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Competition and Regulation issues in Indian Agricultural Markets

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Paper prepared for:

International Workshop

Agricultural Trade Liberalisation and Domestic Market Reforms in Indian Agriculture

June 5, 2008
The Claridges Hotel, New Delhi, India

Competition and Regulatory Reform in Indian Agricultural Markets[1]

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I. Background

Agriculture continues to play an important role in the Indian economy despite its share in the total GDP has declined over time. At all India level, it has contributed 18.5 per cent of total GDP in 2006-07. At state level, its share is considerably high in Punjab (21.7 per cent), Bihar (20.4 per cent), Uttar Pradesh (18.7 per cent), Madhya Pradesh (18.4 per cent), Rajasthan (16.3 per cent) and Haryana (15.9 per cent). The declining share of agriculture GDP is expected as the economy progresses towards high growth trajectory. However, the continued dependence of large number of workers on the sector for employment is a serious concern. The limited availability of non-farm employment opportunities to absorb the surplus labour in rural areas further compounds the problem of low productivity in agriculture.

Traditionally, India's agriculture development was based on protected policy environment, which included controls on market, pricing, trade, storage, transport, and quantitative restrictions on foreign trade. The policy was primarily intended to attain long term food security and stabilise agricultural prices. During 1970s huge public investments were made on irrigation, research and extension to augment food production by increasing cropped area and productivity. The "Green Revolution" technology initially introduced in resource endowed areas in late 1960s spread into other parts of the country during 1980s. The agriculture sector observed spectacular growth of over 4 per cent per annum during 1980-81 to 1989-90. However, this growth optimism did not continue during 1990s. Several factors including slowdown in public investment, low yield growth, declining water table and environmental problems led to poor performance of agriculture.

However, two important policy changes occurred during 1990s affected incentive structure of the agriculture sector. These included domestic economic reforms and WTO Agreement on Agriculture. Though measures affecting agriculture sector were not included in economic reforms, but reduced levels of industrial protection have improved the incentives in agriculture. Further, raising per capita income has resulted in diversification of food consumption pattern (Landes and Gulati, 2003). WTO Agreement on Agriculture has forced to bind the tariff levels of agricultural commodities and to convert the non-tariff barriers into tariffs. The government also removed quantitative restrictions on imports in April 2001.

Despite policy changes in liberalising border measures controlling agriculture trade, domestic regulations continued to exist restricting the private entry and investment in this sector. The government interventions in agricultural markets cover wide range of activities. However, a series of domestic market reforms were introduced since 2000 to improve the efficiency of the marketing system and to attract private investment. These included reform of Agriculture Produce Marketing Regulation (APMR) Act, futures market, direct marketing and private

[1] **Initial notes on the new ACIAR sponsored Project: *"Facilitating Efficient Agricultural Markets in India: An Assessment of Competition and Regulatory Reform Requirements"***

markets and contract farming. Several domestic and multinational firms have entered into marketing and processing of agricultural products.

The original intention with which the regulated markets were established in the 1950s has outlived its objectives. The marketing system has to respond effectively to the changing requirements in the domestic and international market. The role of state should change from controller of the market to facilitator for ensuring competition in the marketing system. With gradual liberalisation of the markets, it is expected that the country would witness flurry of activities by the private traders. In general, output markets are characterised by large number of sellers and small number of buyers. The buyers' collusion results in affecting the interests of farmers by lowering the price. Agricultural input markets for seeds, pesticides and machinery is controlled by a few dominant players. There should be an effective competition policy to ensure efficient functioning of agricultural markets which would deliver efficient outcomes thus protecting interests of both producers and consumers. This paper provides background notes to the new ACIAR sponsored Project: *"Facilitating Efficient Agricultural Markets in India: An Assessment of Competition and Regulatory Reform Requirements"*

The paper is organised in eight sections. The second section discusses government regulations in agricultural domestic market and the third section provides reforms in agricultural market. The general performance of agriculture and issues related to agricultural marketing are presented in sections four and five, respectively. The sixth section provides competition issues in Indian agriculture. The current scenario of Indian competition law and policy and the way forward are presented in the sections seven and eight, respectively.

II. Domestic Market Regulations

The Government of India intervenes in the agricultural markets to achieve certain developmental objectives. The overarching reasons for effective government interventions are stated to be food security and price stability. The government intervenes in domestic market in various forms such as food grain procurement and distribution, price support, input subsidies and marketing legislations. The objectives and forms of intervention have undergone substantial changes over time. The interventions attempted to bring in regulation of various agricultural activities to protect the interests of producers and consumers. But, such regulations did not foster a competitive environment for fair play of market forces.

II.1. Procurement and Distribution

The Government of India's food grain policy aims at achieving reasonable price support and procurement system to increase farm income and making available food grains to consumers at reasonable price through distribution of subsidised food grains and price stabilisations/ buffer stock operations. The Food Corporation of India (FCI) is entrusted with implementation of food grains policy particularly for rice and wheat. FCI or the designated agency of state government procures paddy and wheat from the farmers at minimum support price (MSP). Additionally, FCI procures rice through a levy system from rice mills.

Depending on the state, rice mills are required to deliver to the FCI from 10 to 75 per cent of their milled rice at the prescribed levy price. Wheat and paddy/ rice procured thus are used to meet the demand for public distribution system, buffer stocks and other welfare measures. FCI's operations are intended to build buffer stocks to meet any exigency, open market sales to stabilise the domestic price and to meet the food security requirements.

In general, the official procurement operations are carried out through regulated markets set up under APMR Act. A network of regulated markets was created to promote organised marketing of agriculture produce. Except Kerala and Manipur, all the other states had enacted State level APMR Acts. In 2005, there were about 7,557 regulated markets spread across various states in India. The geographical distribution of markets was skewed towards large states: larger the size of area, more the number of markets. States like Andhra Pradesh, Bihar, Maharashtra, Madhya Pradesh, Uttar Pradesh and West Bengal had share of more than 50 per cent of total number of markets. The regulated markets handled about 20 per cent of total marketed surplus (Acharya, 2007).

During initial periods of operations, the regulated markets helped to mitigate the difficulties faced by the agricultural producers in disposing their produce. Despite several drawbacks in the functioning of regulated marketing system, they helped to provide access to the markets and increase income of the farmers. But over a period of time, these regulated markets failed to serve the interests of the farmers in a reasonable manner. Some of the rigidities incorporated in the Act bred inefficiency in the system. There are instances that agricultural produces are marketed bypassing the regulated market yards. Several studies (Acharya, 1998; Jha and Srinivasan, 2004; Gulati et al, 2005; Acharya, 2006; Chand, 2006; NCAER, 2006) and Committees (Government of India, 2001; Government of India, 2002a, Government of India, 2002b) pointed out restrictive provisions of Act and their impact on the efficient functioning of the market. Some of the obstacles posed by APMR Acts are summarised as follows:

- The restrictive legal provisions like delineation of "market area" do not promote a competitive market structure. Farmers do not have options to sell his produce at any other place/agency than regulated market. This has not facilitated the direct supply to the processing and consuming industries and has hampered the development of retail supply chain.

- The powers vested with market committees to issue and suspend/cancel the licenses granted to traders have resulted in ethical practices of arbitrage and favouritism. The basic functions of regulations, correct weighing and proper sale had not been given much importance.

- The licensed traders acquired monopoly status by forming collusion among them. The monopoly status in marketing and handling has added to marketing costs detrimental to producers and consumers. The new entrants find very difficult to operate under such collusive environment, thus stifling the competition. The monopolistic circumstances also do not allow use of latest technologies in handling, grading, packaging and transportation.

- State Agricultural Marketing Board undertakes market infrastructure development. Market committees contribute some percentage of their income to the Board in this regard. But, it is reported that funds from the Boards are siphoned off to Public Ledger Account of State governments, thereby limiting the development of market infrastructure.
- The regulated markets are mostly located in towns and remained out of reach of farmers living in far-flung areas. Though, the density of regulated markets varies across the states, but on average a market serves 459 sq. Km in the country, which is quite high.
- Market infrastructure is important for performing various marketing operations efficiently. The facilities available in the market are not adequate. For instance, only one fourth of markets have common drying yards. Cold storage facilities exist only in 9 per cent of markets and grading facilities in less than one third of the market.
- Farmers are represented in the Market Committees of regulated markets. But their voice is rarely effective and lack control over certain marketing functions.

II.2. Reform of APMR Act

Observing the inefficiency caused by licensing/registration, market controls and other interference introduced by APMR Acts, it was strongly felt that an alternative marketing system needs to be introduced. The government should facilitate smooth operations of the markets and should not control over it. Further, greater participation of private sector should be encouraged to make investments required for the development of marketing infrastructure and other supporting services.

For the first time a National Policy on Agriculture was introduced in July 2000. The National Policy aims to attain agricultural growth rate of over 4 per cent per annum in the next two decades. The National policy also underlines bringing about domestic market reforms to create favourable economic environment and to remove the distortion. Subsequently, in December 2000, an Expert Committee was constituted to suggest policy recommendations to strengthen the agricultural marketing. The Committee submitted its report in 2001. To examine findings and recommendations of the Expert Committee and to suggest measures to implement them, the Ministry of Agriculture, Government of India constituted an Inter-Ministerial Task Force on July 2001. The important recommendations/measures proposed by Task Force are as follows.

- An alternative marketing systems should be developed to promote competition by amending State APMR Acts; Central assistance should be provided for development and strengthening of general and commodity specific agricultural produce markets
- Progressive dismantling of controls and regulations under the Essential Commodities Act
- The institutional credit for marketing of crops (pledge financing) should be increased; negotiability status should be given to warehousing receipts of agricultural commodities.

- Allowing of futures trading in all agricultural commodities to improve price risk management and facilitate price discovery by amending the Forward Contracts (Regulation) Act, 1952;

These recommendations were discussed with State governments. Most of the states expressed the view that reforms in the agricultural markets were necessary to move away from the regime of controls to one of regulation and competition. Accordingly, Ministry of Agriculture, Government of India in consultation with state governments formulated a Model Act, called "The State Agricultural Produce Marketing (Development and Regulation) Act, 2003. The important features of the Model Act are given below.

- Permission for establishment of Private Markets/Yards, Direct Purchase Centres, Consumer/Farmers Markets for direct sale and promotion of Public Private Partnership in the management and development of agricultural markets in the country.
- Provisions for separate constitution of Special Markets for Commodities like Onions, Fruits, vegetables, Flowers etc.
- A separate Chapter has been included in the legislation to regulate and promote contract-farming arrangements in the country.
- It provides for prohibition of commission agency in any transaction of agricultural commodities with the producers.
- It redefines the role of present Agricultural Produce Market Committee to promote alternative marketing system, contract farming, direct marketing and farmers/consumers markets.
- It also redefines the role of State Agricultural Marketing Boards to promote standardisation, grading, quality certification, market led extension and training of farmers and market functionaries in marketing related areas.
- Provision made for resolving of disputes, if any arising between private market/ consumer market and Market Committee.
- Provision has also been made in the Act for constitution of State Agricultural Produce Marketing Standards Bureau for promotion of Grading, Standardisation and Quality Certification of agricultural produce. This would facilitate pledge financing, E-trading, direct purchasing, export, forward/future trading and introduction of negotiable warehousing receipt system in respect of agricultural commodities. (Government of India, 2003a)

All the State governments have been asked to bring changes in the APMR Acts on the lines of Model Act. The progress of the reforms in APMR Acts is given in Table 1. Several state governments have taken initiatives to adopt the model Act. Karnataka permitted the National Dairy Development Board to set up a fruit and vegetable wholesale market. State governments such as Punjab, Haryana, Madhya Pradesh and Tamil Nadu allowed contract farming arrangements to enable the farmers to sell directly to private buyers.

Table 1: Progress of Reforms in Agricultural Markets (APMR Act) as on 31.7.06

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

Source: Acharya (2006)

Besides, APMC Acts there are several other legal instruments used by both central and state governments to regulate the functioning of agricultural markets. Amongst various Acts the most pervasive one has been the Essential Commodities Act, 1955. Most of restrictions related to movement, storage, processing and stock limits are contained in this Act. The operation of ECA has created obstacles in the free flow of commodities from surplus to deficit region. This has widened the price wedge between the different parts of the country and increased the cost of marketing. ECA has prevented large scale participation of private traders in various marketing activities. In fact, private investment in large-scale storage and marketing has been non-existent due to restrictive provisions of this Act and Control Orders issued thereof. Presently, there are about 15 essential commodities are covered under this Act.

The Food Safety and Standards Act, 2006 consolidates different Acts relating to food. These Acts include The Prevention of Food Adulteration Act, 1954; The Fruits Products Order, 1955; The Meat Food Products Order, 1973; The Vegetable Oil Products (Control) Order, 1947; The Edible Oils Packaging (Regulation) Order, 1998; The Solvent Extracted Oil, De oiled Meal and Edible Flour (Control) Order, 1967; The Milk and Milk Products Order, 1992 and any other order issued under Essential Commodities Act, 1955 relating to food. In recent times, there is huge enthusiasm generated regarding forward trading of agricultural commodities and is expected to provide price stability in the domestic market.

Forward Markets (Regulation) Act, 1952 regulates the commodity futures markets in India. The Forward Markets Commission (FMC) performs the functions of advisory, monitoring, supervision and regulation in futures and forward trading. Futures' trading is conducted in exchanges owned by the private associations registered under the Act. These exchanges operate independently under the guidelines of their bylaws approved by the FMC. Futures' trading in agricultural commodities is a recent phenomenon. Government has permitted futures trading in 54 agricultural commodities with effect from April 2003. Futures are traded in 24 commodity exchanges of which 3 are national exchanges and 21 are regional exchanges. Agricultural commodities constitute over 60 per cent of total volume of trade in 2005-06. The major commodities traded in futures market in terms of decreasing order of value are guar seed, chana (gram), urad (black gram), soy oil, tur (red gram), menth oil and guar gum (Forward Markets Commission, 2008). The participation of traders and farmers in the futures trading is very much limited due to uncertainty in the policies of government of India. The government uses futures trading as one of the instruments to contain raise in prices of agricultural commodities. In February 2007, government banned futures trading in rice and wheat. Further, in May 2008, four more commodities such as potato, gram (Chana), soya oil and rubber have been added to the list of banned commodities.

II.3. Price Support

Government's price support policy provides guarantee against sharp fall in commodity prices and helps ensure reasonable income to farmers. Presently, government sets minimum support price for 25 commodities. The Commission for Agricultural Costs and Prices (CACP) recommends the MSP for these commodities. The MSP of various commodities has increased rapidly during recent years. However, the operation of MSP system has been controversial as it draws criticism from different quarters of policy makers and academics for its basis of calculation and its relevance in the present context. The minimum support prices, especially for foodgrains, are being effectively implemented only in a few surplus states like Punjab, Haryana, Uttar Pradesh and Andhra Pradesh and only a small segment of farmers in the country are benefited (Acharya, 1997; Vyas, 2003; Chand et al, 2003).

The average annual income transfer per household from the government wheat price support program at C2 Cost was found to be Rs.9,980 in Punjab and Rs. 5,790 in Haryana. In case of rice it was Rs. 3041 in Punjab and Rs. 164 in Andhra Pradesh. Further, the income transfers mainly accrue to the large farmers. Whether for rice or wheat, the average income transfer to large farmers is over 10 times greater than those received by marginal farmers. (World Bank, 2004).

II.4. Input Subsidies

The government interventions in agricultural input markets are basically intended to make available crucial inputs at affordable price and at desirable quantities. The intervention takes place in the form of input subsidies on variable inputs like fertilizer, power and irrigation water. Through subsidisation, inputs are supplied below their actual cost of production. The supply of inputs at subsidised rates was considered necessary to increase their use when new seed cum fertilizer and irrigation technology was introduced during the late sixties. However, over time the level of subsidy increased tremendously, which became a major burden in the central and state budgets. The input subsidies also led to indiscriminate use of chemical fertilizers and irrigation water and thus threaten the sustainability of agriculture in the long run. The total input subsidy was about Rs. 14,069 crores in 1993-94 and has increased to Rs. 29,117 crores in 2004-05 (Agricultural Statistics at A Glance, 2006-07).

The supply of fertilizer at subsidised rate originated with the issuance of Fertiliser Control Order, 1944. Under this order, the government administered the selling price of fertilisers with a view that the increased use of fertiliser would help augment the foodgrains production. The difference between the cost of production and distribution to farmers was termed as subsidy, which is paid out to the manufactures. Since 1977, the transfers to the manufacturers are effected through the use of Retention Prices which are plant-specific and are based on cost-plus formula. The entire amount of fertilizer subsidy is borne by the central government.

The subsidy on power is calculated as the difference between the rate charged for non-agricultural users of electricity and the rate charged for agricultural operations. Though there are variations in the rate charged by various states for agricultural purposes, the overall amount of subsidy is substantial. The power subsidy in agriculture basically applies for use of ground water for crop production. The supply of power at subsidised rates induced farmers to extract ground water excessively and is now posing serious environmental problems in different parts of the country. Besides ground water, the governments also provide irrigation through the surface water (canal water), on which subsidy is calculated as the different cost of supplying irrigation water and charges levied for its use. It is reported that user charges are so low that these cover less than 20 per cent of the operation and maintenance cost.

The policy of subsiding inputs to raise food production has achieved its objectives with some costs. It has been recognised over time that raising input subsidy will not be fiscally sustainable and threaten long term sustainability of agriculture production in many states. These subsidies encourage inefficient and discriminatory use of inputs, which lead to over-exploitation of groundwater resources, soil salinity and water logging problems and nutrient imbalances.

III. Reforms in Agriculture Market

To protect the farmers' interests and to ensure adequate availability of food grains for official procurement from the unfair practices by private grain traders, a large number of restrictions were imposed by the central and state government. However, excessive regulations of domestic marketing had resulted in increased marketing costs, risks and uncertainty, which impacted the performance of agriculture sector (World Bank, 2004). Excessive regulations dampen growth through suppressing competition in the market. Further, India has achieved food security at the national level through its interventionist policies in input and output markets. However, it is not sustainable to continue with controlled markets for long time. To achieve higher growth and move the sector in long term sustainable growth trajectory, market reforms in agriculture need to be strengthened.

The government of India initiated domestic market reforms in agriculture since 2000. These included improving the performance of commodity markets, reforms in APMR Act, reforms in price policy, rationalisation of input subsidies, increasing public investments, operation of futures trading and encouraging participation of private sector. Necessary changes have been effected to progressively dismantling controls and regulations under Essential Commodities Act. In February 2002, Government of India brought out Removal of (Licensing requirements, stock limits and movement restrictions) on Specified Foodstuffs Order. This order removed all restrictions and licensing of dealers on purchase, stocking, transport of the specified commodities viz., wheat, paddy/rice, coarse grains, sugar, edible oil seeds and edible oils. It also specifies that issuing of any order by the states/UTs under ECA for regulating licensing, storage, transport and distribution of any of the specified commodities will require the prior concurrence of the Central Government.

The trade policy reforms progressed during 1990s to facilitate greater integration of agriculture sector with global market. Quantitative restrictions on import of agriculture commodities were removed in April 2001. The list of commodities which were earlier canalised through State Trading Enterprises was trimmed down. The average import tariffs were also reduced considerably over time. Agricultural export policies were liberalised in 1994. It included relaxation in export quotas, abolition of minimum export prices and increased availability of credit. To boost agricultural exports, “Vishesh Krishi Upaj Yojana” (Special Agricultural Produce Scheme) was introduced in EXIM policy 2002-07 with special incentives. However, the Government often tampers with export policies to make available commodity supplies to stabilise the price level in the domestic market.

IV. Production Performance of Agriculture

Table 2: Growth in Area, Production and Yield of Important crops (% per annum)

Particulars	1985-86 to 1995-96			1995-96 to 2004-05		
	Area	Production	Yield	Area	Production	Yield
Foodgrains	-0.38	2.74	3.14	-0.35	0.55	0.90
Cereals	-0.38	2.92	3.31	-0.39	0.61	1.00
Rice	0.59	3.00	2.40	-0.37	0.45	0.82
Wheat	1.03	3.67	2.61	0.11	0.67	0.56
Pulses	-0.41	0.61	1.03	-0.17	-0.24	-0.07
Oilseeds	3.76	7.56	3.67	-1.03	-0.83	0.20

Source: Agriculture Statistics at a Glance, various issues, Ministry of Agriculture

The trend growth rates for the periods 1985-86 to 1995-96 and 1995-96 to 2004-05 are presented in Table 2. These periods correspond to pre and post liberalisation periods. The area under food grains registered negative growth rates during both the periods. The growth rates in production and yield of foodgrains were impressive at 2.7 per cent and 3.1 per cent per annum, respectively during pre-liberalisation period. However, there was significant decline in these rates during the post-liberalisation period. The similar pattern is observed for all the major crops including cereals, pulses and oilseeds. The decline in growth rates indicates the lack on new technological breakthrough to improve the productivity.

The slowdown in the growth of agriculture is a serious concern. This is in contrast to growth in industry and services sectors, which grew at 7 per cent and 8 per cent, respectively during 1990-91 to 2006-07. In fact, the growth gap between agriculture and non-agriculture sector has began to widen since 1981-82 and more pronounced since 1996-97 (Economic Survey, 2007-08). Table 3 provides an assessment of the trend growth rates of various parameters that contribute to agricultural growth. It may be observed that except for credit supply to the agricultural sector all other parameters have posted deceleration during the last decade.

Table 3: Growth in Important Parameters of Agriculture

Items	1980-81 to 1990-91	1990-91 to 1996-97	1996-97 to 2005-06
Technology @	3.3	2.8	0.0
Public sector net fixed capital stock	3.9	1.9	1.4*
Private Sector net fixed capital stock	0.6	2.2	1.2*
Gross irrigated area	2.3	2.6	0.5*
Terms of trade	0.2	1.0	-1.7*
Credit supply	3.7	7.5	14.4*
NPK use	8.2	2.5	2.3
Total cropped area	0.4	0.4	-0.1
Net sown area	-0.1	0.0	-0.2

@ Yield potential of new varieties of paddy, wheat, maize, groundnut, and rapeseed and mustard
* Data upto 2003-04
Source: Economic Survey, 2007-08, Ministry of Finance

Further, high rural population exerts pressure on land resulting in fragmentation of operational holdings. According to Agriculture Census (2000-01), there are about 121 million operational holdings in India. Marginal and smallholdings (<2 ha) accounted for over 80 per cent of total operational holdings. The number of large farms (>10) have declined from 1.2 per cent to 1.0 per cent between 1995-96 and 2000-01. A disturbing trend of falling average size of operational holding has been observed across the farm sizes and has reached 1.32 ha in 2000-01 from 1.32 ha in 1995-96. Agriculture is dominated by small holders, who should be enabled to get a fair deal in the market through effective policy mechanism.

V. Agricultural Marketing

V.1. Performance of Grain Market

Agricultural marketing system has undergone transformation over time to meet the rapidly changing needs of the other sectors of the economy, advent of information technology, greater direct access to domestic and international markets by farmers and consumption requirements. Efficient agricultural markets are important to transmit the price signals effectively to producers to take decision on production, sale, storage and input purchases.

This will facilitate farmers to move close to the domestic and international consumers. Functioning efficient agricultural markets would protect the consumers through reasonable price for their produce. To foster competitive marketing system, the government should reorient its role in regulation to create enabling environment for greater participation of private players.

FCI procures rice and wheat at minimum support price announced by the government. Almost all the states grow rice and some grow wheat. However, FCI procurement operations are concentrated only in a few states (Table 4 and 5). FCI procures rice from over 20 states in India. However, Punjab, Andhra Pradesh and Uttar Pradesh accounted for about two-thirds of total procurement in 2004-05. In Punjab and Haryana, FCI purchases almost 100 per cent of total market arrivals (World Bank, 2004).

In the case of wheat, the average marketed surplus is estimated to higher in Gujarat (93.6 per cent) followed by Punjab (81.3 Per cent) and Haryana (74.6 per cent). There are other wheat growing states like Uttar Pradesh, Madhya Pradesh, Rajasthan, Bihar and Himachal Pradesh. But, wheat procurement is concentrated in three states viz., Punjab, Haryana and Uttar Pradesh. While Punjab accounted for about 55 per cent of total procurement, Haryana and Uttar Pradesh accounted for 30 per cent and 10 per cent, respectively.

Table 4: Marketed surplus and government procurement of rice

	Marketed Surplus (%)		% of government procurement	
States	2003-04	2004-05	2003-04	2004-05
Andhra Pradesh	85.2	83.1	18.5	15.8
Assam	39.6	41.3		
Bihar	66.1	73.5		
Haryana	94.9	98.2	5.8	6.7
Karnataka	79.5	84.4		
Kerala	58.5	64.6		
Madhya Pradesh	65.4	65.1	0.5	0.2
Orissa	61.9	65.4	6.0	6.4
Punjab	98.7	97.7	37.9	36.9
Tamil Nadu	78.1	78.4	0.9	2.6
Uttar Pradesh	90.5	46.5	11.2	12.0
West Bengal	55.6	60.4	4.1	3.8

Source: Agriculture Statistics At a Glance, 2006-07

Table 5: Marketed surplus and government procurement of wheat

	Marketed Surplus (%)		% of government procurement	
States	2003-04	2004-05	2003-04	2004-05
Bihar	62.04	70.12		
Gujarat	80.92	93.62		
Haryana	75.80	74.64	32.4	30.5
Himachal Pradesh	30.09	29.49		
Madhya Pradesh	67.29	74.54		
Punjab	83.07	81.34	56.6	55.0
Rajasthan	73.03	27.20	1.6	1.7
Uttar Pradesh	55.48	50.21	7.7	10.4

Source: Agriculture Statistics At a Glance, 2006-07

Agricultural markets are characterised by large number of sellers and small number of buyers. Though, government controls most of the activities related to marketing of agricultural products, the private trade and agro-processors continued to dominate handling large quantities of crop produce. Private traders handled about 80 per cent of marketed surplus of agricultural products (Acharya, 2004). In 2000-01, private traders handled more than 100 million tonnes of cereals, which constituted 71.1 per cent of total marketed surplus (Acharya, 2006). Government permitted establishment of private markets and direct purchase centres by private firms under Model Act. As a result big private traders such as Cargill, Reliance and ITC entered in a big way to purchase about 3.9 million Tonnes of wheat in 2007.

Based on the survey of regulated wheat market in Narela (Delhi), Banerji and Meenakshi (2002) observed that wheat market had high degree of buyer concentration and collusion and thus cannot be characterised as competitive. They found that three largest buyers accounted for about 45 per cent of market arrival. Further, wheat market displayed collusion between traders in such that when one of them bids, the other two did not participate in the auctioning process. Collusion depressed the market price appreciably, because the two traders with highest valuations are part of the cartel, which disallowed their bidding simultaneously for a particular lot of grain. Similarly in paddy markets in Panipat (Haryana), Meenakshi and Banerji (2005) found evidence of collusive behaviour of traders. Cartel formation affects not only price received by the farmers..

V.2. Direct Marketing through Farmers' Market

State governments encourage new channels of marketing so as to reduce involvement of intermediaries middle between farmers and consumers. Under direct marketing, farmers sell their produce directly to the consumers. It was developed mainly to deal with perishable commodities like vegetables, fruits and flowers. Thus, farmers' markets facilitate the sale of farmers' produce directly to the consumers. The physical infrastructure is provided by the state governments. Farmers bring their produce to the market yard daily and transactions take place on the price fixed on a daily basis by the market committee. Such initiatives include

Apni Mandi in Punjab and Haryana, Rythu Bazaars in Andhra Pradesh, Uzhavar Santhaigal in Tamil Nadu, Krushak Bazaars in Orissa and Hadaspur Vegetable Market in Pune. It is estimated that about 10 per cent of total produce is marketed through direct marketing (Government of India, 2007).

V.3. Co-operative Marketing

In the marketing and processing of agricultural products, co-operatives organisations play an important role. Co-operatives have been successful in processing of sugar, paddy, milk and cotton (Acharya, 2007). Sugar co-operatives, numbering around 203 account for about 55 per cent of total sugar production. Similarly, co-operative spinning mills (173) produce about 22 per cent of yarn and fabric production. There are oilseed co-operative units, which act as marketing outlet and input delivery system for oilseed growers. The performance of oilseed co-operative processing units is dismal. They account for only 1.8 per cent of expelling capacity, 2.1 per cent of solvent extraction capacity and 18 per cent of refining. Private processors dominate and function well when compared to co-operative sectors, which suffered due to lack of working capital to purchase seeds to utilise their capacity.

V.4. Contract Farming

Another channel of linking farmers directly with consumers and agro-processors is through contract farming. Several domestic and multinational firms have entered into agreement with farmers to produce agricultural commodities of desired quality with assurance of procurement at pre-announced prices. Contract farming helps farmers to reduce price risk, remove input supply bottlenecks, technology constraints and access to viable procurement options. Contract farming is also seen as medium for diversification of cropping system in the country. The Model Act recognises and encourages its expansion in the country. In 2007, total area under contract farming was 426 thousand hectares (Table 6). The area under contract farming varies across the states. The percent area under contract farming in gross cropped area was the highest in Tamil Nadu (4.0 per cent) followed by Mizoram (2.6 per cent) and Punjab (1.5 per cent).

Table 6: Statewise area under contract farming in 2007

States	Contract Farming (Hectares)	% Contract farming in GCA*
Bihar	20	-
Assam	160	-
Haryana	1416	0.02
Goa	1924	1.14
Gujarat	2000	0.02
Mizoram	2447	2.55
Orissa	5900	0.07
Punjab	121457	1.51
Tamil Nadu	236610	4.02
India	425834	0.22

* GCA data for 2004-05 and - negligible
Source: www. Indiastat.com

The emergence of supermarkets has added new dimensions to agricultural marketing system in India. The supermarket chains purchase large volume of agricultural produce either directly from individual farmers, wholesalers or through specialised suppliers. There are concerns that small producers are excluded from such supply chains. It was because that small and marginal farmer is unable to undertake production of high value agricultural products like vegetables and fruits due to lack of resources with them (Singh, 2007). The medium and large farmers have mostly benefited from the operations of supermarkets chain.

V.5. Performance of Input Markets

Input markets are characterised by large number of buyers (farmers) and relatively small number of sellers (dealers). Here, we review performance of select input markets for seeds, agricultural machinery and pesticides. The state government supplies these inputs at subsidised rates to marginal and small farmers. But, in general these markets are largely controlled by the private producers/dealers.

Indian seed industry has grown phenomenally over time and is valued at about US $900 in 2008 (www.dacnet.nic.in). The public and private sectors have sizeable business covering production and marketing of seeds. The public sector consists of National Seeds Corporation, State Farms Corporation of India and thirteen State Seed Corporations. The private sector comprises about 200 private seed companies, which include domestic and multinational companies. These companies account for 70 per cent of the market in terms of market turnover. The contribution of private sector research has steadily increased over time. Subsidiaries and joint ventures with multinational companies accounted for about 30 per cent of total private seed industry research (Gadwal, 2003). Domestic private and multinational companies mainly focus on creating hybrids for oilseeds, maize, cotton and vegetable crops.

Farmers increasingly rely on market for seeds. The use of purchased seed has increased over time. Government does not intervene in pricing of hybrids produced by private companies. For orderly development of the sector, there are legislations enacted to provide competitive environment. These included The Seed Act, 1966; Seed Rules, 1986; Seed (Control) Order, 1983 and New Seed Legislation, 2002.

The production and sale of tractors used in agricultural operations have increased over time. There are 13 major tractor manufactures in India and produce about 250,000 tractors annually (Singh, 2005). These tractors are available in different horse powers ranging from 25 to 55 horse power. The use of tractors is highly concentrated in Punjab, Haryana and Western UP accounting for about 55 per cent of total sales in India. The sale of tractors is also increasing in the states of Maharashtra, Tamil Nadu, Karnataka and Andhra Pradesh.

The agrochemicals industry has grown tremendously during the recent years with market value of Rs.4500 crores as on March 2008 (Ministry of Chemicals and Fertilizers, Government of India). India is one of the dynamic generic pesticide manufactures in the world. The pesticide industry comprises 125 producers including 10 multinational companies. These companies manufacture more than 60 technical grades of pesticides.

VI. Competition Issues in Indian Agriculture

India's traditional marketing system has witnessed significant changes since 2000. These included emergence of private markets, improved commodity supply chains and supermarkets and futures trading. Both the central and state governments are in the process of liberalising regulatory regime to promote healthy competition in agricultural markets. There were about 222 legislative measures undertaken to regulate the functioning of agricultural markets (Acharya, 2006). Several of these acts have been repealed, lifted or consolidated. Still, the existing regulations tend to suppress competition. A particular regulation may be necessary if such regulation is required to deliver efficient outcomes, when there is market failure. However, a comprehensive review of agricultural market regulations needs to be undertaken to assess whether it has achieved its intended objectives.

Domestic agricultural markets have increasingly been opened for private sector participation. However, the central and state government agencies have flexibility to impose restrictions on certain aspects of agricultural marketing. Competition issues become significantly important as these will not only affect diverse farm producers and also consumers in getting a fair deal. In view of emergence of improved commodity supply chains, competitive markets may bridge the resource gap between the small and large farmers. Competition policy has, in fact, a major role in generating and keeping markets competitive (Arguello C and Lozano O de Z, 2007). Competition law and policy have important role to play in the development of dynamic agricultural sector in India.

Competition is required in many areas in the agriculture policy activities. Enforcement of competition should not create tension with sectoral policy, which aims at protecting income of select rural groups through transfer of income from other agents in the economy or through regulations. The potential clash between competition policy and sectoral policy may negatively affect the competition in agricultural sector. This is also likely to affect the delivery of outcome through sectoral policy.

There several ways in which market power can be generated in agricultural sector. Agricultural producers are diverse and unorganised to influence price of a commodity in a particular market. In the grain market, a few traders can potentially depress the price by forming a cartel. Agrochemical and other input markets are highly concentrated. This may prevent the producers to substitute less expensive inputs for highly expensive ones, which is important for improving the efficiency of farm operations. Though, the high degree of market concentration will not only lead anti-competitive behaviour, but also tend to create conditions favourable for asymmetric bargaining power.

The producers may lose bargaining power in the case of vertically integrated markets also. The scale of operations of agro-business firms involved in downstream and upstream activities and high concentration will favour price fixing arrangements. Mergers and acquisitions of supermarkets would create dominant positions in the market, thus affecting interests of producers and consumers. Further, lack of market information, technological advancement, aggressive marketing strategies and barriers to entry may also create market power.

There is need for having watchful competition and regulation system to oversee agricultural markets. This thus brings us to having appropriate law in place since inadequate and inappropriate legal framework can distort and reduce the efficiency of agricultural markets, increase the cost to the participants and severely stunt the development of healthy private markets (Cullinan 1999). There needs to be appropriate law to accomplish economic regulatory functions, which seek to promote, guide and discipline the establishment and operation of markets. These functions may be performed by a wide range of laws dealing with competition, uniform weights and measures, food quality standards and taxes.

Agricultural markets are typically characterised by lack of competition when the agro-commercial firms deal with producers and consumers though competition among these firms is generally relatively stiff. This is a reflection of collusive behaviour of the buyers and imperfections in retail sales (Chand 2005). Indian agricultural markets have performed inefficiently due to state intervention in prices, lack of entry of private business firms, particularly at the level of purchasing farm produce, Agricultural Produce Market Committee (APMR) Act, movement restrictions, essential commodities act (ECA), collusions and cartels formed by private transporters, lack of effective regulation of retail sales (Jha and Srinivasan 2004).

While it is important to liberalise all the various factors that affect the entire chain of agricultural marketing mentioned above so as to make their operations relatively efficient, we shall focus our attention to the first stage in which farmers sell their produce to the buyers. It is at this stage that appropriate grading and quality certification institutions need to be established. However, it is equally important and desirable that efficiency issues of transportation, processing, storage and selling should also be addressed to bring in private firms and investment. This would address issues of infrastructure investment in rural roads and storage capacities including cold stores, making transportation competitive through checking and eliminating truckers' collusive behaviour through regulation, eliminating movement restrictions and ECA, regulating competition at the stage of retail sale.

Reforms in Indian agricultural markets need to be introduced with caution. A proper regulation and competition regimen needs to be put in place before liberalising agricultural markets in favour of major privatisation. Due diligence needs to be adopted lest undesirable anti-competitive behaviour may offset the likely gains. There has been evidence that a greater number of market participants does not always lead to superior outcomes (Poulton et al 2004). Agricultural markets tend to suffer from vertical market failures, which impair the performance of input markets and output supply chains (Kydd and Dorward 2003). Such market failures result from failures to co-ordinate measures designed to make various market players, within a market system, act interactively to achieve some common goal(s).

Consequently, there may be lack of investments by a group of market players, say farmers, due to possible absence of complementary investments by other players at different stages, say input providers, traders and processors, in the supply chain. Such co-ordination failures lead to situations in which everyone is worse off than if there were efficient and successful co-ordination. This would obviously need mutually reinforcing and benefiting investments by farmers or farmer-groups as well as input providers, traders and processors. Such co-ordination will not be achieved by market mechanisms alone. Non-market co-ordination would be equally important. For example, a farmers-group might enter into an interlocking arrangement with relatively powerful trader or processor for making required new investments by all parties.

VII. Current Scenario of Indian Competition Law and Policy

In economics, competition is defined as rivalry among firms for a larger market share, which may stimulate innovation, encourage efficiency, or lower prices for the consumers. Competition in fact, induces firms to develop new products, services and technologies, which provides consumers better varieties of products. Competition policy is an important component of overall economic policy of any country. It intends to promote efficient allocation of resources and to maximise the social welfare. The competition policy attempts to put in place a set of policies that promote competition in the market, such as liberalised industrial policy, trade policy, free entry and exit and reduced domestic controls. The another important aspect of competition policy is a law and its effective enforcement to prohibit anti-competitive behaviour of firms, prevent abuse of dominant position, regulate anti-competitive mergers and reduce unwarranted regulatory controls by the government. Thus, a competition law and a competition policy are required to ensure fair play of market forces in delivering efficient outcomes. While competition law prohibits and penalises anti-competitive behaviour of enterprises or market failure, competition policy aims at creating a framework of policies and regulations that will facilitate competitive outcomes in the market (Government of India, 2007b).

The macroeconomic general economic reforms were introduced in 1991 to provide greater role to the market forces in determining efficient allocation of resources. Later, the sectoral reforms were also introduced, but the progress across the sectors remains inconsistent. There are several policies and regulations that may affect competition. These regulations and laws are redundant and do not foster competitive environment in the economy. A comprehensive competition policy should address these and subject the regulations to "public benefit test" as provided under Hilmer Reforms for National Competition Policy (NPC) of Australia (Quiggin, 1997). In the case of public sector, the objective of the NPC is to achieve the "most efficient provision of publically provided goods and services through reforms designed to minimise restrictions on competition and promote competitive neutrality". The "public benefits test" might justify the maintenance of any public policy even if it *prima facie* restricts competition.

The evolution of competition act in India has been gradual. The Competition Act, 2002 replaces the Monopolies and Restrictive Trade Practices Act, 1969. Though, the competition law is in force, but an effective competition policy is yet to be implemented. The salient features of competition law and the proposed competition policy for India are discussed here.

VII.1. Competition Act, 2002

The competition act seeks to (i) prohibit anti-competitive agreements, (ii) prohibit abuse of dominant position by enterprise and (iii) regulate combinations. The Act also makes provision to undertake competition advocacy, which include periodic review, create awareness and imparting training on competition issues. Under this Act, the Competition Commission of India (CCI) has been established to enquire into any alleged contravention of the provisions contained in the Act. The CCI has been entrusted with the duty to eliminate practices having adverse effect on competition, promote and sustain competition in markets, protect the interests of consumers and to ensure freedom of trade carried on by other participants.

Under anti-competitive agreements, the Act prohibits agreements entered into between enterprises or persons or their associations including cartels, relating to production, supply, distribution, storage, acquisition or control of goods or provision of services, which cause or are likely to cause an appreciable adverse effect on competition within India. The forms of agreement may include tie-in arrangement, exclusive supply agreement, exclusive distribution agreement, refusal to deal and resale price maintenance.

The Act prohibits abuse of dominant position when an enterprise imposes unfair or discriminatory condition in purchase or sale of goods or services; or prices in purchase or sale including predatory prices of goods or services. The dominance is considered to be abused if it limits or restricts production of goods or provision of services or technical or scientific developments, indulges in a way which denies market access, prevails up on contracting parties to be contractually bound which are not connected with the subject of contracts and uses dominant position in one relevant market to enter or protect other relevant market.

The Competition Act has provisions to regulate "combinations" which includes acquisitions, mergers or amalgamation of enterprises. The act regulates combinations exceeding threshold limits in terms of prescribed turnover or assets. Further, the operation of Act is not confined to transactions strictly within the boundaries of India but also such transactions involving entities established overseas.

VII.2. National Competition Policy

The government is pushing forward reforms in various sectors of the economy. These reforms will not be complete unless there is an effective National Competition Policy, which harmonises all other policies and removes unwarranted government legislation. The competition policy will unify the national market removing the barriers on trade in goods and services. The objectives of the proposed National Competition Policy as given in Government of India (2007b) are given below.

1. To persevere the competitive process, to protect competition and to encourage competition in the domestic market so as to optimize efficiency and maximise consumer welfare. This would also make domestic firms competitive globally.

2. To promote, build and sustain strong competition culture within the country through creating awareness, imparting training and consequently capacity building of stakeholders including law makers, judiciary, policy makers, business, trade associations, consumers and their associations.

3. To achiever harmonisation in policies, laws and procedures of the Central government, state governments and sub-State Authorities in so far as the competition dimensions are concerned with focus on greater reliance on well functioning markets.

4. To ensure competition in regulated sectors and to ensure institutional mechanism for synergized relationship between the sectoral regulators and the CCI,

5. To strive for single national market as fragmented markets are impediments to competition.

The competition law and policy is applicable to all the sectors of economy. The Report of the Working Group on Competition Policy mentioned explicitly the need for competition policy in agriculture sector. It states that "there is huge potential to advance competition in the agricultural sector both from the demand as well as from the supply side. On the demand side, the model Agricultural Produce Marketing Committee Act is likely to provide a framework, which will abolish the mandi tax and permit the farmers to sell their produce outside the mandi so that the farmers will get a legitimate share in the final value of their produce. It will also facilitate free movement of agricultural produce between the states. This is expected to help the agricultural sector to grow faster and also augment rural income and employment. On the supply side, competition in supply of inputs such as seeds, fertilisers, pesticides and credit may be augmented which will facilitate timely, effective and adequate supply of agricultural inputs in the country and will lead to greater efficiency through more realistic pricing, conservation of input use and more rational crop selection".

VIII. The Way Forward

India's agriculture sector faces major adjustment pressures as it is increasingly exposed to international market forces. Its rapid growth since the beginning of the green revolution, in the mid sixties, occurred in a protected environment facilitated by policy support, new production technologies and public investment in irrigation infrastructure. The sector has also been heavily shaped by India's national goals of long term food security and price stabilization.

A key challenge over the medium term is therefore the development of agricultural policy settings, which enable farmers to efficiently adjust to a less regulated marketing environment. However, these reforms need to be introduced with caution and in conjunction with an appropriate competition policy regime to avoid anti-competitive outcomes eroding the gains from market reform.

The ACIAR-sponsored project on “Agricultural Trade Liberalisation and Domestic Market Reforms in Indian Agriculture” culminating in this International Workshop has assessed the gains from international and domestic market reforms and found that trade policy reform must be complemented by ‘behind-the-border’ reforms if government objectives of improved productivity, higher rural employment and incomes and enhanced food security are to be met.

While competition law and associated institutions will be critical to achieving efficient market outcomes in India, it is also the case that competition will be best served if farmers are in a position to adjust their business operations in response to ‘low’ or ‘unfair’ prices from buyers. It is important to identify policy and regulatory settings, in areas such as input markets, that may be impeding farmer adjustment, and hence, their ability to compete in less regulated commodity markets. All regulatory/legislative measures that restrict competition should be reviewed under “market failure” principle. For this, the institutions that implement such regulations should be open-minded to frame broader principles for such review.

NCAER and NSW Department of Primary Industries, Government of Australia with the support from Australian Centre for Agricultural Research (ACIAR) has initiated a major project on “Facilitating Efficient Agricultural Markets in India: An Assessment of Competition and Regulatory Reform Requirements” this year. The aim of this project is to help ensuring the gains from international and domestic market reforms translate into real income gains for Indian farmers by facilitating the development of appropriate pro-competition policy settings. The project will be undertaken collaboratively between India’s National Council of Applied Economic Research (NCAER), NSW Department of Primary Industries, the Economics and Finance Department of La Trobe University, the Economics Department of the University of Melbourne and the Australia and New Zealand School of Government.

The objectives of the project include:

Aim: To ensure that the gains from international and domestic market reforms translate into real income gains to Indian farmers by facilitating the development of appropriate pro-competition policy settings.

Objectives:

1. To identify, categorise and document agricultural marketing and competition policy settings in India and a selection of other developing countries (Brazil, Russia, China and South Africa). Emphasis will be placed on identifying relevant policy objectives, policy reform processes and the ‘market failure’ principles driving those changes in order to facilitate analysis and debate in relation to the necessary elements of competition policy framework that might apply in India.

2. To undertake a policy comparison across those same developing countries of trends in agricultural sector regulation more broadly and assess efforts being made to facilitate farm

level adjustment. Successes and failures will be identified to evaluate the scope for lessons learnt to be applied in an Indian contest.

3. Using the country comparisons and an appropriate public policy framework, undertake 2-3 industry case studies, which identify current policy settings, and how an alternative competition policy and regulatory reform initiatives would apply. The focus of these studies will be (i) wheat in Punjab; and (ii) horticulture products in West Bengal (rice may be studied in Andhra Pradesh).

4. To formulate a set of policy recommendations that guide and provide support for the introduction of necessary competition and regulatory reforms.

Project outputs will include two policy reports – one on the country comparisons and one on the case study analyses which will culminate in recommendations to government about the introduction of competition policy in India. Key government agencies and academics will be directly involved in the project through an Advisory Committee. Project information and outcomes will be disseminated through Committee members and associated workshops as well as directly to government agencies.

By providing and convincing policy briefs to key policy making target audiences this project will contribute to enhancing the efficiency of agricultural markets, the project will also provide a policy framework and ongoing guidance to policy makers in India in relation to the range of available competition policy mechanisms and their application in particular circumstances. These outcomes are a necessary step in facilitating a considered transition to more open agricultural markets. Experiences in Australia and elsewhere shows that improved market access is highly conducive to increased farm incomes and a range a range of associated benefits such as food and livelihood security, enhanced regional development and improved regional employment opportunities.

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