Farmers' perception on PPP in agricultural marketing

The majority of the farmers (78 percent) are not satisfied with the availability of infrastructure in the market yard. The matter of great concern is that none of the sample farmer is aware of the schemes of the government of India to promote infrastructure in agricultural marketing. Only 39 percent of the farmers agreed to the proposal setting up markets themselves, individually or collectively and majority of them (61 percent) did not agree to the proposal. This can probably be attributed to the lack of awareness, poor entrepreneurial quality and low educational level of the farmers. The data reveals that 97 percent farmers showed preference for better equipped private market to Government Markets.

The Table – 5.6 reveals that farmers have recognized the importance of infrastructure for some of the facilities like information kiosk, refrigerated van, warehouse, cold storage, collection centre at village level, grading and cleaning, facilities packaging facilities, etc.

Table 5.6. Infrastructure Suggested by the Farmers to be developed for Efficient Marketing

Sr No	Infrastructure	Response in Percent	
		Yes	No
1	Grading and Cleaning Facilities	87	13
2	Packaging Facilities	77	23
3	Transportation/ Refrigerated van	97	3
4	Collection Centre at Village Level	97	3
5	Cold Storage	80	20
6	Warehouse	97	3
7	Information Kiosk	100	0

Status of Availability of Infrastructure in Markets of Pune District

The officers of the various Mandis operating in district Pune were also involved in the study. The status of infrastructure availability in their respective Mandis, as reported by them, reveals that many of the important facilities required for efficient marketing in general and particularly for perishables are not present in more than 50 percent of the markets. The Table – 5.7 shows that refrigerated van (1/10th), cold storage, grading, cleaning and packaging (1/5th), ware house (1/3rd) and information kiosks (2/5th).

Table 5.7. Status of Availability of Infrastructure in different Mandis of Pune District

Sr No	Facilities	Percent
1	Weighing Facility (Electronic Weigh Bridge)	67
2	Security Facility	100
3	Auction Platform	56
4	Laour Availability	100
5	Parking Facility	89
6	Internal Roads	78
7	Labour Shed	78
8	Farmers Shed	89
9	Cold Storage	22
10	Ware House	33
11	Drinking Water	100
12	Toilets	100
13	Canteen	89
14	STD/PCO Booth	78
15	First Aid Centre	11
16	Agricultural Input Shop	67
17	Daily Necessity Shop	78
18	Petrol Shop	44
19	Vehicle Repairing Shop	33
20	Animal Sheds	56
21	Grading & Cleaning Facilities	22
22	Packaging Facility	22
23	Refrigerated Van	11
24	Information Kiosks	44

The officers of the various Mandis, being the representative of Public agencies and based on their experience in the field of agricultural marketing, were asked to identify infrastructure having potential to be developed under PPP mode. Table – 5.8 presents the infrastructure identified by the Officers having great potential for development under PPP. The infrastructure identified includes Grading & Cleaning, Packaging, Refrigerated Van, Warehouse, and Information Kiosks Cold Storage.

Table 5.8. Perception on Market Secretaries on Investment in Agricultural Marketing under Public Private Partnership

Sr No	Facilities	Percent
1	Weighing Facility (Electronic Weigh Bridge)	44
2	Security Facility	11
3	Parking Facility	11
4	Cold Storage	89
5	Warehouse	78
6	Canteen	11
7	STC/PCO Booth	44
8	Agricultural Input Shop	56
9	Daily Necessity Shop	44
10	Petrol Pump	67
11	Vehicle Repairing Shop	67
12	Grading & Cleaning Facilities	100
13	Packaging Facility	100
14	Refrigerated Van	100
15	Information Kiosks	78

Test of significance (Students't-test) was applied to know whether there is a statistically significant difference in the perception between different stakeholders such as traders, entrepreneurs and bankers on different factors like investment in marketing infrastructure, Government policies, and sectoral knowledge and skills. The factor, investment is based on the response of the respondents to a set of items such as poor return, degree of risk, problem in land acquisition, seasonal nature of agriculture; the factor, Government policy is based on the response to items like negative perception about public organizations, discouraging funding conditions/restrictions of existing schemes, clearances from different organizations, cumbersome procedure to avail Government incentives, insufficiency of incentive, poor technical guidance from Government organizations etc; the factor of sectoral knowledge and skills is based on the response of the respondents to items of the questionnaire such as agriculture background of the entrepreneur, lack of entrepreneurial skill, lack of awareness about Government schemes etc.

The application of student's t-test reveals that there is significant difference between the traders and bankers about their perception on investment in PPP in agricultural marketing infrastructure and also the policies of Government for PPP. This can possibly be attributed to the fact that traders are more involved in agricultural marketing sector as compared to bankers and the conservative attitude of the bankers towards financing private sector agricultural marketing infrastructure due to various uncertainties associated with the sector. Similar difference in the perception of bankers and entrepreneurs in respect of investment and government policies can also be attributed to the same factor.

The t-test reveals (as presented in Table – 5.9) that there is no significant difference between traders and entrepreneurs in terms of investment factor and government policies. This can possibly be accounted to the fact that traders and entrepreneurs are driven by almost the same factors in their attitude towards investment in the sector and both the stakeholders are in the receiving end of the continuum so far Government policies are concerned.

Table 5.9. Difference in the Perception of various Stakeholders in Pune (factor-wise)

		(t-Stat) Difference between the Perception of		
		Traders & Entrepreneurs	Traders & Bankers	Banker & Entrepreneurs
1	Investment	0.89	2.65*	-3.11*
2	Government	0.48	2.83*	-2.88*
3	Knowledge & Skills	2.57*	1.11	-3.67*

**Perception is different at 5 percent level of significance*

Table also reveals that in terms of the factor of agriculture subject knowledge and entrepreneur skills, there is no statistically significant difference between the perception of traders and bankers. This is possibly due to the traders' feeling that with agriculture subject knowledge and entrepreneur skills they can effectively and efficiently run their trading businesses and the bankers' perception that sectoral knowledge makes the traders better equipped to run their businesses profitably and to that extent risks associated with financing of agri-businesses get reduced.

The difference between the perceptions of different stakeholders was also assessed on various other factors like non-availability of successful PPP models, demand of the infrastructure and tight scrutiny of agriculture project by Banks, non-availability of quality machinery and equipment and long gestation period of agricultural projects. The Table – 5.10 reveals that there is no significant difference between the perception of traders and entrepreneurs. This may again be because of the fact that both of these are mainly driven by the same factors in their attitude towards investment.

Table 5.10. Difference in the Perception of various Stakeholders in Pune (Item-wise)

		(t-Stat) Difference between the Perception of		
		Traders & Entrepreneurs	Traders & Bankers	Banker & Entrepreneurs
1	Non-availability of successful PPP models	0.57	3.33*	2.13*
2	Demand of the infrastructure created	1.33	2.30*	0.76*
3	Tight scrutiny of agri-project by Banks	2.05	3.51*	1.24
4	Non-availability of quality machinery and equipment	0.46	3.6*	- 2.67
5	Long gestation period of agricultural projects	0.18	3.31*	2.59*

**Perception is different at 5 percent level of significance*

The statistically significant difference between the perception of the entrepreneurs on the one hand and the traders/ bankers on the other indicates that the entrepreneurs are more convinced than traders and bankers about the importance of sectoral knowledge, i.e subject knowledge and entrepreneur skills for PPP in agricultural marketing infrastructure.

Relation of Perception with Experience

The statistical tool of correlation coefficient was applied to find out the relationship between the perceptions of stakeholders with their experience in the field of agricultural marketing.

The Table – 5.11 reveals that there is a negative correlation between the perception of the traders towards private investment in agricultural marketing infrastructure and their experiences indicating that the older traders are more inclined to Government investment in infrastructure. On the other hand, the

correlation between the entrepreneurs and private investment is positive indicating that the more experienced the entrepreneur, the more inclined he is towards private investment. This can perhaps be attributed to the fact that intense competition in the market call for more innovations, better managerial skills and new technology to make private sector players more capable to sustain.

Table 5.11. Relationship between the Perceptions of different Stakeholders with their Experience

Sr No	Relation	Correlation coefficient	Remark
1	Experience and Perception of Traders	- 0.14	Inclination towards Government investment with experience
2	Experience and Perception of Entrepreneurs	0.63	Inclination towards Private investment with experience

SECTION 6: CONCLUSIONS AND SUGGESTIONS

Promotion of private investment is one of the prime motto of the process for reforms initiated by both the central and state governments. Hence, in order to evolve a public private partnership regime in the sector, all the identified reform measures need to be implemented in the right spirit by the states by bringing necessary amendments in their respective state APMC Acts. Private investment in agricultural marketing sector can not be considered in isolation. This calls for removing glitches of the regulatory marketing system through promotion of direct marketing, contract farming and setting up of markets in the private and cooperative sector, promotion of a responsive market information system, a vibrant mechanism for price discovery and risk management, a need-based marketing extension system, promotion of grading and standardization and promotion of modern marketing system like hub-and spoke model of terminal markets. Following are the suggestions made for promoting Public Private Partnership in agricultural marketing based on the findings of the study.

- 1) The perception of different stakeholders reveals that major hindrances for private investment in the sector are low return on investment and longer gestation period. There is a high degree of risk in the sector due to dependence on the weather and trends in prices in the sector. The level of incentives under various schemes of the Government of India have to be enough to motivate private players to participate in the infrastructure development process which presently seems to be not so comprehensive.
- 2) The incentives to encourage private participants in agricultural marketing infrastructure may be increased through higher rate of subsidy, subsidy on interest on the finance availed from the bank as most the schemes of the Government are credit-linked, longer repayment period, rebate on the taxes on the equipment bought for the projects, etc. The mechanism for working out the project cost for disbursement of subsidy should also be dynamic in nature to take care of the inflationary pressure.

3) The investment in agricultural marketing under public private partnership is also affected by the poor level of awareness among different stakeholders about various Government initiatives to promote infrastructure development in agricultural marketing. The lack of entrepreneur skill is further adding to the problem of low level of investment in agricultural marketing under PPP. Hence, there is a need to create awareness about various schemes of the Government among different stakeholder. This can be executed by organizing awareness programme on various schemes of the Government and training programme on entrepreneur skill development, project preparation and financial appraisal of the project proposal in which investment is made. Sensitization of officers of marketing department and other line departments is also need of the hour.

4) The finding of the study revealed that the procedure to avail government incentive is cumbersome on account of various factors like clearance from various government departments. The introduction of single window system for infrastructure development projects under PPP may facilitate faster clearance of different infrastructural projects like private market and procurement centers for agri-commodities based on the convenience of the production in the area.

5) Findings of the study revealed that, majority of them are not getting proper technical guidance. Hence, there is need to provide technical guidance to the interested entrepreneurs to enhance investment in agricultural marketing. Therefore, focus should be laid on region specific and crop specific marketing extension.

6) Subsequently the infrastructure and expertise available at various institutes of ICAR and state agricultural University system to be used to provide region and specific crop guidance to the farmers/ entrepreneurs on various agriculture and agricultural marketing infrastructure. Orientation programmes on the subject may also be organized for officials from these organizations.

7) Though there is a publicity component in different schemes of the Government of India such as NHM, APEDA, and other schemes of Ministry of Agriculture viz., Rural Godown and Infrastructure scheme for giving fillip to setting up of marketing infrastructure on PPP basis, the awareness level about

the schemes amongst the stakeholders is still poor. The same should be intensified through a proper marketing extension mechanism by the state governments.

8) Several limitations to promote investment as stated above revealed that, information dissemination is poor. Hence information/ knowledge should be disseminated as a part of public information domain through marketing extension mechanism. Research system should synergize with both farmers and private sector.

9) For management of risks, there is need for introducing a comprehensive insurance policy for agricultural production, marketing and infrastructure projects. There is also need for the implementation of these initiatives by the Government in the right spirit.

Foolproof infrastructure, no doubt, is the answer to many of the present inadequacies of the agricultural marketing system of the country. A little systemic change will go a long way towards mopping up private funds to the sector. With liberalization and globalization of trade; efficiently produced, attractively packaged, reasonably priced commodities from different countries are being made available in urban markets across the country. It is an irony that while the indigenous food industry is threatened by the onslaught of imports from the developed world, which meet parameters of quality and safety, the domestic market of primary agricultural products is riddled with marketing glitches like high transaction costs, heavy post harvest losses and fragmented supply chain etc due to poor or absence of requisite agricultural marketing infrastructure. Hence the need of the hour is to address this problem of availability of infrastructure for efficient marketing of agricultural produce. With the support of proper policies, creating awareness among various stakeholders, Public Private Partnership has potential to answer the problem of low investment in agricultural marketing sector.

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OUTLAY FOR XI FIVE YEAR PLAN

Sr No	Infrastructure	No.	Unit Cost (Rs. Lakhs)	Total (Rupees Crore)	Appropriate PSP Option	Private Sector Outlay
1	Development of wholesale markets					
	a) Principle Markets	2428	300	7284	BOT	3000
	b) Sub Markets	5129	100	5129	BOT	1000
2	Rural Primary Markets	5000	25	1250		
3	Primary value addition centres and Soil health management infrastructure	50000	30	15000	Concession	5625
4	New wholesale markets	75	1000	750		750
5	Livestock markets	1000	20	200		
6	Terminal markets	35	5000	1750	Concession	1300
7	Apni mandis/ direct markets	1152	50	576		
8	Markets for spices crops	50	50	25		
9	Storage capacity (Million MTs)	6.67	0.03	2000		
10	Cold Storage (lakh tonnes)	45	0.045	15708	Concession	11500
11	Specialized commodity markets (F&V)	241	2000	4820	Concession	3600
12	Flowers markets	10	1500	150	Concession	100
13	Medicinal, aromatic & forest produce markets	500	100	500		

14	Modern abattoirs	50	1000	500	BOT	500
15	Retail market infrastructure for poultry	1000	500	5000	BOT	2500
16	Centre for perishable cargo	15	2000	300		
17	Farm road infrastructure/ green corridors	100	500	500		
18	Quality and food safety infrastructure	500	100	500	BOT	250
19	Specialized quality and safety infrastructure	50	500	250		
20	GAP and certification infrastructure	100000	1	1000		
21	Model farms for India GAP Certification	1000	1	10		
22	Farmers' organizations support infrastructure	5000	5	250		
23	Post Harvest Mechanization infrastructure					
24	R&D Infrastructure for market led production					
25	Production risk management infrastructure/ setting up of automatic weather stations	50000		680	BOO	500
	TOTAL			64132		30625

PROGRESS OF REFORMS IN AGRICULTURAL MARKETS (APMC ACT)

Sl. No.	Stage of Reforms	Name of States/ Union Territories
1.	States/ UTs where reforms to APMC Act has been done for <i>Direct Marketing; Contract Farming and Markets in Private/ Coop Sectors</i>	Andhra Pradesh, Arunachal Pradesh, Assam, Chhattisgarh, Goa, Gujarat, Himachal Pradesh, Karnataka, Madhya Pradesh, Maharashtra, Nagaland, Orissa, Rajasthan, Sikkim, Jharkhand and Tripura.
2.	States/ UTs where reforms to APMC Act has been done partially	a) <u>Direct Marketing:</u> NCT of Delhi. b) <u>Contract Farming:</u> Haryana, Punjab and Chandigarh. c) <u>Private markets</u> Punjab and Chandigarh
3.	States/ UTs where there is no APMC Act and hence not requiring reforms	Bihar*, Kerala, Manipur, Andaman & Nicobar Islands, Dadra & Nagar Haveli, Daman & Diu, and Lakshadweep.
4.	States/ UTs where APMC Act already provides for the reforms	Tamil Nadu
5.	States/ UTs where administrative action is initiated for the reforms	Mizoram, Meghalaya, J&K, Uttarakhand, West Bengal, Puducherry, Jharkhand and Uttar Pradesh.

* APMC Act is repealed w.e.f. 1.9.2006.

THE DETAILS OF MARKETS/ SUB-MARKETS IN PUNE DISTRICT

S No	Market	Sub-yard	Main Commodity
1	Baramati	1. Supa	Wheat, Rice, Bajra, Jaggery
2	Bhor	2. Nasrapur 3. Kikvi	Wheat, Rice
3	Dound	4. Kedgaon 5. Yavat	Jaggery, groundnut, Red chillies , Soyabean Paddy, Cashewnut
4	Indapur	6. Bhigwan 7. Nimgaon 8. Valchandnagar 9. Bavada	Jawar, Bajara, Wheat, Gram, Piegeon pea Maize, Fish, Groundnut, Jaggery
5	Junnar	10. Belhe 11. Otur 12. Narayangaon 13. Alephata 14. Mad 15. Aptale	Onion, Potato, Rice, Wheat, Garlic, Green chillies Tomato, Groundnut
6	Khed	16. Chakan 17. Pipalgaon 18. Pait 19. Vada 20. Kude 21. Dehane	Onion, Potato, Groundnut pods, Vegetables

7	Manchar	22. Ghodegaon 23. Loni 24. Taleghar	Onion, Potato, Groundnut pods, Bajra Groundnut kernels
8	Nira	25. Saswad	Jaggery, Wheat, Bajara., Jawar, Gram Rice
9	Pune	26. Hadpasar 27. Khadaki Niyam-5 28. Pimpri Chichawad 29. Uttamnagar 30. Mangalwar Peth	Jaggery, Potato, Jawari, Bajara, Tomato, Banana, Chillies, Onion, Rice,
10	Shirur	31. Talegaon - Dhamdhare 32. Pabal 33. Jambur 34. Vadgaon Rasai 35. Kavathe Yamai	Jawar, Bajara, Wheat, Green gram, Groundnut Gram, Jaggery, Pigeon Pea, Tamarind
11	Talegaon Dabhade	36. Khadkala 37. Indori 38. Lanavala	Wheat, Rice, Bajara, Jowar, grass
12	Mulshi		Wheat, Rice, Jowar, Groundnut kernels.