

**COMPARISON OF PERIODIC AND REGULATED MARKETS WITH
SPECIAL REFERENCE TO PERISHABLE COMMODITIES: A CASE
STUDY OF HARDOI DISTRICT (UTTAR PRADESH)**

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Master of Philosophy

By

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CERTIFICATE

This is certify that this dissertation entitled “Comparison of Periodic and Regulated Markets with Special Reference to Perishable Commodities: A Case Study of Hardoi District (Uttar Pradesh)” submitted by PANKAJ KUMAR in partial fulfilment of the requirement for the award of the degree of MASTER OF PHILOSOPHY has not been previously submitted for any degree of this any other University and Institution, and is my own work.

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Abbreviations

APMC	Agricultural Produce Marketing Committee
BPL	Below Poverty Line
CSO	Central Statistics Office
DMI	Directorate of Marketing and Inspection
ESD	Directorate of Economics and Statistics
FAO	Food and Agriculture Organisation
GDP	Gross Domestic Product
GIS	Geographical Information System
HDI	Human Development Index
ICAR	Indian Council of Agricultural Research
IIPS	International Institute for Population Science
NAFED	National Agricultural Co-operative Marketing Federation of India
NHB	National Horticulture Board
NIAM	National Institute of Agricultural Marketing
OBC	Other Backward
QGIS	Quantum Geographical Information System
SC	Scheduled Caste
SPSS	Statistical Package for the Social Science
ST	Scheduled Tribe
STATA	Statistics and Data

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CHAPTER I

Conceptual and Methodological Framework of the study area

1.1 Introduction

This study deals with the comparative analysis of periodic and regulated markets in Hardoi district of Uttar Pradesh. These markets are important for both producers as well as buyers of commodities. They provide return to producers and a range of commodities to buyers. The presents study touches upon comparative issues of regulated and periodic markets, namely their characteristic features, the socio economic conditions of market participants focusing on sellers, and lastly accessibility of perishable commodities of regulated markets in Sandila and Hardoi and surrounding the periodic markets.

1.2 Meaning and concept of Periodic and Regulated Markets

Agricultural production has increased since green revolution, but India is still facing many problems like lack of proper marketing channel, a large part of the existing network being connected to periodic and regulated markets. Agricultural marketing plays an important role not only in stimulating production and commercialisation but also in accelerating the pace of economic development in rural areas. It acts not only as an economic link between the producer and consumer; but also maintains equilibrium between demand and supply. There are two types of markets, periodic and regulated markets. Periodic market centres are mostly situated in rural areas. These markets are organised periodically after a certain interval of time. These markets are the best option for marginal (having 1 hectare or less than 2.5 acres land holding) and small farmers (having 2 hectares or less than 5 acres land holding). These markets give them opportunity to earn from their surplus perishable commodities, even though the volume of the product is less.

Regulated markets are regulated by government and market committees, and the major participants in these markets are medium and large farmers because they have large landholding in terms of marginal and small farmer. Periodic markets are mainly unorganised as they are not regulated by any statute of government and main a time these markets are held following a decision of an individual or the community. Periodic markets also lacks important marketing infrastructure. On the other hand, regulated markets are governed by an act of

government. Both types of market systems are important in a developing country like India.

About 83.3 crores people live in rural areas (census 2011). Agriculture is the dominant occupation of population in rural areas. Agriculture contributes 13.9 % of GDP while providing employment to about 54.6 % of workforce. Productivity of agriculture is still very low as compared to developed countries like USA and Japan. One reason behind low productivity is incentives coming out of low returns that farmers get. Low return does not give farmers the incentive to invest in agriculture. One of the major reasons behind farmers getting low returns is absence of market, where farmers can directly negotiate with the buyers and fetch reasonable and appropriate profits. Periodic markets are places, where farmers assemble for selling their products and buying the commodities they need.

Hoddar (1965) has described market centres as an authorized public gathering of buyers and sellers for purchasing and selling commodities and meeting at desired places at regular intervals. *Dixit, (1984)*, has defined marketing as buying and selling function by management. Marketing is also a geographical phenomenon of exchanging goods and services. Moreover market centres performs function of exchange of goods and services and ideas and information. These centres are also places of social intermixing.

1.2.1 Periodic Market

Periodic markets are prominent marketing centres in rural areas. These centres are important for exchange of commodities and services. These markets are held for one or more days in a week. They are held for minimum one day to maximum five days in a week, or once or twice in month and sometimes in a year. Periodic markets are interconnected and sometimes also connected to nearby regulated market. So, periodic markets provide market network on the grassroots level which are important for developing country like ours. These markets are better options for farmer's family and people, who are living in rural areas. Periodic markets are only one option in rural area for fulfilment the need of markets for rural people, because in regular markets are located away from a rural settlement. Periodic markets are organised very close to villages, thus periodic market seems like marketing facility in courtyard of farmers, and hence this market is preferred by most of the farmers.

Periodic market is a fundamental aspect of marketing geography and it plays a major role in rural development. Periodic markets are the point, where the surplus products of the rural areas are exchanged. Some of the surpluses find their way to the urban centres. These commodities are manufactured there and the manufactured products from urban centre again

get back to the rural areas. It is fact that the exchange system of the periodic market is very diversified and compact. Periodic market is the entry point of local produced goods like that perishable goods, food grain, pulses, and oilseeds etc. It has become large marketing networks which are estimated to more than 21,000 to a maximum of 47000 in India. Periodic markets are mostly unregulated, but in some in some instances it administered by some individual or community. It is a fact that most of population of developing nations like India live in villages with agriculture as their chief economic activity (*xii five year plan of Planning commission, 2011*). Throughout the developing world, periodic market usually appears in areas having low purchasing power, poor transport system, poorly utilized or unutilized resource bases and low population density. The periodic market is related to the mobility of individuals in rural areas. It will not be incorrect to assert that, periodic market centres are the growth point of the rural areas in India. It is also one of the pillars of Indian economy.

The origin of traditional periodic markets can be traced back to late Neolithic Age ,when settled agriculture and evolution of sophisticated agricultural provided the early human beings with surplus production, which was used to be exchanged in return of some other necessary commodities (*Manjula Borthakar, 1992*). In the initial stages when the self-sustained village economy was in vogue, the exchange of goods and services was carried out within the respective villages. Periodic markets are very prestigious place in the sense of people's gathering and as a place of lager transaction. But condition of these places is very poor; government gives no attention towards planning, organization and networking between rural periodic markets and urban regulated markets. These places can be very important places for spreading awareness to the grassroots' about many programs and policy implemented by government, which are meant for developing rural folk, this awareness can increase the trust of people in government, thus it can be observed that developing periodic markets also has its own side effects in this case it is strengthening of democracy apart from economic development. It is already evident, that markets have plays major role in urban as well as rural areas, because the circulation of economy through the market channels.

1.2.2 Regulated market

Regulated markets are mostly situated in urban areas or large villages. These markets are established by the state government. Regulated markets are established under the state agricultural produce marketing committee (APMC) acts 2003 in order to manage wholesale

transactions of agricultural produce. Unlike periodic markets are organised 7 days in a week. Regulated markets are non periodic entities have not undergone evolutionary process of market systems (*Wanamali 1981, Hugar 1984, Nayak 1994, Mulimani, 2002*). These market systems are markets, where large number of commission agents or intermediaries and traders are involved. This marketing system is somewhat different, here commission agents or intermediaries play major role in a transaction between buyers and sellers, contrastingly in periodic markets dominants are farmer and consumer. The role of intermediary is very important in this market, firstly a small agent buyers and sellers in another wholesale market, then this commodity is purchased again by another agent and then sold in regulated market. There may be more stages repeating the same business, this only increases the cost of commodities. This disability is however absent in case of periodic market.

It is a known fact that the marketing channels in regulated markets are very complicated and also dominated by the traders, these traders' tries to fetch high margins than producer-sellers or farmers. In India some most important commodities are regulated by the government like in the Maharashtra, cotton, onion, potatoes are some commodities, that are regulated whereas other commodities are not regulated by the govt. through regulated market like vegetables, food grain, pulses, and oilseed. Today about 7320 regulated market (*Economic survey 2014-15*) are there in India, which function under the ambit of model APMC act 2003. The advent of regulated markets has helped in mitigating the factors limiting of producers-seller interaction at wholesale assembling level.

1.3 Major Difference of Periodic Market and Regulated Market

There are some significant differences between periodic markets and regulated markets in spite of the fact that they are both centres where producer directly meets the consumer for exchange of goods, services and information. These differences are as follows:

- In the periodic markets producers are mostly peasants, who belong to surrounding areas and depend on primary activity, consumers are also from those in regulated market, some are peasant and other engage in different activity. There is a great degree of homogeneity among consumers. In the regulated market there are many marketing channels so it is more complicated than periodic market.
- Periodic markets have contributed immensely in economic growth in rural areas being the central place for exchange of commodities.
- In periodic market the main function of market is to ensure that goods are not only

transported from the areas of production to the areas of consumption, they must be transferred into the hands of the consumer but in regulated market this effort is taken by consumer himself/herself.

- It is fact that periodic market is traditional (peasant) and regulated markets were established after the Independence, which have remarkably contributed towards transformation of rural and urban areas.

The purpose of study is to finds out the function of periodic markets and regulated markets and their role of regional development in rural areas. What is role of periodic market and regulated market and how do they influences the rural and urban economy? This particular study focuses on horticultural crops. Vegetable farming is not only a source of employment, income and food but also plays socio cultural and socio economic linkage in the study area. So there are some main purpose of the study is to find out the perishable vegetables transaction variations in rural village to periodic market and regulated market. Periodic market and regulated are focus on economic development of surrounding areas. Both markets are interlinked with each other. Farmers, who are producer cum traders and consumers, concentrate their commercial activities at a particular place on one or two days each week, they provide a convenient agglomeration of services giving a reasonable range of facilities on market day (*Bromly, 1975*).

1.4 Perishable Commodities

Uttar Pradesh has played appreciable role in perishable commodities because markets in agricultural product are regulated under the Agricultural Produce Market Committee (APMC) Act enacted by State Governments. There are wide range of perishable commodities (vegetables and Fruits) are produced in the state because it has vast area of agricultural land. But the trends of production, productivity and area are some differences in India and Uttar Pradesh. In the table 1.2 and 1.1 table has calculated compound annual growth rate and area, production and productivity from 1991-92 to 2013-14 respectively. The study has been examining the trends of perishable commodities. The table 1.2 has revealed the annual growth rate form 1991-92 to 2001-02, shows that production (-0.70%), area (-0.50%) and productivity (-0.25%) of fruits had decrease in Uttar Pradesh, but the production (4.15%), area (3.39%) and productivity (0.68%) of fruits production had increase in the national level. However, the present time, from 2012-13 to 2013-14 the growth of production (24.85%), area (13.93%) and productivity (12.64%) of fruits production has been increase in Uttar Pradesh,

and also increase the area, production and productivity in India. The figure 1.1 also shows the trend of area, production and productivity. The trends of vegetables from 1991-92 to 2001-02, production, area, and productivity of vegetables had increase, which was 4.57%, 3.04%, and 1.46% respectively in Uttar Pradesh. From 2012-13 to 2013-14, area (-6.20%), production (-5.45%) of vegetable has been increase, but productivity has been decrease in Uttar Pradesh. Although, production, area has increase in India, but productivity has been decrease.

Table 1.1 Area, Production and Productivity of Fruits and Vegetables in India and Uttar Pradesh.

			Uttar Pradesh		India	
Sr. No.	Year		Fruits	Vegetable	Fruits	Vegetable
1	1991-92	Area	303.2	576.7	2874.5	5592.4
		Production	2449.8	9627.3	28632.0	58520.9
		Productivity	8.1	16.7	10.0	10.5
2	2001-02	Area	288.3	777.9	4010.2	6155.6
		Production	2282.8	15044.8	43000.9	88620.3
		Productivity	7.9	19.3	10.7	14.4
3	2011-12	Area	337.0	852.1	6704.1	8989.5
		Production	5795.1	18563.7	76424.2	156325.5
		Productivity	17.2	21.8	11.4	17.4
4	2012-13	Area	326.2	912.7	6982.0	9205.2
		Production	5176.1	19571.6	81285.4	162186.6
		Productivity	15.9	21.4	11.6	17.6
5	2013-14	Area	379.0	859.4	7216.3	9396.0
		Production	6887.4	18545.0	88977.1	162896.9
		Productivity	18.2	21.6	12.3	17.3

Source: Indian Horticulture Database Report 2014

Area in '000 Hectares

Production in '000' Metric Tons (MT)

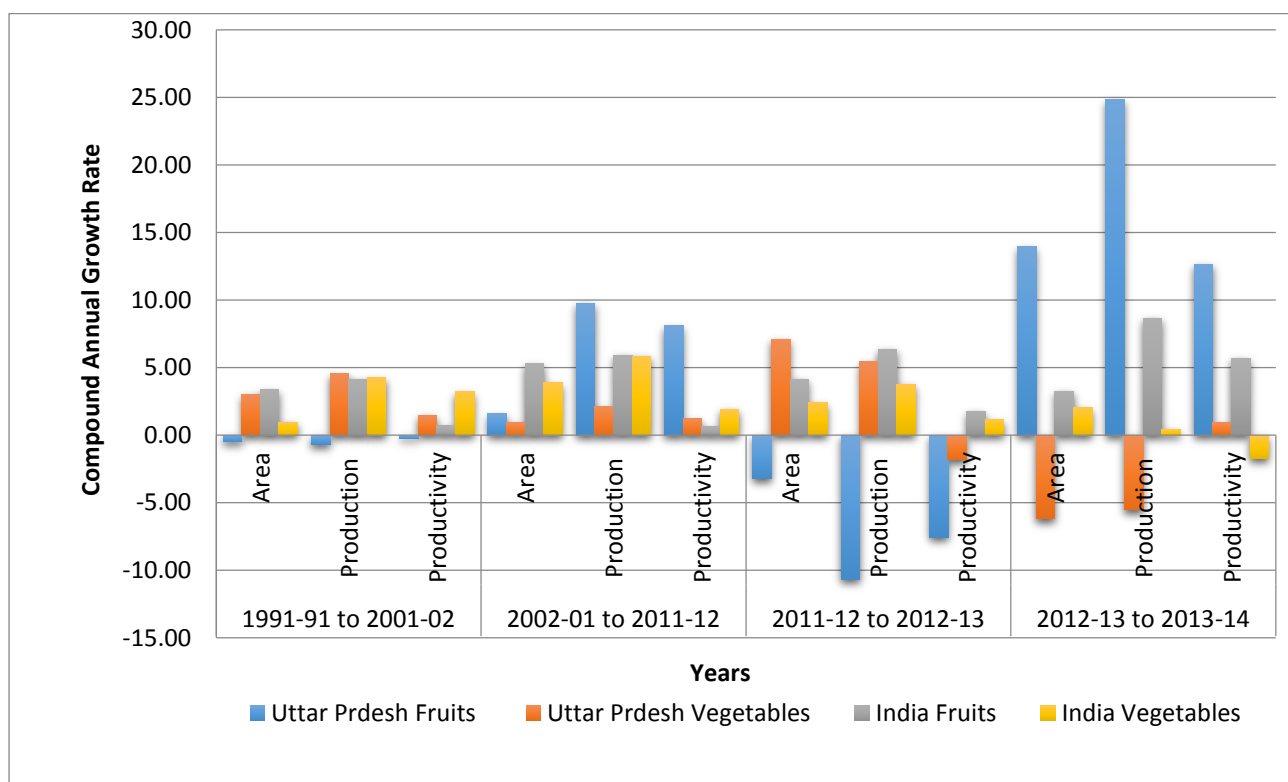
Productivity in Metric Tons/ Hectares (MT/HA)

Table 1.2 Compound Annual Growth Rate of Area, Production and Productivity of Fruits and Vegetables in India and Uttar Pradesh (1991- 2014)

Sr. No.	Year		Uttar Pradesh		India	
			Fruits	Vegetable	Fruits	Vegetable
1.	1991-92 to 2001-02	Area	-0.50	3.04	3.39	0.96
		Production	-0.70	4.57	4.15	4.24
		Productivity	-0.25	1.46	0.68	3.21
2.	2002-01 to 2011-12	Area	1.57	0.92	5.27	3.86
		Production	9.76	2.12	5.92	5.84
		Productivity	8.09	1.23	0.64	1.91
3.	2011-12 to 2012-13	Area	-3.20	7.11	4.15	2.40
		Production	10.68	5.43	6.36	3.75
		Productivity	-7.56	-1.83	1.75	1.15
4.	2012-13 to 2013-14	Area	13.93	-6.20	3.25	2.03
		Production	24.85	-5.54	8.64	0.44
		Productivity	12.64	0.93	5.69	-1.73

Source: Indian Horticulture Database Report 2014

Figure: 1.1: Compound Annual Growth Rate of Area, Production and Productivity of Fruits and Vegetables in India and Uttar Pradesh (1991- 2014)



Source: Indian Horticulture Database Report 2014

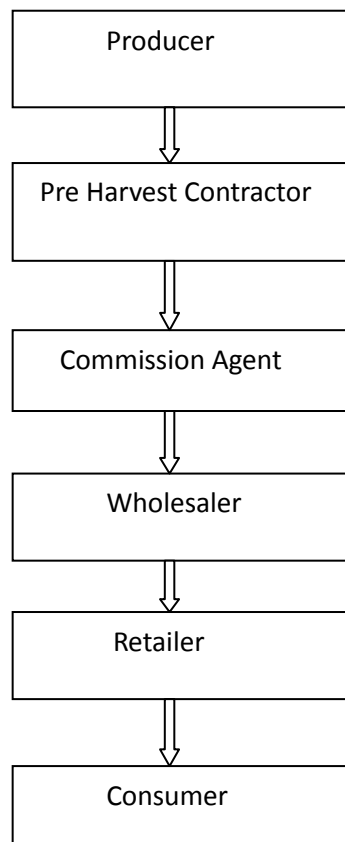
The variations in transaction of perishable vegetables are due to number of factors like that accessibility to market, higher market demand, nature of produce, transportation facility, market size, fair price and other factors are also influenced the transaction pattern. Another factor is that, Indian agriculture land holding pattern are very fragmented and most of farmers are marginal and small farmers their production is very low, and also to get quick and better returns they prefer periodic market instead of regulated markets. Following are some of characteristics of perishable commodities.

- Seasonality of production
- Highly perishable nature of commodities
- Bulkiness of products
- Quality variation of products
- Irregular supply of products

1.5 Marketing Channels

Today, India produces various perishable commodities across large areas. It is significant that it has favourable condition for growing a wide range of perishable commodities. But most of production, as mentioned above, is seasonal and grown in small scattered areas. For example, the peak period of availability of mango is confined to a two months (May June), the same is the case with oranges (November January), and with Papaya during (February March) etc. This short period of availability in large quantities makes the marketing a challenging task associated with problems like storage, transport and price fluctuations (*R. N. Hegde and N. V. Madhuri, 2006*). For the farmers that have no access to cold storage facilities, the best option to sell. There are some marketing channels among Indian state but most famous marketing channel used by cultivators. The popularity of this channel shown fig 1.2 has been brought out in many studies on different fruits and vegetables in different states over a period of time. The studies conducted on marketing of citrus fruits in Punjab 1973 (*Mehata and Balvindar Singh, 1973*) has shown that nearly 85 percent of the orange fruits were marketed by pre-harvest contractors. The same study shows that even, in case of mango about 73 percent are sold their pre harvest contractor (*Balvindar Singh and Sindhu, 1976*). Periodic markets and regulated markets channels are very complicated, therefore the perishable commodities cost, marginal profit, and price distribution is so diverse in different channel.

Figure 1.2: Common Marketing Channel is revealed in the study area



Source: Based on Primary Survey

Periodic markets have mostly producers as sellers, but in regulated market there are lot of traders like that wholesaler, wholesaler cum retailers, retailers. Periodic markets are the best option for the marginal and small farmers to dispose off their perishable surplus to get quick returns (*Khan and Khan, 2012*).

1.6 Review of Literature

The large amount of research has been done regarding the periodic and regulated market and had covered major areas

1.6.1 Characteristic features of Periodic and Regulated market

Regulated and periodic markets are most important centres, and have contributed remarkably towards rural development in India. Regulated markets are established by the state government, and these markets regulate some agricultural commodities in different areas (*Wanmali, 1980*). The markets have efficient market function, without markets functions;

development of marketing activities can-not be possible. In every periodic market there are many people have perform their role, they are traders, commission agent, dalalas, auctioneers, wholesalers, retailer and peddler. They are broadly classified into two categories on is full time traders and another part time traders. Full time traders are divided three categories mobile traders, buying traders and services sellers, and part time traders divided into two categories producer farmers and collector seller. These types of traders are different function, mobile traders, who attend various markets centre during the week, which is useful to them. These types of sellers do not restrict to particular market centre depending upon their volume of produce, transportation facility and also they attend the markets centres of their choice. Another, producers sellers, generally the farmers, potters and craftsman etc. farmer are basically the small and marginal farmers coming from the rural areas. They grow vegetables, fruits, dairy milk, butter, chicken egg etc. during the spare time. They sell their commodities in nearby markets centre (*Mulla and Mulimani, 2014*).

The establishment of regulated market are to manly maintain the buffer stock of food grain at National level and increase the income of market committees and to incur expenditure on various development works in rural areas. The total markets arrivals of agricultural commodities increased during the year 2006 due to vast network of markets centre (*Malik, 2010*). Periodic market and marketing network, periodic market general exchange system it is not in India but all over world. It had its beginnings in silent trade and barter system. Periodic market places are the first tier of marketing system in general. The Periodic Market are not exclusively economic but also combine with it social, political, recreational, sometimes even religious and purposes. There are lot differences in behaviour of seller travel (*Tamaskar 1993*).

Market distributional pattern of umland of Kanpur are very diverse nature, there are no similarity of temporal and spatial distribution of markets. Markets centres are associated with the economy and life of people of urban, rural and even tribal areas. Markets are so important for urban dwellers, and urban centres are generally the centres of business activities. Mostly developing countries in Asia, Africa, and Latin America periodic marketing system are vital features of the space economy as not only that the market exhibit the location pattern of timing, size, nature,. Market centre shows as a service centres which is helpful of to rural and urban market centres. It is fact that in Kanpur umland area most of markets are periodic market which is very important. There some types of market centre are exist in rural and urban area like that small rural market, Medium size Rural Markets, Large Rural Markets Small Urban Markets, Medium Size Urban Markets, Large Urban Markets (*Dixit, 1984*).

Marketing is a part of man's economic activity and man's economic activity covers a broad spectrum, and can be described in a generalized form. In brief, marketing geography is concerned with the location and distribution of market. their infrastructural pattern, measure and extent of marketing activity, movement of commodities, consumer behaviour, perception and the determination of hierarchy in order to prepare a systematic plan for regional development. The root of marketing geography is market place and market place is the main focal point for the commercial activities of most peasant societies. Market is a process or phenomenon of interaction among producers, distributors, buyers and users or in other word it include, all process and service a commodity goes through as it travels from producers to consumer (*Saxena, 2008*). Although, India have own Wal-Martin form of periodic market there are no need of these types of markets in rural area which are effect the rural periodic market but there are some profit and negative impact on local rural area and farmers. (*Shrivatava 1976*), studies the rural markets of the district of Meerut from the point of view of their spatial distribution. He also studies the location capability of existing trade centres in the Baghelkhand Plateau and north east part of Madhya Pradesh and also focuses on the market periodicity and centrality and demonstrated the use of factors of periodicity in establishing the hierarchy of central places in peasant society of Naugarh Tehsil of Bati District of Uttar Pradesh. Subsequently, the scholar made an observation on a correlation between market systems and spatial development in the case of Bahraich District of U.P. *Shashi Kant Upadhyay (2010)*, studies the spatial distribution of periodic market National Capital Region. He has studies spatial distribution of periodic market and Network and Linkage of rural and urban periodic market in NCR region. He has find out the actual pattern of market, size of market, periodicity of market and behaviour of buyer and seller on the market field. These regions have occupied 303 periodic market but most of periodic market distribution in Ganga and Yamuna Doab region. There are larger difference of market distribution, size of market, Hierarchy of market and periodicity of market within NCR region. India's rural market is much larger as compared to its urban market in terms of population and households. Until the recent past it has been characteristic by low income poor literacy and inadequate infrastructural facilities, despite the fact that over two third 68.84 percent of the Indian population is rural and over half (56%) of its national income generated by the rural areas (Census 2011). As we know that India is leading economy in the world with second highest production of fruits and vegetable but India has performed poorly in the International market, we waste fruits and vegetables every year equivalent to the annual consumption of the United Kingdom i.e. 23000 corers. Behind this problem there are

many reasons like no proper attention on agriculture and agriculture production and marketing, lack of infrastructure (*Datta, 2004*).

1.6.2 Role of Markets

Markets are the widespread exchange system and play dynamic role not only in rural socio economic development but also performed the significant role in the regional level development. The rural market in India is showing an impressive growth largely due to changing life style patterns, better communication network and rapid changing demand structure of the consumer of rural areas. He also argues that every markets have own influence area they served number of village. If larger the market area, greater will be the area of influence. The size and shape of market centre is depending on the served the area of village. The village which come under the influence of more than one markets are considered as command area with alternate market facility (*Mullamani and Belgaum, 2012*).

Periodic market are invaluable social economic components of the rural space and major finding in long interval market trends to be higher than those in short interval market and quite a number of rural traders participate in many markets to improve their income and also there are multiple market percent existence and very low frequency of persons of number not partake in multiple markets. *Yusuf (2006)* has explained the market function of Nigeria, there are temporal and spatial distribution markets are different than India, here market centre reflect the number of quality of functions it perform for the region. Naturally, a market which has both retail and wholesale functions will tend to larger market attracting both buyer and seller from surrounding villages and urban centre. Markets involve many operations and processes through which the food and raw materials move from the cultivated farm to the consumers (*Rehma, 2012*).

Markets have contributed remarkably in transformation of socio-economic condition of their participant and also the role of rural development but markets are not perform the function of service centre instead of they are also the centre of diffusion of information. In markets centre there are lot difference of their participant in producers-seller and consumers, which are coming in different background, producers-seller are almost marginal and small farmer and consumer are almost very low purchasing power and poor background area (*Pawan & Rajendra, 2014*).

It is fact that, In the present time of rural markets in India have acquired significant growth of the economy, after the green revolution periods but yet some types of problems have been facing this sector, although, there are two types of market have most contribution of

economic growth. The Rural marketing environments are complex and changing continuously and government also promoted to agricultural marketing in India. The former conditions are drastically change due to government policy like Kisan Credit Card (KCC) scheme of National Bank for Rural Development (NABARD), KCC scheme becoming effective tool to fight the Sahukars, which are direct and indirect impact on agriculture and markets centre (*Sandhu, 2012*).

An efficient marketing system ensures higher levels of income for the farmers reducing the number of middlemen or by the restricting the cost of marketing services and malpractices. It guarantees the farmers better prices for farm products and induces them to invest their surpluses in the purchase of modern inputs so that productivity and production may increase. This again results in an increase in the market surplus and income of the farmers. If the producer does not have an easily accessible market output where he can sell his surplus produce, he has little more incentive to produce more (*Acharaya and Agarwal, 2010*).

Joydeep Goswami (2013), studies rural market in Barak Valley with sociological aspect has discussed that rural market is not a single entity itself is highly influenced by the socio economic cultural and political factor. Market is not an economic phenomenon it is rather more social phenomena. It is the way people organise a social life through the transaction of goods and service. While involving in the transaction people play their roles as sellers or shopkeepers, buyers or customers, suppliers and onlookers. These roles organise people into social life called market.

1.6.3 Marketing of Agricultural Commodities

In Maharashtra there are some commodities are regulated like that cotton, orange, potatoes, onions, ginger and garlic are the regulated items of produce. Because these products are imported into Nagpur from outside the districts and also examine that some unregulated and few regulated commodities are not controlled by the government, these types of trading are transaction of private traders and periodic market. But the purchase of cotton is the monopoly of the state government rather than other goods. The price of cotton fixed by the state government and also government has allotted the village area of cotton market. Allotted villages sell their other commodities like food grain, pulses, and vegetables and so on, but these types of goods are government not able to trade under control, so they can sell in informal sector. Periodic markets are a place where consumer and traders visit during the market week. In periodic market are minimum government control rather than regulated market, these markets are meeting place of consumers, producer seller, collector seller, selling trader, and buying traders (*Wanmali, 1980*). Periodic market and regulated market

plays major role in sense of collected, distributed and resold perishable commodities, because India is the third largest producer of fruits and second largest producer of vegetables, but these sector are facing more problem like that lack of infrastructure, greenhouse technology, timely transportation, storage facilities and good marketing policies. Periodic market reveals high transaction of vegetables (67.21), due to freshness and perishable nature which discourage long distance for the trade and handled by small farmers and petty traders. They have trade services for 2-9 km radius. So in periodic markets have highly trade of vegetables than other commodities like food grain, pulses, oilseed etc (*Ali & Husain, 2013*).

Price of market cost and margin are different in market channel, because different intermediaries operating between the production and consumer so portion of consumer's price that goes to marketing intermediaries. Markets margins of different intermediaries, retailers enjoyed the largest gross as well as the net margins and second margins were for wholesaler cum retailer. So farmer get lowest cost of their produce and consumers pays more cost of commodities (*Omer & Hoq, 2014*).

Perishable Commodities of transactions are different periodic market as well as regulated markets, because the most perishable commodities are transfer to Periodic market instead of Regulated market, there are causes, periodic markets are the best option for the marginal and small farmers to dispose their perishable surplus to get quick return, there is higher demand, accessibility, nature of produce, transportation facility, market size, these are causes farmer prefer to local rural markets instead of going to regulated market. So, rural periodic markets are the best option for the marginal and small farmers to dispose of their perishable surplus commodities to get quick returns (*Khan & Khan, 2012*).

Dastagiri, Chand, Mandal, Sudha (2013), have revealed in the paper (Indian Agriculture: production trends, marketing efficiency and export competitiveness) that horticulture development is currently constrained by poor marketing arrangement. The gap between prices received by farmers and paid by urban consumers is large, reflecting inefficient marketing arrangements. He has found that area under total vegetables cultivation has grown at the rate of 4.12 and production growth rates was 6.48 India vegetables production. The most common marketing channels for majority of the crops are that Producer- wholesaler-Retailer-consumer. *Hegde and Madhuri (2013)*, have studies on Marketing Infrastructure for Fruits and Vegetables in India. He has revealed that fruits and vegetable are very important for Indian economy by improving the income of rural household. Cultivation of fruits and vegetable crops is labour intensive and hence, generate lot of employment opportunities for rural population. Horticulture is gradually emerging as an imported opportunity both for the

farmer and corporate sector. So the marketing system has to respond effectively to the changing requirements in domestic and international market (*Usha Tuteja and Subhash Chandra, 2012*).

Singh and Chauhan (2004), have reveals his studies (marketing of vegetables in Himanchal Pradesh)I that production system so weak link in the programme for increasing vegetable, availability and improving farmer's share in the consumer rupee. Since vegetable crops require a chain of marketing function before reaching the ultimate consumer, the role of various marketing agencies assumes great importance

Binoi (2007), studies his paper Management of marketing systems for perishable agricultural commodities in Kerala have said that there is lot of problem in management of perishable commodities in India. India has a major share in the production of fruits and vegetables, owing to low productivity and increased post harvest wastage, the per capita availability of fruits and vegetables in India is low.

1.6.4 Markets channels in the Markets

Gandhi and Namboodri (2004), studies the marketing of Fruits and vegetables in India with special reference to Ahmadabad, Chennai and Kolkata Markets. He has revealed that market of fruits and vegetables in India witnesses very high fluctuating prices and only small share of the consumer rupee reaches the farmers. Marketing of horticulture crops is complex especially because of perish ability, seasonality and bulkiness, and very low contact between commission agent and farmer, farmer to consumer, consumer to retailer. So the system of transaction of commodities very complicated. There are many channels existent in India in different commodities.

- Producer - Consumer
- Producers –retailer – consumer
- Producers – wholesalers- retailer-consumer
- Producer – pre harvest contractor- consumer
- Producer –pre harvest contractor –commission agent – consumer
- Producer –pre harvest contractor – commission agent –Wholesalers - consumer
- Producers –pre harvest contractor –commission agent – Wholesalers – retailer – consumer

It is fact that, commodities are being sold through different marketing channels but share of commodities selling is different. By the large, the system of transaction remains traditional and open auction is rarely seen. This is the major region foe poor efficiency. However the share of farmer in consumer rupee in Ahmadabad was 41.1% to 69.3% of vegetable and

25.5% to 53.2% for fruits. In Chennai farmers share was 40.4% to 61.4% for vegetable and 40.7% to 67.6% for fruits. But where farmer sell directly to consumer the share is high 85% to 95.4 %. So, it is shows that if farmers sell directly to consumer then both are get profit. This is very remarkable marketing channel for farmer as well consumer.

1.6.5 Accessibility of Markets

It is important that smallholder farmers require improved access to agricultural markets to raise their farm productivity and living standards. Majority of rural smallholders operate under dismal market access condition, with generally high level of remoteness and associated high marketing cost and risk, and poor access to information and supporting services. The importance of access for agricultural development is readily accepted at the level of stylized fact, as are the general mechanisms of impacts: smallholders in remote areas face higher input costs, lower output prices, fewer buyers competing for their surplus production and weak access to supporting services, which together result in disincentives to adopt new technologies and produce for the market (*Chamberlin & Jayne, 2011*). It is fact that rural development is that remote places are poorer, less productive and less integrated with input and output markets. Physical access has been the principal defining characteristic of remoteness, captured largely if not exclusively through the physical mediation of roads, along with the costs of transportation, travel time to urban markets and other transactions costs (*Porter, 1993*).

1.7 Objectives of the study

The main objectives of the study are as the following:

- To identify the characteristic features of periodic and regulated markets in Hardoi district, in serving as a transaction point for perishable commodities particularly fruits and vegetables.
- To examine the difference in socio-economic conditions of the participants (sellers) of the periodic and regulated markets in terms of their demographic and socio-economic characteristics.
- To understand the differences of access to the periodic and regulated markets of farmers from different size categories and the underlying reasons for this.

1.8 Data Collections

The secondary and primary data are used for the present study. The primary data source has been collected through field surveys, farmer sellers and traders based on a questionnaire.

Secondary data have been collected from different source; followings are the main sources of the secondary data that have been used are:

1.9.1 Sankhyikiya Patrika of Economics and Statistics Division, Planning Department, Uttar Pradesh.

Number of Periodic markets, 1995 to 2013, Market served his surrounding villages, Infrastructure data

1.9.2 State agricultural produce marketing board, Uttar Pradesh

Number of regulated markets and sub-market

1.9.3 Census of India

Block wise population of Hardoi district.

1.9.4 Indian Horticulture Database Report 2014

1.9.5 Sampling

Sampling is the act, process, or technique of selecting a suitable sample, or a representative part of a population for the purpose of determining parameters or characteristics of the whole population. A sample is a finite part of a statistical population whose properties are studied to gain information about the whole *Webster (1985)*.

The collection of primary data is very complicated, and also faces some problem in the study area. The primary data have collected of two regulated market and its surrounding ten periodic markets of sellers of perishable commodities in Hardoi district. Because, the selection of district is based on his backwardness according to the *Government of India's Ministry of rural development* and *International Institute for population science, Mumbai*, which have discussed in the topic of '*Study Area of Hardoi district*'. And, also this district has prosperous in the perishable commodities (Fruits and vegetable).

In the present study samples are taken in the two biggest regulated markets (**Sandila &**

Hardoi) and ten periodic market of each regulated market of surrounding area. The selection of regulated market is based on arriving of perishable commodities. Thus, there are two regulated markets have selected. The selection of periodic markets is based on the access of sellers in both periodic markets and regulated market and also most nearest to regulated market.

So, on the basis of above point, survey have conduct in the two regulated market, the first one being Hardoi regulated and the second is Sandila regulated market and also selected 10 periodic markets of each regulated market of surrounding area.

In all 20 periodic markets, total 120 samples have taken, 6 samples have taken in each periodic markets. Further, in the regulated market, total 60 samples have taken in the regulated market, 30 samples in each regulated markets. So, in both periodic and regulated markets, total 180 samples have taken of sellers of perishable commodities in Hardoi district.

Table 1.3: Sample Design of the Study Area

Sr. No.	Regulated markets	No. of sellers in regulated market	No. of periodic market	No. of sellers in each periodic market	Total no. of sellers in periodic markets
1	Hardoi	30	10	6	60
2	Sandila	30	10	6	60
Total	2 Markets	60	20		120

Source: Primary Source of Information

1.9 Methodology

Methodology in the applied sense refer to various method used by the researcher right from data collection and various techniques used for the same for interpretation and inference. The present study examined with the help of quantitative techniques, statistical tools, empirical methods and GIS application.

1.10.1 Principal Component Analysis

Principal component analysis is the backbone of data analysis tool and called on of the most valuable result from applied linear algebra. It's used extremely in the all form of analysis because it is a simple, non-parametric method of extracting relevant information from the confusing data sets. It is hard to find the variables that are really important for research when there are so many variables to consider. This is where principal component analysis can help. PCA is a way of identifying patterns in data, and expressing the data in such a way as to

highlight their similarities and differences. Since patterns in data can be hard to find in data of high dimension, where the luxury of graphical representation is not available, PCA is a powerful tool for multi-variant analysis of data (Smith 2002).

The Principal component analysis is a special case of more general method of factor analysis. PCA is one such method, which help in deciding the weights objective and also suggest way combining various indicators. In the method of PCA, the weight are supposed to reflect the degree of importance that each indicator is considered to have in the measurement of the whole. The composition of indicators can be done in two stages:

- **Elimination of the bias of scale**

Each indicator has been made scale free by using standardization method. The standardization method is generally used to make indicators scale free; in the process of construction composite index various indicators are made scale free because they are measured in different units.

$$X_{i, 1\sigma} = \frac{X_i - \bar{X}_S}{\sigma_{X, S}}$$

- **Determination of weightings.**

The first component of the Principle component Analysis has been used to assign weight to the each indicator because it explains the maximum variations in the data matrix.

1.10.2 Compound Annual Growth Rate

The compound annual growth rate is a useful measure of growth over multiple time periods or it used to show the smoothed annual growth rate over a given time period. CAGR has used for compare the annual growth of periodic market in the Hardoi district.

$$CAGR = \left(\left(\frac{V_n}{V_0} \right)^{\frac{1}{n}} - 1 \right) * 100$$

Where

V_n Is the value of the current node

V_0 Is the value of node to compare it with (e.g. one year back?)

n Is the number of steps (year) between the values to compare

1.10.3 Standard Deviation

Standard deviation is the most common measure of variability, measuring the spread of the data set and the relationship of the mean to the rest of the data. If the data points are close to the mean, indicating that the response are fairly uniform, then the standard deviation will be small. Conversely, if many data point are far from the mean, indicating that there is a wide variance in the response, then the standard deviation will be large. If all the data values are equal, then the standard deviation will be zero.

$$\sigma = \sqrt{\frac{\sum (x - \bar{x})^2}{n}}$$

σ = Standard deviation

Σ = Sum of

\bar{X} = Mean = $\frac{\Sigma x}{N}$

N = Total number of observations

1.10 Hypothesis

The present study of comparison of periodic and regulated market with special reference to perishable commodities are regarding some hypothesis.

- There are changes in trends in periodic and regulated markets.
- The socio-economic condition are distinct in nature for the market participant (Sellers), those are in the periodic markets and regulated markets.
- The seller's accessibility in the periodic and regulated markets is influenced by selected variables such as time and distance to visit the markets, size of landholdings, quantity of commodities, average price of commodities, market charge and transportation costs etc.

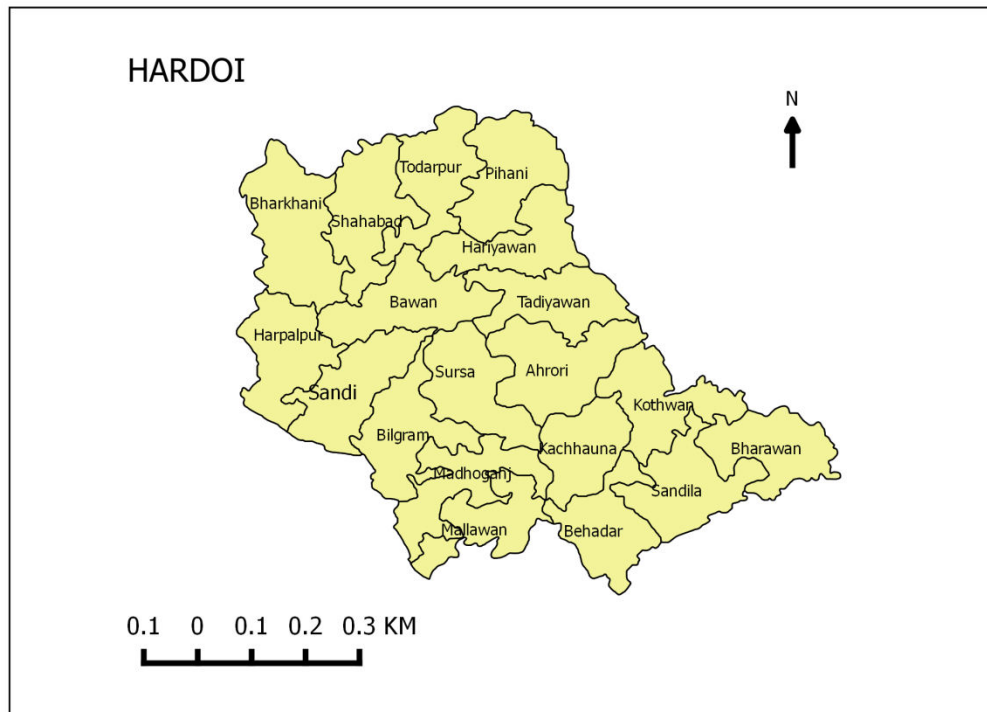
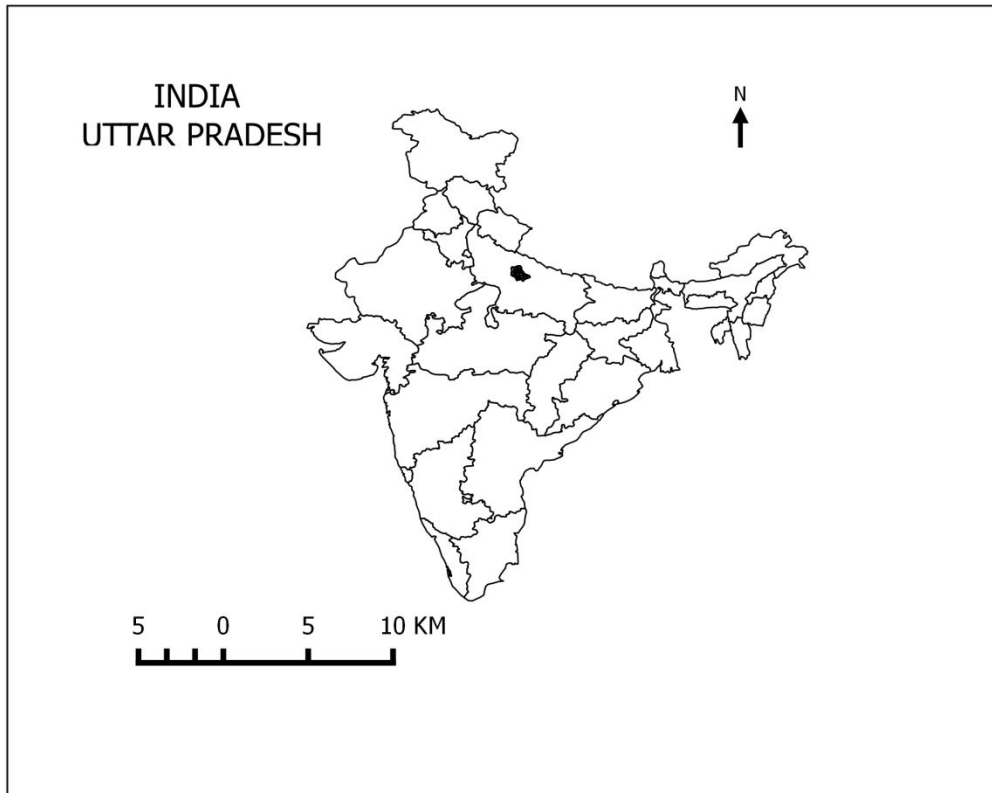
1.11 Study Area

The study area is Hardoi district which is the third largest district of Uttar Pradesh and it's situated in the upper gangetic zone. Hardoi district from the geographical point of views is situated between 26°53' to 27° 42' North latitude and from 80° 07' to 80° 12' East longitude. The district is situated in Lucknow Division. Geographically this region extent between three mighty rivers Ganga, Ramganga and Gomati. Its north border is touches Shahjahanpur district and Lakhimpur Kheri district. Lucknow and Unnao is on southern border and western border touches Kanpur and Farrukhabad district and eastern border is Sitapur. The geographical area is 5947 sq. km. and as per census 2011 the population of the district is 40, 91,380. Hardoi district comprises 5 tehsils (Hardoi, Sandila, Shahabad, Sawayajpur and Bilgram), 19 block, (Sandila, Sandi, Shahabad, Sursa, Ahirori, Pihani, Bawan, Bharkhani, Bharawan, Bilgram, Behndar, Hariyavan, Harpalpur, Tadiyavan Todarpur, Kothawan, Kachona, Madhoganj, Mallavan) 1101 gram sabha and 1901 habitat revenue village. According to legends, Hardoi District is related with '*HIRNAKASHYAP*' its present name Hardoi is a distorted version of its earlier name '*HARIDROHI*' which is a Hindi word that means "anti to the god" In view of some people this district was colonized by Hardevbaksh and just because of this reason there is an old locality Hardevganj exists in the city.

There are various reasons for selection of Hardoi district as a study area. A committee of the *Government of India's Ministry of rural development* conduct one of the most elaborate exercises for the identification of backward district in 1997. So, the ministry of rural development find out 447 districts across India on the basis of three parameters such as scheduled caste and scheduled tribe, agriculture wages, output per agriculture worker. According to the ministry of rural development report find out Hardoi district is 5th most backward district in Uttar Pradesh and 99th most backward district in India. As per *International Institute for population science, Mumbai* has assigned ranks of districts of Uttar Pradesh according on the basis of a composite Index. As per this work, Hardoi district's rank is position 62th out of 70 districts of in Uttar Pradesh.

In this district, agriculture is most prime sector of rural development and economic growth. A vast majority population are dependent on agriculture; agriculture is base of livelihood and at present about most of population is engaged in agricultural sector. There is different land use pattern of Hardoi district; about 433.3 ('000 hectare) lands is under net sown area, 237.4 ('000 hectare) land under area sown more than once and 670.0 ('000hectare) land under gross

Figure 1.3 Location Map



Source: Constructed by Researcher

cropped area. This district a fairly well-performing one at the state level in term of food grain production and vegetation. There are some major crops produce in the district like wheat, paddy, maize, jowar, bajra, sugarcane and some major fruits like mango, papaya, guava, onion, garlic and vegetables. Approximately 14425 hectare land is dedicated to horticulture.

Table 1.3: Demographic characteristics of Uttar Pradesh and Hardoi district

<u>Characteristics</u>	<u>Uttar Pradesh</u>	<u>Hardoi</u>
Population	199812341	4092845
Population Growth Rate 2001-2011	19.85	20.44
Population Share to the State population	100	2.05
Population share 0-6 population to total population	15.41	15.94
Density of Population per sq.km.	829	684
Percentage of Urban population	22.27	13.24
Percentage of SC population	20.70	31.14
Percentage of ST population	0.57	0.01
Sex Ratio	912	868
Sex Ratio 0-6 population	902	899
Literacy of Total Population	67.68	64.57
Male Literacy	77.28	74.39
Female Literacy	57.18	53.19
Percentage of total workforce participant	32.94	32.23
Male workforce participant	47.71	49.83
Female workforce participant	16.75	11.94
Percentage of total workers as agricultures labours	30.3	30.85
Male workers as agricultures labour	27.69	30.3
Female workers as agricultures labour	38.43	33.48

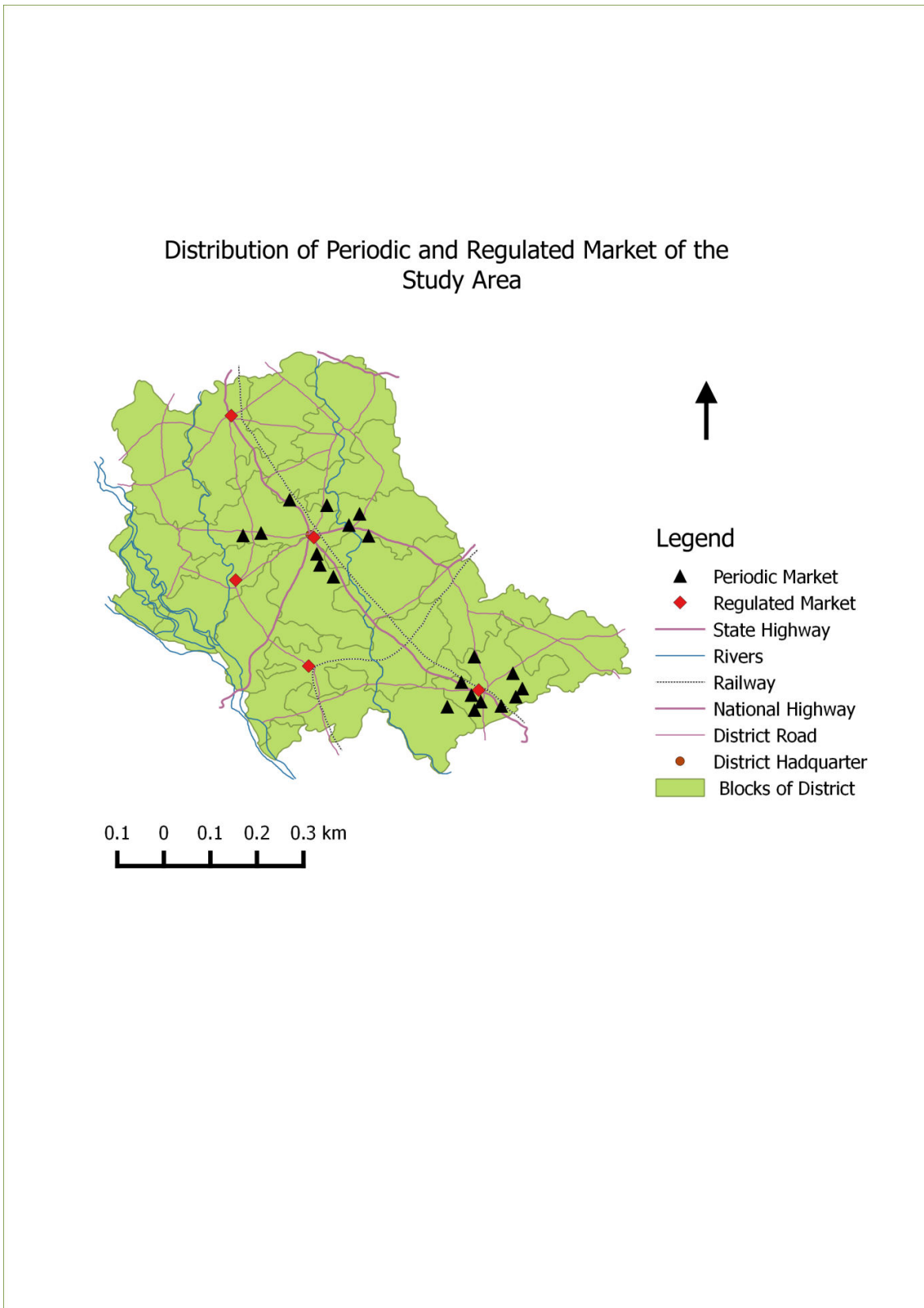
Source: Census of India, 2011

Uttar Pradesh is most populous state of India with 19.98 core population according 2011 census and population growth rate 2001 to 2011 was 19.85 percentages. Uttar Pradesh is largest state regarding total population and it has 75 districts.

When we compare Hardoi district in context of State then we found major characteristics of Hardoi District. Hardoi district has 40.92 lakh populations according 2011 census; it has 20.44% decadal growth which is greater than state level. It has 64.57 % literacy rate, which is below the state level also male female literacy is below the state level. There is major difference in workforce participation at district and state level 32.23 % at district level whereas 32.94 % at state level, but district level male participation is greater than state level and district female work participation is also greater than state level. There are some differences of agriculture's labours participant male and female. The total workers as agricultures labours participant are mostly same level in above the table. However, in this district, male workers as agricultures labours 30.3%, which is higher the state level 27.69%, but the female workers as agricultures labour (33.48%) percentage lower the state level, which is 38.43%. Thus, it is major difference of performance of the district as a state level.

There are five regulated market (Hardoi, Sandila, Madhoganj, Shahabad and Sandi) and some sub-market as per state *agricultural produce marketing board of Uttar Pradesh*. The study has been conduct on the two biggest markets from the district, the first one being Hardoi regulated market and the second is Sandila regulated market, on the basis of arrival of perishable commodities in the market and also ten periodic market as per the *Sankhyikiya Patrika of Economics and Statistics Division Planning Department, Uttar Pradesh* had selected surrounding the each regulated market on the basis of perishable commodities and accessibility of farmer sellers in the periodic and regulated market.

Figure 1:4 Distribution of Periodic and Regulated market of the study area



Source: Constructed by Researcher

1.12 Organization of the study

The present study is comparative study of periodic and regulated market with special focus on perishable commodities has systematically organized five chapters with systematic order.

1.12.1 Chapter I

The first chapter of introduction which is deals with the brief Introduction, concept of Periodic and Regulated Market, brief introduction of perishable commodities especially vegetable and fruits in the periodic market and regulated market, market channels in the periodic and regulated market, literature review, study area, research objectives, research question, data collection, methodology and hypothesis. I have completed first chapter of introductory, work have done various scholar on periodic and regulated market.

1.12.2 Chapter II

The second chapter deals with the characteristic features of periodic and regulated market with special focus on perishable commodities; the analysis is based on primary and secondary source of data. Further, I will discuss the transaction of perishable commodities particularly fruits and vegetables in periodic markets surrounding the two regulated markets, one is Sandila and other one Hardoi. I have revealed the overall situation of both markets like number and growth of market; number of village served by periodic market and other information within study area. I have discussed socio economic characteristics of blocks of Hardoi with different indicator like demographic, agricultural, industrial and infrastructural indicators.

1.12.3 Chapter III

The third chapter is related to examine the difference of socio economic condition of market participant because the role of market is very important in development and economic growth of considerable effect on rural society. Markets increases interaction between cities and villages and introduces local traditions to visitors, which is also very important in the economic sphere. In this chapter show the socio-economic condition of market participant, on the basis of many indicators like gender and age, social groups, education, income of market participants, land holding of participants and other amenities. Producer's sellers and non producer sellers are most important components in periodic and regulated markets.

1.12.4 Chapter IV

The fourth chapter is related to different accessibility of sellers in the periodic and regulated markets of the study area. Market accessibility is important, because a larger number of marginal and small farmers are engaged in agriculture. So it is necessary to enable farmer's access in periodic and regulated markets. Accessibility plays a remarkable role. It fastens the pace of rural development. In the remote places lands are poor, less productive. There is also higher marketing and servicing charge. Due to lack of transportation facility and infrastructure, farmers are not able to access the markets. So in this chapter have examine the different accessibility of sellers on various indicators like distance of market, land holding of sellers, prices of perishable commodities, mode of transport, time coming in the market and devoted for selling, and market charge.

1.12.5 Chapter V

Periodic and Regulated markets are most important in term of holistic rural development. The nature of both market are different on the various indicators. In this chapter is related with conclusion of this research. I have summarized the core chapter of the study area and also describe the finding of the study area.

CHAPTER II

Characteristics features of Periodic and Regulated Markets in Hardoi District with special reference to Horticultures crops

2.1 Introduction

In this chapter, the features of periodic and regular markets would be compared, which would include distribution pattern, growth of markets from 1995 and 2012, average number of villages served by these markets and the periodicity of these markets. The analysis of this chapter is based on both primary and secondary sources of data. Further, the transaction of perishable commodities particularly fruits and vegetables in periodic markets surrounding the two regulated markets of Sandila and Hardoi will be discussed.

In addition, the price structure of the relevant crops in these markets will also be discussed in this chapter. Regulated market mainly deals with the wholesale trading of commodities including perishable commodities and the commodities from these markets sometimes find their ways to periodic markets. But commodities in regulated markets are traded in bulk and thus small and marginal farmers, due to marketable surpluses, are often unable to participate in this market. Under such circumstances, the local markets become the most reasonable option for marginal and small farmers to sell their perishable agricultural products in order to get quick returns. Due to lack of appropriate infrastructure facilities, most of the farmers prefer local rural market instead of going to organized markets or to town area to sell their commodities (*Khan and Khan, 2012*). Vegetables produced in India reach the final consumers through both regulated agriculture markets and unregulated local vegetable markets. In unregulated markets, less attention is given towards grading, sorting, and storage, which result into poor handling of perishable commodities during the loading, unloading, and transportation. This results into a loss of 30 to 40 percent of total production. However, in the regulated market systems, a large number of intermediaries are involved and they share a significant part of the total transactions. Regulated markets are mainly situated in urban areas where the production of the commodities is however mostly limited to rural areas. Farmers in rural areas lack the facility to transport their produce to regulated markets. Thus, there must be some mechanism, which can facilitate the movement of perishable product from rural to urban markets and here comes the role of intermediaries. The role of these intermediaries in agricultural marketing is to consolidate the produce at the village market and reconsolidate

again at least two or three times before it reaches the final consumers (*Goswami, 2013*).

2.2 Numbers and Growth of Markets centers in the Hardoi District

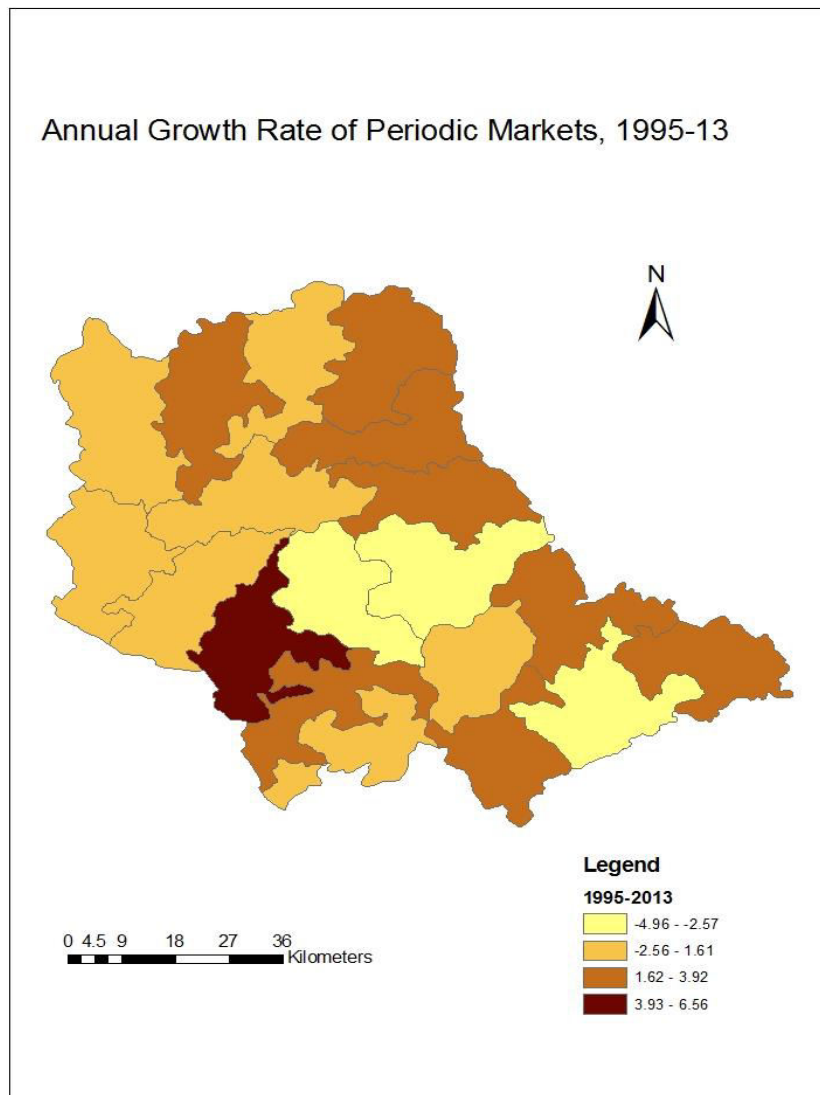
The study of growth of the market and it's the block-wise distribution shows a considerable diversity. I have calculated the growth of periodic markets in some of the blocks where the data for this analysis has been taken for four years i.e. for 1995, 2001, 2007 and 2013. Analysis is done based on the secondary data from the *Sankhyikiya Patrika*, which is an important annual publication of *Economics and Statistics Division of Planning Department of Uttar Pradesh*. The study hereby demonstrates the growth over a period of 6 years as well as a composite annual growth rate (CAGR, 1995 and 2013).

Table 2.1 Numbers and growth of Periodic Market of blocks wise 1995-13

	Number of Markets				Growth in Markets			CAGR	Composite Index
	1995	2001	2007	2013	1995-2001	2001-2007	2007-2013	1995-2013	
Bharkhani	9	14	11	11	55.56	-21.43	0.00	1.12	0.394
Shahabad	10	18	18	18	80.00	0.00	0.00	3.31	0.616
Tondarpur	19	22	22	21	15.79	0.00	-4.55	0.55	0.437
Pihani	14	28	28	22	100.00	0.00	-21.43	2.54	0.158
Bawan	15	21	17	17	40.00	-19.05	0.00	0.69	0.579
Hariyawan	14	23	23	23	64.29	0.00	0.00	2.79	0.282
Tadiyawan	16	21	33	32	31.25	57.14	-3.03	3.92	0.533
Sursa	20	23	10	8	15.00	-56.52	-20.00	-4.96	0.162
Ahrori	23	20	11	10	-13.04	-45.00	-9.09	-4.52	0.460
Harpalpur	8	11	9	9	37.50	-18.18	0.00	0.65	0.228
Sandi	6	9	6	8	50.00	-33.33	33.33	1.61	0.228
Bilgram	7	28	24	22	300.00	-14.29	-8.33	6.56	0.050
Madhoganj	7	15	14	14	114.29	-6.67	0.00	3.92	0.311
Mallawan	5	10	10	10	100.00	0.00	0.00	3.92	0.311
Kothwan	10	16	16	16	60.00	0.00	0.00	2.64	0.343
Kachhauna	8	9	9	9	12.50	0.00	0.00	0.65	0.204
Behandar	24	23	23	22	-4.17	0.00	-4.35	-0.48	0.290
Sandila	16	10	10	10	-37.50	0.00	0.00	-2.57	0.406
Bharawan	13	20	20	20	53.85	0.00	0.00	2.42	0.343
Total	244	341	314	302	39.75	-7.92	-3.82	1.19	

Source: *Sankhyikiya Patrika of Economics and Statistics Division Planning Department, Uttar Pradesh*

Figure 2.1 Annual Growth Rate of Periodic Market of block wise in Hardoi District, 1995-13

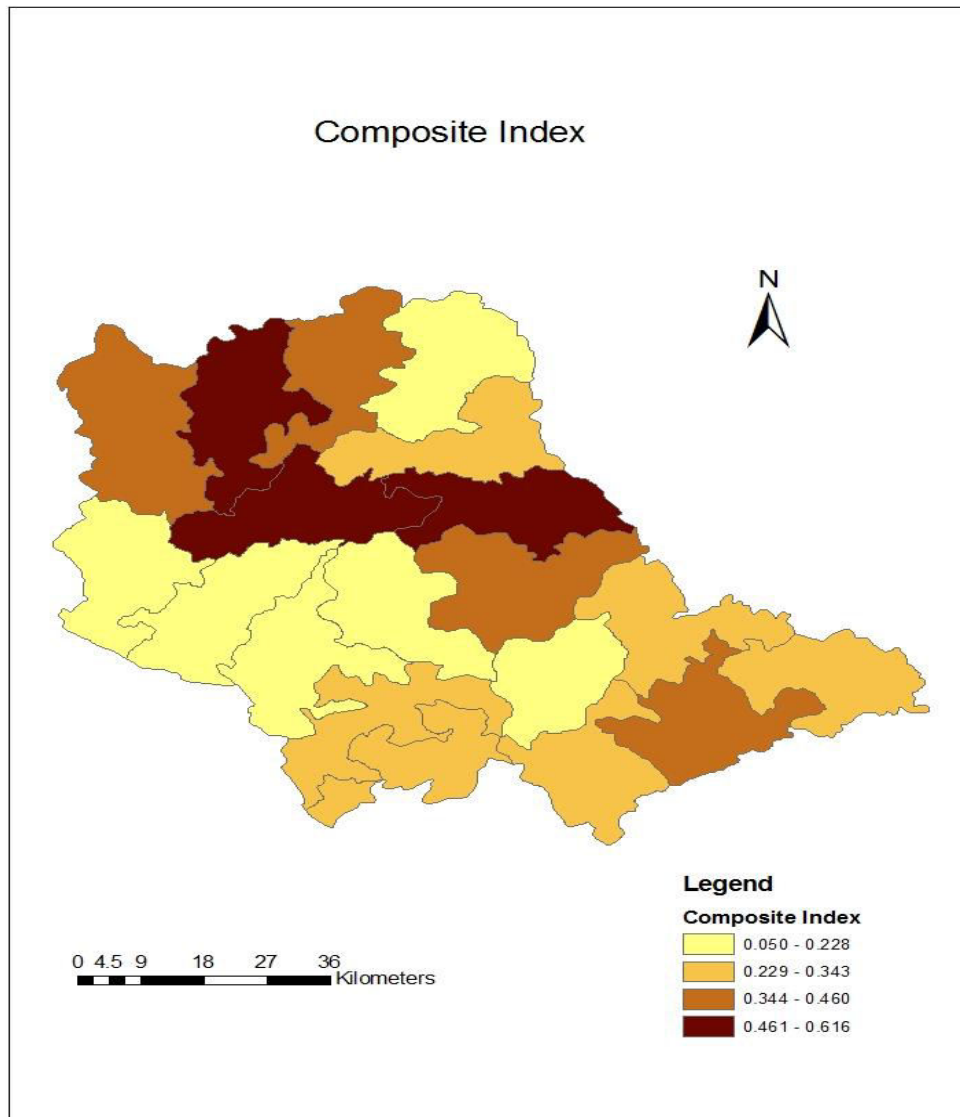


Source: Constructed by the Researcher

The table 2.1 shows that in 2013, there are 19 blocks and 302 periodic markets in Hardoi districts of Uttar Pradesh. This table clearly demonstrates that the trend of market growth of periodic markets in Hardoi district is not uniform and not always positive. During 1995 and 2013, the number of periodic markets in Hardoi has increased by 1.19% annually. During the same period, the number of periodic markets has increased almost across all the blocks except in Suras, Ahrori, Behandar and Sandila. The increment in number of market was ranging from a maximum in Bilgram (increased by 6.57% annually) to a minimum in Sursa (in which it decreased by 4.96% annually) The *composite index*, which has been constructed by using percentage of literacy, number of post office, bank, and senior basic school for girl's

indicators, reveals a mixed picture of the growth in number of periodic markets. Examples can be taken from the Bilgram block, which has the lowest composite index (0.050) but has experienced the highest increment (increased by 6.57% annually) in the number of periodic markets. The change in the number of periodic markets and existing value of composite index across blocks can be seen easily from figure no 2.1.

Figure 1.2 Composite Index with Different Indicators of Hardoi District.



Source: Constructed by the Researcher

Among the three highly developed blocks in terms of the composite index (more than 0.500 values), the annual growth in the number of periodic markets was highest (3.32% annually) in Shahabad. There was eight blocks in the developed category (composite index value more than 0.400 and less than 0.300) in which only one (Ahrori) block has experienced a negative growth (-4.52% annually) in terms of the number of periodic market. In the moderately

developed category, (composite index value more than 0.200 and less than 0.300) highest increment has been registered in Mallawan and Madhoganj blocks, where in Behadar block, there has been a negative growth in the number of periodic markets. As far as the less developed blocks are concerned, there were only three blocks in this category and the highest increment (6.57% annual) in periodic markets has been observed in Bilgram block.

An analysis of the periodic markets at block level reveals that number of periodic market in the district is unevenly distributed and the growth of market in all the blocks are not uniform. By studying the trend of the growth of market at block level from 1995 to 2001, it can be clearly seen that the overall growth in number of periodic markets has been positive in almost all blocks except the three blocks of Ahrori (-13.04) Behandar (-4.17) Sandila (-37.50), which have recorded a negative trend. During next year periodic market of Sandila markets have been static, but other two blocks Ahrori and Behadar blocks have experienced negative growth. Although the markets in other blocks have witnessed an increase from 1995 to 2001, the rate of growth of markets has been above 100 percent in Bilgram, Pihani, Madhoganj, Mallawan and above 50 percent in the blocks like Bharkhani, Shahabad, Hariyawan, Sandi, Kothawan, and Bharawan .

As mentioned earlier, between 2001 and 2007, there has been a general downtrend in the number of markets except in the Tandiawan block that has recorded a growth of 57.14 % in number of markets, and nine other blocks that have been constant with no change in number of markets. The blocks of Bharkhani (-21.43), Pihani (-19.05) Sursa (-56.52), Hrpapur (-18.18), Sandi (-33.33), Bilgarm (-14.29), Mallawan (-6.67) have all recorded negative trend in number of periodic markets during this time.

In the next interval of 2007-13, again there have been many changes. A lot of blocks have recorded negative growth except Sandi block, which has witnessed a positive growth of 33.33 percent and eleven other markets that have recorded no change. However, many blocks have recorded decrease in number of periodic market like Tondarpur (-4.55), Pihani (-21.43), Tadiyawan (-3.03), Sursa (-20), Ahrori (-9.09), Bilgram (-8.33), Behandar (-4.35). Data clearly reveals that in many blocks number of periodic markets have decreased. The growth of periodic markets was positive from 1995-2001, but after the 2001 markets has been continuously decreasing except in large number of blocks of the district.

2.3 Growth in number of villages according to the distance of periodic market

In rural economy the periodic markets are playing a vital role in the process of economic development of the rural sector. Table 2.2 shows the increment in number of villages according to the distance of periodic markets during 1995 and 2014. From the table it is clear

that the average number of villages has increased across the distance groups of periodic market except periodic market, which is more than five KM from the village. The average numbers of zero distance villages have increased by 1.24% annually. The maximum increment has been registered in Bilgram block (in this block, it has increased by 6.21% annually) because the number of villages which are three to five km away and more than five KM from the periodic markets have decreased sharply. There are four blocks- Sursa, Ahrori, Kachuana and Behandar in which it has decreased because in Sursa, the number of villages that are less than one KM away from periodic market has increased by 5.95% annually and also remaining blocks it has increased in more than one KM away from periodic market.

Pattern of growth in the number of villages, which are one KM away from the periodic market, shows that in five blocks i.e. Bharkhani, Pihani, Hapalpur, Behandar and Bharawan it has decreased in number while in the remaining blocks an increment has been registered. The maximum increment in the number of villages, one KM away from the periodic market, has been observed in Kothawan block where it has been increased by 12.26% annually. It means many new markets surrounding the villages from Kothawan block has developed during 1995 and 2014. Hereby it is noteworthy that the number of villages that are a more than five KM away from the periodic market has decreased across the blocks except Tondarpur, Pihani, Behandar, Sandila and Bharwan of the Hardoi. In this type of periodic market, the maximum (-9.45% annually) fall in the number of villages has been seen in Kothawan block.

In Shahabad block which has the highest composite index (0.616) the number of villages away from zero, less than one and one to three km from periodic market has increased during 1995 and 2014 and in remaining two it has decreased. In all highly developed blocks (Shahabad, Bawan and Tandiyawan) many new short distance periodic markets has emerged because the number of villages away more than five km from periodic markets has decreased. It is important to note that in less developed blocks (Sursa, Pihani and Bilgram) growth pattern in villages based on nearest and long distance periodic market is not very uniform. In Bilgram block, the number of villages, which is close to period markets, has increased while it decreased in long distance periodic markets.

Table 2.2 Growth in the Number of villages according to distance of periodic

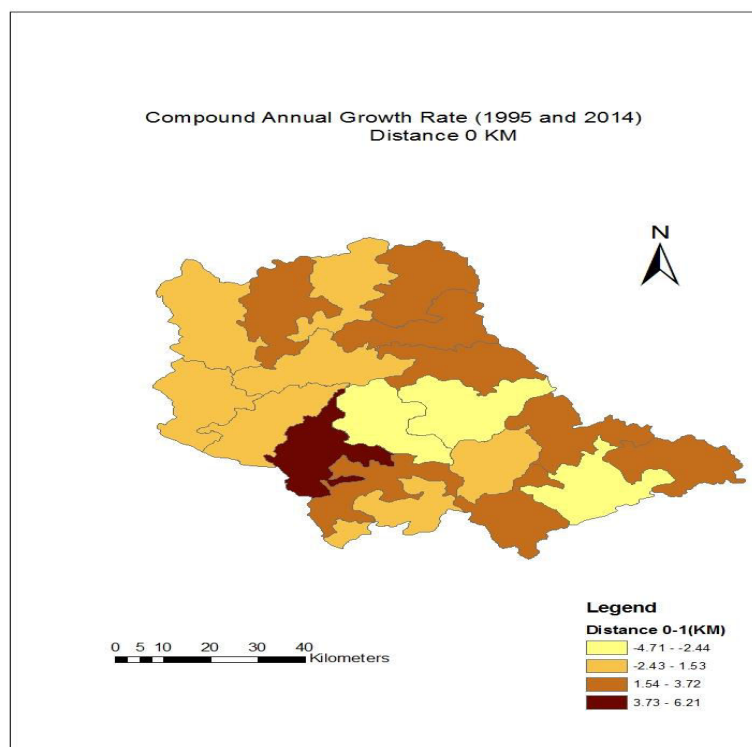
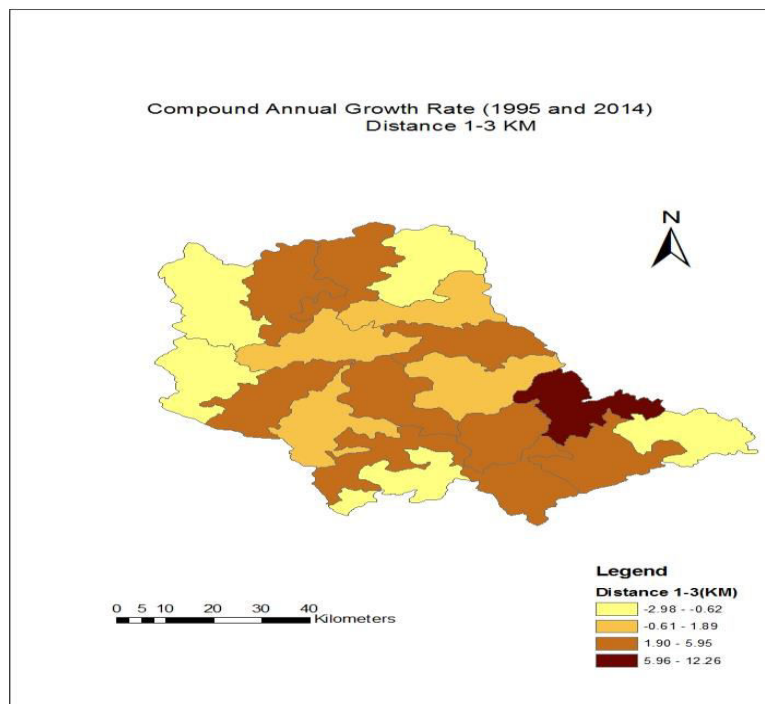
Compound Annual Growth Rate (1995 and 2014)					
	Distance 0(KM)	Distance 0-1(KM)	Distance 1-3(KM)	Distance 3-5(KM)	Distance >5(KM)
Bharkhani	1.06	-0.81	3.31	6.65	-2.32
Shahabad	3.14	3.72	2.02	-4.71	-0.81
Tondarpur	0.53	3.72	-3.48	0.32	3.88
Pihani	2.41	-1.17	-1.36	-2.04	3.39
Bawan	0.66	0.81	3.39	0.00	-5.12
Hariyawan	2.65	0.42	-0.98	0.00	-2.11
Tandiyawan	3.72	5.57	-3.47	-0.88	-5.03
Sursa	-4.71	5.95	4.60	-2.24	-7.33
Ahrori	-4.29	0.50	-0.86	4.21	-1.05
Hapalpur	0.62	-0.62	1.04	-1.62	-0.32
Sandi	1.53	3.72	0.46	4.05	-0.58
Bilgram	6.21	1.89	2.27	-0.55	-5.62
Madhoganj	3.72	4.36	1.62	1.37	-5.27
Mallawan	3.72	4.94	1.65	-1.71	-2.56
Kothawan	2.50	12.26	9.16	10.78	-9.45
Kachauna	0.62	4.94	0.76	2.16	-3.89
Behandar	-0.46	-1.17	0.29	-2.52	6.54
Sandila	-2.44	4.94	-2.90	3.48	2.23
Bharawan	2.29	-2.98	-1.74	3.98	4.36
Average	1.24	2.68	0.83	1.09	-1.64

Source: Sankhyikiya Patrika of Economics and Statistics Division, Planning Department of Uttar Pradesh

In Pihani, it has increased.

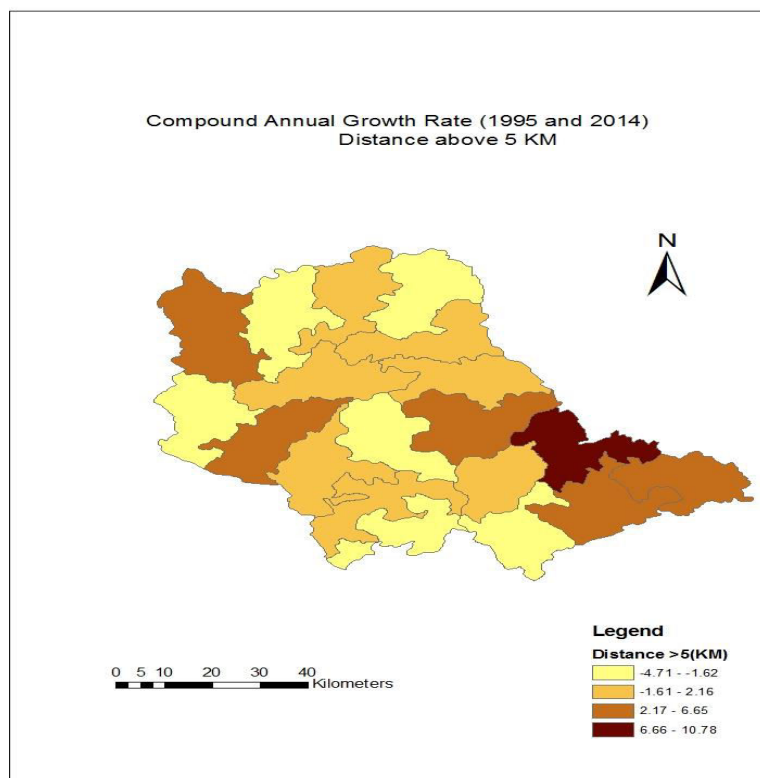
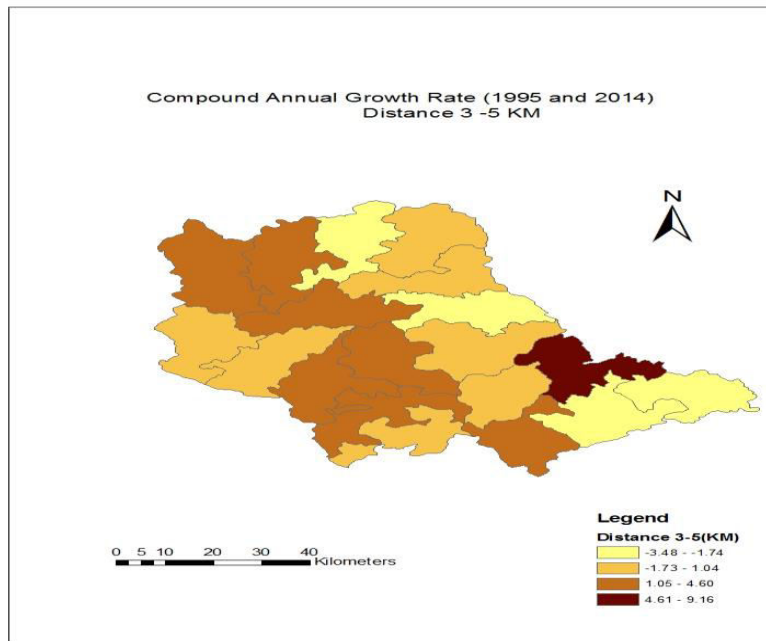
Table no. 2.3 shows percentage growth in number of villages according to the distance of periodic market during 1995 to 2000 and 2000 to 2005. During 1995 and 2000, the number of villages which are very close (zero km) to periodic markets has increased in fifteen blocks with maximum increment in Bilgram (171.73%) block while the number has decreased only in four blocks. In Shahabad block (which is mostly developed), no growth has taken place in number of villages which are zero km away to more than five km from the periodic market.

Figure 2.3 Growth in number of villages according distance of periodic markets



Source: Constructed by the Researcher

2.4 Growth in number of villages according distance of periodic market



Source: Constructed by the Researcher

Table no.2.3 Percentage Growth of in the Number of village according to the Distance of Periodic Market (1995-2005 and 2000-2005)

Percentage Growth in Number of Villages										
	During 1995and 2000					During 2000 and 2005				
	Distance 0(KM)	Distance 0-1(KM)	Distance 1-3(KM)	Distance 3-5(KM)	Distance >5(KM)	Distance 0(KM)	Distance 0-1(KM)	Distance 1-3(KM)	Distance 3-5(KM)	Distance >5(KM)
Bharkhani	22.22	-14.29	4.76	120.00	-12.61	0.00	0.00	81.82	63.64	-26.80
Shahabad	0.00	0.00	0.00	0.00	0.00	80.00	100.00	38.46	-62.86	-8.93
Tondarpur	10.53	28.57	-17.65	-75.00	112.50	9.52	44.44	-38.10	325.00	-14.71
Pihani	57.14	40.00	22.92	-54.05	0.00	27.27	14.29	-18.64	41.18	-17.65
Bawan	13.33	33.33	19.23	-3.23	-23.68	17.65	-31.25	64.52	6.67	-55.17
Hariyawan	7.14	-25.00	2.44	-8.33	22.22	53.33	44.44	-19.05	9.09	-45.45
Tandiyawan	56.25	-100.00	-6.67	-15.38	0.00	-12.00	56.87	-33.33	27.27	-25.00
Sursa	15.00	100.00	70.00	-45.00	-58.82	0.00	-16.67	0.00	36.36	-14.29
Ahrori	-8.70	-90.00	42.42	-18.75	0.00	-4.76	58.67	-14.89	0.00	-18.18
Hapalpur	12.50	-44.44	-30.43	6.67	94.12	0.00	80.00	78.13	-31.25	-60.61
Sandi	166.67	100.00	-12.12	0.00	-21.05	-62.50	0.00	20.69	100.00	-30.00
Bilgram	171.43	-28.57	21.88	-10.00	-29.17	31.58	100.00	20.51	0.00	-50.00
Madhoganj	14.29	25.00	3.57	5.88	-9.52	75.00	80.00	31.03	16.67	-57.89
Mallawan	40.00	150.00	-4.55	-20.00	5.56	42.86	0.00	42.86	-10.00	-52.63
Kothawan	0.00	45.89	400.00	100.00	-51.52	60.00	80.00	5.71	250.00	-68.75
Kachauna	-25.00	100.00	15.38	100.00	-47.06	50.00	25.00	0.00	-25.00	-11.11
Behandar	-29.17	6.67	-5.71	-30.77	400.00	35.29	-25.00	12.12	-11.11	-26.67
Sandila	-6.25	450.00	-26.19	0.00	13.04	-33.33	-54.55	-25.81	83.33	42.31
Bharawan	15.38	25.00	-9.43	-50.00	125.00	33.33	-55.00	-20.83	320.00	0.00
Average	28.04	42.22	25.78	0.11	27.32	21.22	26.38	11.85	59.95	-28.50

Table no.2.4 Percentage Growth of in the Number of Villages according to Distance in Periodic Market (2005-2010 and 2010-2014)

	Percentage Growth in Number of villages									
	During 2005 and 2010					During 2010 and 2014				
	Distance 0(KM)	Distance 0-1(KM)	Distance 1-3(KM)	Distance 3-5(KM)	Distance >5(KM)	Distance 0(KM)	Distance 0-1(KM)	Distance 1-3(KM)	Distance 3-5(KM)	Distance >5(KM)
Bharkhani	0.00	-16.67	-2.50	2.78	-1.41	0.00	20.00	0.00	-8.11	1.43
Shahabad	0.00	0.00	5.56	7.69	-5.88	0.00	0.00	0.00	0.00	0.00
Tondarpur	-4.35	7.69	3.85	0.00	3.45	-4.55	0.00	-3.70	0.00	10.00
Pihani	-21.43	-50.00	-20.83	8.33	128.57	0.00	0.00	-2.63	-3.85	0.00
Bawan	-15.00	27.27	-1.96	0.00	0.00	0.00	0.00	-2.00	-3.13	7.69
Hariyawan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tandiyawan	50.00	-11.76	-14.29	-21.43	-33.33	-3.03	-6.67	-4.17	0.00	-25.00
Sursa	-65.22	80.00	38.24	-13.33	-33.33	0.00	0.00	0.00	0.00	0.00
Ahrori	-50.00	0.00	-30.00	176.92	-11.11	0.00	0.00	0.00	-2.78	12.50
Hapalpur	0.00	0.00	-1.75	0.00	0.00	0.00	-11.11	0.00	0.00	23.08
Sandi	33.33	0.00	8.57	0.00	14.29	0.00	0.00	-5.26	6.25	41.67
Bilgram	-12.00	0.00	4.26	0.00	-5.88	0.00	0.00	0.00	0.00	0.00
Madhoganj	0.00	0.00	2.63	0.00	0.00	0.00	0.00	-2.56	4.76	-6.25
Mallawan	0.00	0.00	0.00	0.00	11.11	0.00	0.00	0.00	0.00	10.00
Kothawan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Kachauna	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Behandar	0.00	0.00	0.00	0.00	-9.09	-4.35	0.00	0.00	0.00	0.00
Sandila	0.00	0.00	0.00	4.55	-10.81	0.00	0.00	4.35	0.00	6.06
Bharawan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average	-4.46	1.92	-0.43	8.71	2.45	-0.03	0.00	-0.05	-0.02	0.18

Source: Sankhyikiya Patrika of Economics and Statistics Division, Planning Department of Uttar Pradesh

The villages in which the periodic market is less than one km away have increased in all the block twelve blocks while in six blocks it has decreased and in Shahabad block zero percentage growth has been registered. In this category of periodic market, the increment in the number of village was ranging from maximum 100 percent (in three blocks Kachauna, Sandi and Sursa) to zero percent in Shahabad while the fall was ranging from a maximum of 100% (in Tandiyawan) to 14.29 (in Bharkhani). The average percentage growth in the number of villages has been higher in those category of periodic markets which are less than one km away while in long distance (three to five km) periodic market groups, the growth in the number of villages during 1995 and 2000 was lower (0.11%).

During 2000 and 2005, the growth in the number of villages across the blocks was not very symmetric. The average percentage growth in the number of villages was higher in that periodic market which is three to five km away while in case of very long distance (more than five km) periodic market groups it was the lowest (-28.5%). The number of villages, which have a periodic market, has increased across block except Tandiyawan, Ahrori, Sandi and Sandila. In long distance periodic market category, which is more than five km away, the number of villages had decreased across the blocks except Sandila block in which it was increased by 42.31%. From table no. 2.3, it is clear that the number of villages that are close to periodic market has increased in almost all the blocks, which indicates that many new short distance periodic markets was developed during 2000 and 2005.

The table no. 2.4 shows the percentage growth in number of villages according to distance of the periodic market during 2005 to 2010 and 2010 to 2014. This table clearly shows that, in recent years the number of villages, which are close to periodic market, did not increased substantially. During 2005 and 2010, the number of villages that have a periodic market was increased in two blocks, in Tandiyawan (increased by 50%) and in Sandi (by 33.33%) where in six blocks it had decreased and in remaining blocks it was constant. The number of villages which are less than one km away from periodic market was also increased only in three blocks (in Tondapur, Sursa and Pihani) and in three blocks it decreased while in remaining blocks it was not increased. In long distance periodic market category, the number of villages was decreased in eight blocks and was increased in four blocks with maximum (128.57%) in Pihani. In rest of villages it remained constant during 2005 and 2010.

In table no.2.4, it can be seen that in recent past (during 2010 and 2014), the number of villages, which are very close to periodic market and less than one km away from them, has not grown in sixteen blocks and even has decreased in three blocks (in Tondarpur, Tandiyawan and Behandar) and in two blocks (Tandiyawan and Hapalpur) respectively. In

long distance periodic market category, the number of villages has increased in most of blocks. The maximum increment (41.67%) in the number of villages, which are more than five km away from the periodic markets, has been registered in Sandi followed by Hapalpur, Ahrori blocks. In two blocks (Tandiyawan and Madhoganj) it has decreased while in the remaining blocks, the number of villages did not grow during 2010 and 2014. Thus, it is clear that in recent years, the villages, which are no longer having the periodic markets, are increasing and the numbers of villages which have a periodic market (or less than one km from periodic market) are decreasing in most of blocks. It indicates that short distance periodic market are decreasing or remaining constant in number and the long distance periodic markets are flourishing in the most of block of Hardoi district in recent years.

1-3 Periodic market have served larger average number of villages. In the class interval of 1-3, Bawan block (49.50) have largest average of villages served, and Tondarpur block have lowest villages served by the market i.e. 13.17. Furthermore, in the other market intervals there are huge differences like, Bharkhani block have largest average no. of villages i.e. 34.50 served, and Behandar (8) block have lowest average no. of villages served by 3-5 class intervals. In class interval of greater than 5, Bharkhani block (67.50) highest average numbers of villages and Sursa block have lowest number of villages served by greater than 5 markets i.e. 4. The comparative study reveals a huge difference among the blocks in terms of the average no. of villages served by the market in all market intervals. Some blocks have positive correlation, for example, if number of markets increased then average number of village should also increase. However, in this table we have different answers, average number of villages have increased in class intervals of 0-1 to 1-3 class intervals, but in the next class intervals of market intervals i.e. 3-5 and >5, villages have decreased in almost all the blocks except Tondarpur. The graph shows the percentage of area and number of village and it is clear that class in the interval of 1-3, market serves greater number of villages.

2.4 Numbers of Regulated Markets in Hardoi district

Regulated markets are efficient system of buying and selling of agricultural produce. Regulated markets are controlled markets, regulated under the state Agricultural Produce Marketing Act. At the time, most of states markets enacted the legislation (Agricultural Produce Marketing (Regulation) Act) to provide regulation for agricultural produce markets. The sub-regulated markets are different to regulated markets because regulated market are established and regulated under the state APMC Acts. The state has divided the market area wherein the markets are managed by the market committees. Once a Particular market area

falls under the jurisdictions of a market committee, the sub markets working under the regulated markets area are to be controlled by the market committee.¹

Table 2.5 Number of Regulated and Sub Regulated Markets in Hardoi district

Name of Markets	Year of Establishment	Nearest Railway station	Dist. (km)	Sub-Regulated	Year of Establish	Nearest Railway station	Dist. (Km)
Hardoi	1986	Hardoi	1	Baghauli	2000	Baghauli	0
Sandila	1988	Sandila	2	Kachhauna	2000	Kachhau.	0
				Beniganj	2000	Beniganj	1
Madhoganj	1990	Madhoganj	2	Bilgram	2000	Madhoganj	15
				Naupurwa	1997	Madhoganj	35
				Mallawan	2000	Mallawn.	0.5
				Kursath	2000	Madhoganj	22
Shahabad	1989	Shahabad	3	Aamtara	2000	Shahabad	15
				Pihani	1992	Hardoi	25
				Paali	1998	Shahabad	21
Sandi	1999	Hardoi	23	-	-	-	-

Source: State Agricultural Produce Marketing Board Uttar Pradesh

Regulated market distribution in India is very uneven, according to *Directorate of Marketing & Inspection (DMI), Ministry of Agriculture, Government of India*, there are 7,320 regulated markets, which have increased from 286 at the time of independence. Furthermore, Uttar Pradesh has also witnessed an increase in the number of regulated markets, and by 2015 the total number of regulated markets is 250 and that of sub market is 365.

In the Hardoi district, there are 5 regulated markets and 10 sub-regulated markets. All the regulated markets of Hardoi district have been established before the 1990 except Sandi regulated market. Sub-regulated markets have been established during 1990-2000. There are a lot of differences in the nature of markets, depending upon the commodities they deal with. Some markets are established to deal with a particular commodity like grains, vegetables, fruits, and fishes, the markets of Sandila, Hardoi, Harpalpur, Bagholi, Kachhauna, Beniganj, Bilgram, Mallawan, Kursath, and Aamtara are some of such markets. These markets have been established for business in fruits and vegetables, but other markets have been established for the purpose of doing business in grains. They are also important for establishing primary link between farmers and periodic markets. These markets reduce the

¹ <http://agmarknet.nic.in/amrscheme/modelact.htm>

loss of commodities and provide better prices to producer.

There is a commonality in the trend of development of the periodic and regulated markets. Most of the new markets have come before 1991 or 2001, depending on the type of market and not in the recent times. Given that the population is increasing and so is the production, lack of expansion of markets in the times of agrarian crisis presents another element of hardship for the farmers.

2.5 Comparative Analysis of Surveyed Periodic and Regulated Market

Markets are invaluable socio-economic component of the rural space and I also the prime mover of economic growth of the study area. Most of the farmers are marginal and small farmers, which comprises more than 80% of the total. In the study area, periodic and regulated markets are a matter of challenge, as most of the sellers are illiterate and have low income.

2.6 Characteristics of Periodic and Regulated Market

The market's location is an important aspect for selling commodities in rural and urban areas. In the rural area, periodic markets are commonly located in the centre of the rural settlement, which constitute the heart of village. Sometimes periodic markets are held in open places, along the roads, near Gram Panchayat establishment, near any religious place or at private places, where buyers and sellers meet at a specific time and day for the exchange of the commodities. But, regulated markets differ from the periodic markets in terms of place and exchange of the commodities, because regulated markets have a regulatory body that regulates the market, facilitates exchange of the commodities, and authorizes the public gathering of buyers, wholesalers, and middlemen. Regulated markets are situated in urban areas or in large villages, which cover a reasonably large area and provide favorable condition for the exchange of goods. In the table, it has been shown that 2.3 is the average of market day in a week and the average number.

In the study of markets in Hardoi district, 20 periodic markets surrounding 2 regulated markets have been surveyed. These markets cover both the rural and urban areas. The study has covered only the sellers of perishable commodities i.e. vegetable and fruits. The study has also revealed the individual and average of different groups. In the study area of Sandila periodic market, average market day is 2.3, which is lower than the Hardoi periodic 2.5 markets. Most of periodic markets are open greater than 5 hours, for example, 5.12 in Sandila and 5.5 in Hardoi, which depends on the market location, number of buyers and so on. Most of the periodic markets are getting higher than 3₹ . Some periodic markets are administered

by private individuals where some markets are administered by Gram Panchayats, and some are not administered by any authority or individual and it seems, that these markets are governed by some unframed and untold convention.

Table 2.6 Characteristics of Periodic and Regulated Market

Name of Market	Market Days	Opening and Closing Time	Commodities taxes (in ₹)	Supervising Agency	Market Location
Som	Sun, Wed, Fri	2 to 6 PM	1	Private	Main Road
Serwan	Mon, Fri	1 to 6 PM	2	Gram Panchayat	Gram Panc.
Behsary	Sun, Wed	2 to 6:30 PM	3	Gram Panchayat	Gram Panc.
Hardalmai	Tue, Thu, Sat	12 to 7 PM	4	Gram Panchayat	Gram Panc.
Moh. Belwaran	Mon, Fri	2 To 6 PM	2	Private	Religious Place
Goudara	Sun, Wed	12 to 6:30 PM	3	Gram Panchayat	Open Place
Behandar Kala	Friday	2 to 5:30PM	1	No Authority	Gram Panc.
Sikrohry	Mon, Thu	12 to 5:30 PM	3	Private	Main Road
Tiloya Kala	Sun, Wed	2 to 7 PM	3	Private	Gram Panc
Malehara	Mon, Wed, Sat	11 to 6 PM	13	Gram Panchayat	Gram Panc
Sandila**	2.3	5.12	3.5	-	-
Khajur Mai	Sun, Wed	2 to 6 PM	2	Private	Gram Panc.
Lalpur	Thu, Sun	2 to 7 PM	5	Gram Panchayat	Open Place
Bawan	Mon, Thu	12 to 6 PM	3	Gram Panchayat	Gram Panc
Jagdeeshpur	Wed, Sun	12 to 6 PM	10	Private	Open Place
Tandiyawan	Except Mon, Fri	11 to 6 PM	3	Private	Main Road
Itoli	Mon, Fri	2 to 6 PM	4	Private	Main Road
Gursanda	Mon, Wed, Fri	1 to 5:30	2	Private	Open Place
Pachkohara	Sun, Tue, Fri	11 to 6 PM	5	Private	Gram Panc
Purabahadur	Wed, Sat	1 to 6:30	3	Private	Main Road
Bargawan	Mon, Fri	12 to 6 PM	5	Private	Religious Place
Hardoi**	2.5	5.5	4.2	-	-
Sandila	Except Sun	8 to till night	0	MandiSamiti	Tehsil
Hardoi	Except Sun	6 to till night	0	MandiSamiti	District

Source: Primary Source of Data, 2015

** Average

In the rural area about 60% of markets are regulated by private individuals and 35% markets are regulated by gram panchayat or some regulatory body where the remaining markets unregulated and are not controlled by any particular actor. These markets function in public

places like any main road, or a barren field on outskirts of village. These types of markets are held at certain places and after certain time periods for marketing activities. However, most of the periodic markets or rural markets or Haats are held in the centre of a rural settlement or near the Gram Panchayat's establishment. The survey reveals that almost 50% of the periodic markets are held near the Gram Panchayat's establishment.

Some markets are held at some religious places, in open spaces or along the main roads to easily reach the consumers. Comparison of regulated and periodic market shows that regulated markets hold more significance than the periodic markets, because regulated markets are regulated under the state APMC act. Where market area are declared by state government and managed by the market committee constituted by state government, no person and agency is allowed to start wholesale marketing activities free of cost. The monopoly of government regulated wholesale markets has prevented development of a competitive marketing system in the country. Since transactions in regulated markets happen in bulks, it hinders farmer's direct participation in market to sell their own products. It also limits retail business in government regulated markets, as well as smooth raw material supply to agro processing industries and adoption of marketing system and technologies

In the study area regulated markets are regulated by Krishi Utpadan Mandi Samiti, Sandila and Krishi Utpadan Mandi Samiti, Hardoi. Hardoi Regulated Market is situated in district headquarter and Sandila Regulated market is situated in tehsil headquarter and both the markets are situated along Hardoi - Lucknow state highway. These markets open early in the morning and remain open until night, but Sunday is a holiday. Seller do not have to pay tax or other charges in regulated market, however in some of the periodic markets some charges are levied from the sellers. Charges levied in periodic market are not uniform in every market; charges may vary from market to market depending upon the location of the market, the administering body of the market, periodicity of the market, facilities provided by the market, and the auction of the market. Charges in most of the markets vary between Rs. 1 to 5, but in some markets charges are above Rs.5. In the study area, market charge structure was 1, 2, 3, 4, 5, 10, and 13. The study has observed that about 10 % of the market charges Rs.1, which are levied for maintaining workers like sweeper and providing other facilities. In other markets construction charges are also collected by controlling authority of market. 20% of market receives Rs 2 as charge, 35% percent of markets levy Rs. 3 as charge, 10% of markets levy Rs.4 as charge, and 35% markets collect above the Rs. 5. Therefore, there is a huge difference in the imposition of market charge on farmers and sellers. The time of market is also significant for periodic market as it gives a lot of information about the market and depends on a lot of factors. Simply, timing of market informs about the size of market, in the study area time of opening and closing was different and fixed for every market, Market usually opens early in the morning and remains open till night. But the time of opening and closing is different for different markets, the study has shown that 15% percent of the market open around 11am, 20% open around 12 pm, 15% open around 1 pm and 40 % open around 2 pm. Thus, it's clear that 40% of the market start around 2 pm and 20% of them start around 1 pm. Closing time of the markets are also different, there is not a fixed closing time but most of the markets close around 6 pm. Thus, there are variations in the timing of markets, charges of markets, authority of markets and place of markets, which is determined by many factors.

2. 7 Markets size and Served Area of Periodic and Regulated Market

The functioning of the market centre depends upon the areas surrounding the regulated markets, and these market areas and regulated markets influence each other. This depends on the size of market, if market sizes are greater, the influence or served area will also be greater. The size of market also depends on demand and supply, if demand is more, supply also

increases, and thus the market expands. Size of a market also depends on the geographical area of the market. The size and shape of market centre vary according to the size and location of respective market centers with respect to other markets (*Belgaum & Mulimai 2012*).

Table 2.7 Market size and Serving Area in the Market

Name of Market	Number of Shops		Area of Markets in Bigha	Average Area served BY market in sq km	Number of Village Served by market	Dist. of Regulated Market
	Vegetable	Fruits				
Som	40	2	0.5	4	15	6
Sarwan	45	3	1	5	20	10
Behsary	80	2	0.5	3	12	5
Hardalmau	200	10	4	5	20	4
Moh. Belwaran	65	5	3	5	15	8
Goudara	100	3	1	5	15	7
Behandar Kala	150	10	2	8	25	10
Sikrohry	130	10	2	5	20	9
Tiloya Kala	90	4	3	3	16	8
Malehara	130	10	3	6	27	10
Sandila**	103	5.9	2	4.9	18.5	7.7
Khajur Mai	75	5	1	5	14	15
Lalpur	100	6	1	4	15	8
Bawan	150	5	2	5	24	10
Jagdeeshpur	180	10	3	6	20	12
Tandiyawan	100	10	2	3	10	10
Itoli	40	5	0.5	3	12	8
Gursanda	50	2	1	3	15	15
Pachkohara	200	10	4	5	25	11
Purabahadur	80	3	1	3	16	8
Bargawan	130	5	2	4	20	10
Hardoi**	110.5	6.1	1.75	4.1	17.1	10.7
Hardoi	0	0	47.71 *	20	0	0
Sandila	0	0	50*	20	0	0

Source: Primary Source of Data, 2015

Note - * Acre

** Average

Market size depends on the area served by the market area and also depends on factors like distance of periodic markets and regulated markets, periodicity of surrounding markets, facilities provide by market authorities, location of markets, land structure of market area, and socio economics condition of market participants etc. So, Market size and area served by market are interrelated to each other, if area served by market increases then market size also increases. In the study area, average number of vegetable in the shops are different, which is 103 of vegetable and 5.9 of fruits in the Sandila periodic market and 110.5 of vegetable and

6.1 if fruits in Hardoi periodic markets. This however depends on price of perishable commodities, transportation cost, and other indicators. Most of periodic markets are large, almost 2 bigha in Hardoi and 1.75 in Hardoi, whereas the regulated market is 47.71 acres in Hardoi and 50 acre in Sandila.

The present study have taken different aspects like size of market area, which depends on number of shops, area of markets, average area served by markets in square km, number of villages served by market, and the distance of regulated market from its service area. We have discussed above that size of market depends upon number of shops, which vary from market to market. These variations are found in market area, vary from one market to another, and depend upon geographical area of markets. The study has examined the relationship between all area of market and number of shops in it. If any market has larger number of shops, then the area of market will also be larger and vice versa.

Average area served by market, number of villages served by market and distance of regulated market are interrelated to each other. In the study area there are minor variations in area served by each market. This depends on geographical area and market frequency of surrounding area. In the study area, about 30 % of markets serve 3 km of surrounding market area and 65% market serve 3 to 6 km of surrounding market area and only 5 % of markets serve above the 8 km of surrounding market area...

2.8 Number of Market Participants in Periodic and Regulated Market

Market is a place where a large number of people like seller (farmer, middlemen, and wholesaler), buyer and retailer assemble for marketing activities. Periodic and regulated markets have also different participants. Periodic market is a rural market or is an option available for rural people to fulfil their basic needs and it is also significant for the farmers who sell their perishable commodities and earn cash. In the periodic market, a large numbers of sellers are also producers.

The study has revealed that the number of market participants in periodic markets and regulated markets are different. In the study area, about 178 are the average sellers in the Sandila periodic market where on the other hand it is 187.5 for the Hardoi periodic market. But in the regulated market the result is different from periodic market, in the regulated market producer seller are noticeable but number of non producer seller have increased. In the study area of Hardoi and Sandila regulated market, there are a large number of non producer sellers like wholesalers and wholesaler middlemen. There are 659 registered Wholesaler and 15 wholesaler middlemen in Hardoi market and 359 registered wholesaler and 20 wholesaler middlemen in Sandila regulated market. Thus there are a lot of differences among the market participants and also among the nature of sellers in Periodic and Regulated markets.

Table 2.8 Nature of Market Participant in Periodic and Regulated Market.

Name of Markets	Average No. of Sellers in Periodic Markets	No of Wholesalers in Regulated Markets	No of Wholesaler & Middlemen in Regulated Markets
Sandila	178	659	15
Hardoi	187.5	359	20

Source: Primary Source of Data, 2015

2.9 Transaction of Perishable Commodities in Periodic and Regulated Market

As we know, India is the second largest producer of fruits and vegetables in the world after China, but when it comes to marketing facilities situation is very alarming. 20-30 percent of produce are lost due to poor storage and transportation facilities for perishable commodities. The marketing of agricultural crops plays an important role not only in stimulating production and consumption, but also in accelerating the pace of economic development. It is not only an economic link between the producers and consumers, but it maintains a balance between demand and supply (*Khan, 2012*).

Table 2.9 Transaction of Perishable commodities in Periodic market

Name of Periodic Markets	Transactions of Vegetables in month (Quintal)	Share of Vegetables in Periodic Markets	Price of Vegetables in Lakh (in ₹)	Transactions of Vegetables in month (Quintal)	Share of Fruits in Periodic Markets	Price of Vegetables in Lakh (in ₹)
Som	150	5.12	1.50	9	5.39	0.08
Sarwan	108	3.69	0.70	10	5.99	0.10
Behsary	200	6.83	1.20	12	7.19	0.10
Hardalmau	700	23.91	5.00	25	14.97	0.20
Moh. Belwaran	200	6.83	1.00	12	7.19	0.12
Goudara	300	10.25	1.50	8	4.79	0.15
Behandar Kala	220	7.51	1.44	12	7.19	0.15
Sikrohry	300	10.25	2.00	30	17.96	0.30
Tiloya Kala	250	8.54	1.70	13	7.78	0.15
Malehara	500	17.08	3.00	36	21.56	0.30
Sandial	2928	100.00	19.04	167	100.00	1.65
Khajur Mai	200	5.39	1.30	16	7.08	0.12
Lalpur	250	6.74	1.50	20	8.85	0.25
Bawan	360	9.70	2.20	16	7.08	0.20
Jagdeeshpur	500	13.48	3.20	20	8.85	0.40
Tandiyawan	800	21.56	5.00	50	22.12	0.50
Itoli	130	3.50	0.80	16	7.08	0.20
Gursanda	200	5.39	1.50	12	5.31	0.15
Pachkohara	750	20.22	4.50	50	22.12	0.50
Purabahadur	200	5.39	2.00	10	4.42	0.12
Bargawan	320	8.63	2.00	16	7.08	0.20
Hardoi	3710	100.00	24.00	226	100.00	2.64

Source: Primary Source of Data, 2015

Table 2 10 Transactions of Perishable Commodities in Regulated Market

Name of Markets	Transaction of vegetables in a year	Share of Vegetables	Price of Vegetables in Lakh (in ₹)	Transaction of Fruits	Share of Fruits	Price of Fruits in Lakh (in ₹)
Sandila	272947	58.72	2258.93	290717	91.66	3920.31
Hardoi	191858	41.28	1281.96	26456	8.34	135.08
Total	464805	100.00	3540.89	317173	100.00	4055.39

Source: Agricultural Marketing Produce Board of Sandila and Hardoi Market, 2015

In the study area 20 periodic markets have been surveyed on the field and 2 regulated markets have been surveyed on the basis of data collected from secondary sources (Mandi samiti). Marketing of perishable commodities in periodic and regulated market are different. The

studies have revealed that market wise production, share and price of perishable commodities in the periodic and regulated markets. In the Sandila periodic markets, most of horticulture production arrive in the Hadalmau market, which has a share of 23.91%, while on the hand the lowest share is in the Som periodic market. The study has revealed that in Hardoi periodic market most of share is of Pachkohara periodic market and lower share of the Itoli periodic market, which is 3.50% of the share in the Hardoi periodic market in the study area. The fruits production in the Sandila and Hardoi regulated market are very less because, the highest production of fruits arrived in the Sikrohary periodic market and lowest share in Som market. On the other hand, in the Hardoi periodic market highest share is of the Pachkohra and Tandiyawan periodic market.

The productions of perishable commodities in the regulated markets are also different in the study area. In the Sandila regulated market the vegetable and fruits have the highest share compared to the Hardoi regulated market i.e. 58.72 % of vegetables and 91.66% of fruits production. This is because the Sandila regulated markets are near to Mango belt of Malihabad. The share of Hardoi regulated market is comparatively lower than Sandila Regulated market.

2.10 Conclusion

Periodic and regulated markets are most important for the economic growth in the study area. The numbers of periodic markets have increased almost across all the blocks except in Suras, Ahrori, Behandar and Sandila during 1995 and 2013. Also In addition, the numbers of villages, which are more away from periodic markets, have decreased across the blocks during 1995 and 2014. Thus, it can be argued that the numbers of those kinds of villages, which have its own periodic market, have increased sharply across the blocks because of the rising population, demand for commodities and distress employment have established many new many periodic markets. There are also a lot of differences in many components. Most of periodic markets are held above 5 hour in the study area and most of them are regulated by the private authority. Periodic markets are served above 4 km q average average area. Therefore, different results have been found in the study area.

CHAPTER III

Socio-Economic Condition of Market Participant (Sellers) of the Periodic and Regulated Market

3.1 Introduction

The regulated markets in India are a form of Government intervention in the trading of agricultural produce. The periodic markets, on the other hand, are a more traditional and spontaneous channel for the marketing of such produce. The Government has tended to consider the former as beneficial and the latter as harmful to the producer-sellers (*Sudhir Wanmali, 1980*). The debate for regulated (centralized) and deregulated (decentralized) market forms have their own validity and demerits. A crucial one is market access (*Marshall et al., 2003; Velde et al., 2006; Gaudi and Hauser, 2009*). Decentralized framework provides access to the local hats and Mandis, the resultant transaction cost and transport cost is lesser than that of the collection centers managed by government or state agencies. In several countries, the national conservation requirements and protectionist policies in support of industrial interests led to significant government control and regulation of agricultural product harvesting and marketing (*e.g. Peck and Christy, 2006; Sarkar and Das, 2007*). Local communities may be deprived of their traditional rights and face restrictions and controls on harvesting or marketing, with little regard for how this impacts local livelihoods. *Saxena N.C (2003)*² highlights the monopoly rights of the states in favor of industry and other large end-users by providing subsidies on certain products. The scenarios post 2000 has been detailed wherein a transition has taken place in Orissa from the hands of Tribal people to State agencies. He urges for the need of Support prices and protectionist approach by these agencies.

Roy Chaudhury (1958) in the Singhbhum district gazetteer describes markets as “the primary markets held daily or weekly” in which “the sale of agricultural produce and consumer goods takes place.” He further notes that there are “a number of weekly markets in the district where local communities make their purchases and sales while merchants from outside come in to ply their own trade.” With varying structural designs of such market, there are inherent diversities within the composition of market participants. The idea is to demarcate and identify the socio economic conditions of such market in their mode of operation i.e.

² Please visit for detail about the inconsistencies in policies and lesser stake of poorest under the state's control of NTFPs - <http://www.odi.org.uk/sites/odi.org.uk/files/odi-assets/publications-opinion-files/2460.pdf>

regulated and unregulated markets. Studies have proved the fact that markets have some implication on regional development in general and economic well being of the rural folks in general, both the markets provide platforms, where farmer or producer can sell crops easily. The frequency and nature of farmer's visit to both the markets have influenced the market centers. Thus, the transformation and reformation in these markets bear direct effect on participants of market mostly hailing from the rural vicinity (*Motiee et al, 2011; Jana, 1978*) There is a need for an analysis for the spatial and temporal arrangement of both types of markets and marketing. Since, rudimentary form of market place is also entitled to some institutional form of rules and regulations but with the limitation of local area conditions. It is more likely to observe rudimentary form of social order (Norms- informal rules) –locally evolved regulations and its intersection to the urban regulated market. (Jha, 1988)³ However, in this part, the study is taking into account essential wellspring of information acquired by area specific field work in occasional (periodic) and directed (regulated) markets. The business sector members have been partitioned into venders and occasional sellers (farmer-producers). In this section, a financial state of the business sector members (dealers) of the overviewed occasional and controlled business regions has been uncovered. Purchasers have been prohibited from the study; the study is centered on vender members in the intermittent and controlled market specifically to capture the socio economic composition of the participants in both levels of market and the modalities (place, time and ownership utilities, roles of participants, the organization of participants, and terms);

Periodic markets – locally referred as 'Hats' are nothing but an area of product exchange giving opportunity not only to purchase consumer goods, but also to sell surplus agricultural and allied products. (Kashyap, Raut 2010). These products then reaches among different sections of next level of producer vis-à-vis manufacturers, consumers etc. The catchment area of a *Hat* varies from region to region but generally each 'haat' caters to the need of a minimum of 10 to a maximum of 50 villages, drawing around 4000 persons who come to buy and sell a range of daily necessities and services (Krishnamacharyulu, Ramakrishanan 2011). Such markets include Ruralised local organizations as a form of societal integration whereby all the major social institutions have an agrarian base... It is one type of social organization, the social features of which are primary interaction, village living, localization, isolation,

³ Jha , Mithelshwar , 1988, "Rural Marketing: Some Conceptual Issues", Economic and Political Weekly, Vol. 23, No. 9 (Feb. 27, 1988), pp. M8-M16 <http://www.jstor.org/stable/4378168>

primary production and distribution of goods, and reciprocal provision of services ⁴(**Taylor and Jones,1964**) Therefore, the supply side is mostly of dual character i.e. – Producer Seller and consumer (mostly fond of rural composition) whereas the next level regulated markets are mostly confined to different market forms which creates fertile ground for the emergence of small enterprises development . These markets are mostly closer to the institutional forms of support system such as market cooperation, small but effective trade unions, banking etc. consequent to this, small enterprises are most likely to develop in the close vicinity and professional traders evolve to provide linkage between specialized higher level traders or the value adding manufacturers in the next level.

Regulated Market in another hand is an institutional arrangement of rules in order to run a market. It may start with an appointed committee of persons from amongst the locally elected representatives of the people, the local officials, the market functionaries such as commission agents and traders and those producer-sellers who are members of co-operative societies which are located within the notified area of the regulated market. The Committee is empowered by the Act to declare any market as 'regulated'; delineate its area of operation; announce the 'produce' it will deal in; issue, renew, refuse and cancel the licenses of the market functionaries; and keep a detailed account of market arrivals and price. (Wanmali, 1988)⁵ Therefore a stiff transition in structural arrangement is observed from lower level of periodic to higher level of Regulated market.

3.3 Demographic and Socio-economic Condition of Market Participant (Sellers)

Literary sources confer the positive effect of the market on its participants. This is Imperative to identify some of the indicators in order to delineate the compositional elements of the participants, specially the sellers. In the following sections, some demographic as well as socio economic elements have been discussed to analyze the differences between both kind of markets.

3.4 Average Age of sellers in Periodic and Regulated Markets

Age is the most important component which controls the participation of sellers into periodic

⁴ Taylor, Lee and Jones Arthur R, Jr, Rural Life and Urbanized Society, New York, Oxford University Press, 1964.

⁵ Wanmali, "The Regulated and Periodic Markets and Rural Development in India", Transactions of the Institute of British Geographers, Vol. 5, No. 4 (1980), pp. 466-486

and regulated. Table 3.1 and figure 3.1 shows the average age of farmer sellers in periodic and regulated market. The findings reveal that the average age of the traders is higher (38.5) in regulated market than the periodic markets (35.8). The average age of sellers in the Sandila in both periodic (38.9) and regulated markets (41.5) is higher than that of Hardoi. On the other hand, average age of sellers of Sandila periodic and regulated markets is higher than that of in both of the total periodic and regulated market in study areas. This shows that the lack of alternate livelihood options have been pushing the farmers in relatively younger age to enter into agriculture, therefore even low income and greater number of farmers with marginal land possession, the proportion of Participants are greater in lower age bracket.(also see table – 3.5 as well as 3.4)

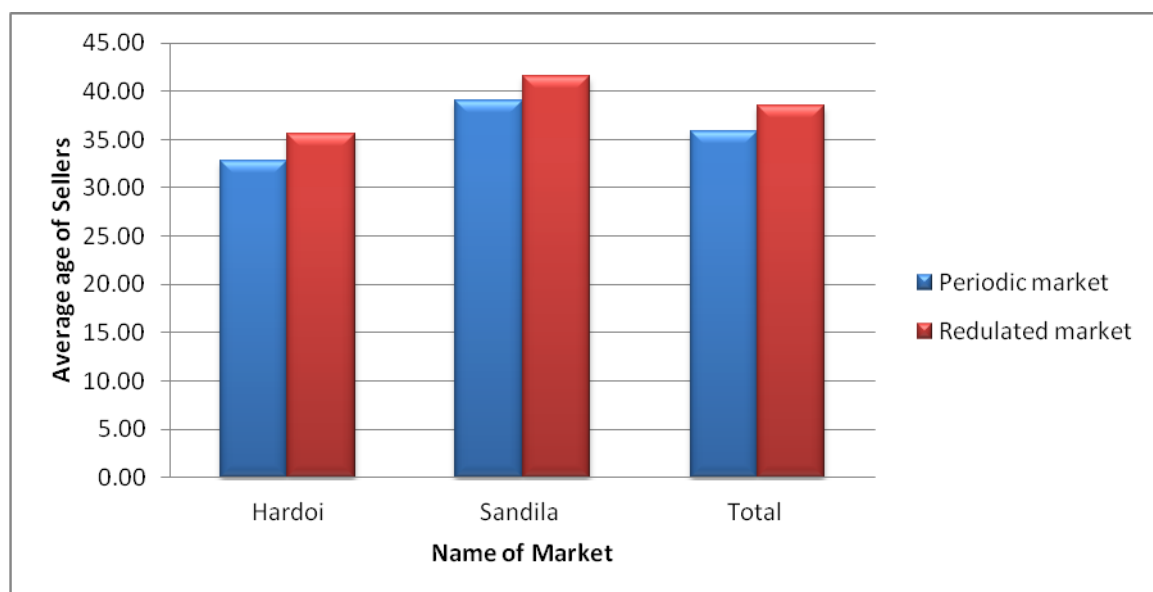
Table 3.1 Average Age of sellers in Periodic and Regulated Markets

Sr. No.	Name of market	Periodic market	Regulated market
1	Hardoi	32.77	35.53
2	Sandila	38.98	41.57
3	Total	35.88	38.55

Source: Primary source of data, 2015

Thus, there are some differences in average sellers' age in the periodic and regulated market of Hardoi district, which depends on many factors like distance of market, nature of perishable commodities, mode of transport, market charge and so on.

Figure 3.1 Average ages of sellers in periodic and regulated market



3.5 Social Group wise Participation of Sellers in Periodic and Regulated Markets

Social group of sellers play an important role in determining the economic activities of the study area. The composition and structure of sellers are deep rooted in the social stratification of caste and division of labor on the basis of social hierarchy (**Khan, 2003**).

Based on the latest NSSO, 70th round – “*Key Indicators of Situation of Agricultural Households in India*”, during the reference period of July 2012- June 2013, about 45 percent out of the total agricultural households in the country belonged to *Other Backward Classes* (OBC). About 16 percent of agricultural households were from *Scheduled Castes* (SC) and 13 percent were from *Scheduled Tribes* (ST), (Section 3.2.1 of the report). This is practically true in the sense that a transition is taking place from that of self employed in agriculture to non agricultural labor class of the Scheduled castes due to possession of low capacity asset and capital for the basic agriculture practices. Therefore, the OBCs are relatively representing agricultural activity at greatest share. This increased share also represents greater share in the trade in local Hats in terms of selling agricultural produce.

In the following table the pattern found is almost similar to the fashion of agrarian household in rural area. What is more striking is the fact that at greater regulated level the share of scheduled caste is further declined and the General as well as OBCs are forming greater share. This is due to historical factor of division of activities on the caste lines. Trade has been the ancestral professions, carried forward by the OBCs and certain general category people, still form the majority. This is also the level at which the traders are mostly non producers of the commodity they trade.

The table 3.2 and figure 3.2 shows the social group wise study of sellers in the surveyed periodic and regulated markets. In the table 3.2, most of those sellers belong to backward and scheduled castes. Together their percentage share in total is 84.1% and 75.0% in periodic and regulated markets, respectively. However, the pattern of participation of sellers in the periodic and regulated markets of the study area presents a different scenario.

The percentage share of OBC sellers is highest in both the markets which are 58.3% and 53.3% in the regulated and periodic markets, respectively.

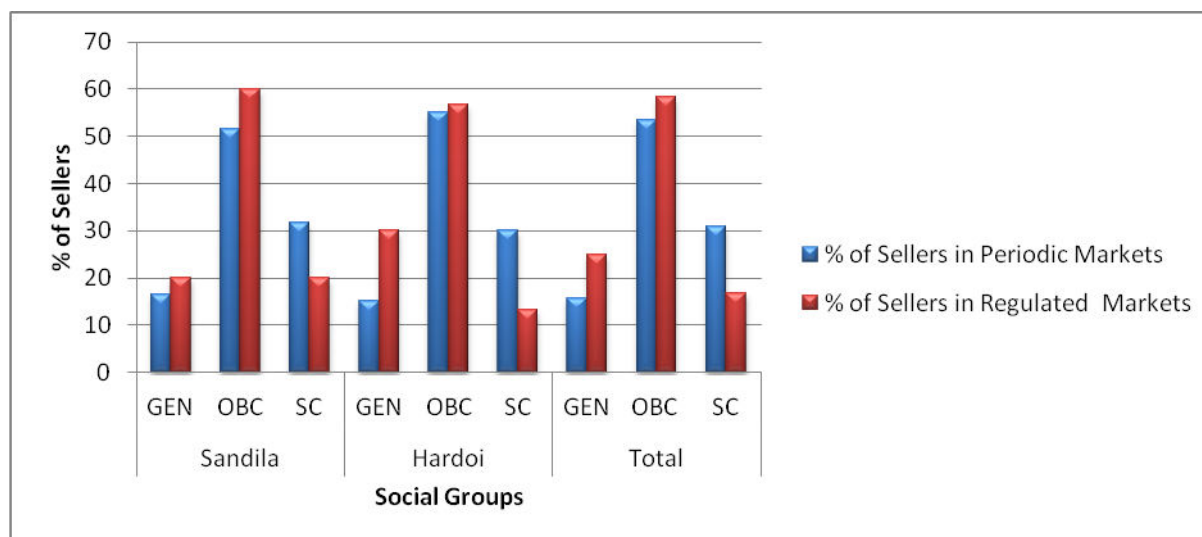
Table 3.2 Social Group wise of Sellers participation in Periodic and Regulated Markets

Sr. No.	Name of Markets	Social Groups	No. of Sellers in Periodic Markets	% of Sellers in Periodic Market	No. of Sellers in Regulated Markets	% of Sellers in Regulated Market
1.	Sandila	GEN	10	16.6	6	20.0
		OBC	31	51.6	18	60.0
		SC	19	31.6	6	20.0
2.	Total	Social Groups	60	100.0	30	100.00
3.	Hardoi	GEN	9	15.0	9	30.0
		OBC	33	55.0	17	56.7
		SC	18	30.0	4	13.3
4	Total	Social Groups	60	100	30	100.00
5.	Markets Total	GEN	19	15.8	15	25.0
		OBC	64	53.3	35	58.3
		SC	37	30.8	10	16.7
6.	Total	Social Groups	120	100.00	60	100.0

Source: Primary Source of Data, 2015

Note- GEN- General Caste; OBC- Other Backward Caste; SC- Scheduled Caste

Figure 3.2 Social Group wise of Sellers participation in Periodic and Regulated Markets



Source: Primary source of data, 2015

However, the general castes sellers are represented in low share in the periodic market and their share remains 15.8% in the periodic market and 25% in the regulated market.

In the table 3.2, it has revealed dissimilar pattern of general caste in the study area. In the periodic market, the shares of general caste are mostly similar, which is 16.6% in Sandila periodic market and 15% in Hardoi periodic market, which is quite difference to other

backward caste and scheduled caste in the study area. However, the share of general caste is more in the both regulated market compare to periodic market. But, in both regulated market has different result. In Sandila regulated market has 20% sellers from general caste and in Hardoi it is 30%, which is larger than Sandila regulated market. Hence it is proven that general caste communities do not prefer to go and trade in periodic markets. They prefer to go and trade in regulated markets because of their prosperities and their large land holding.

3.6 Literacy Rate of sellers in the Periodic and Regulated Markets

Education is the most important component through which it can be figured out the socio-economic changes and improvement in the economic conditions of the study area. Table 3.3 and figure 3.3 shows the literacy rate of sellers in selected periodic and regulated market of the study area. The proportion of illiterate seller is high in the periodic market (45%) comparative to regulated market (31.7 %). So, in the periodic market half of the sellers have not got primary or formal education and also in the regulated market one third of sellers have not got primary education because of their economic backwardness, which is quite different in the both periodic and regulated market.

Table 3.3 Sellers Literacy Rate in the Periodic and Regulated Market

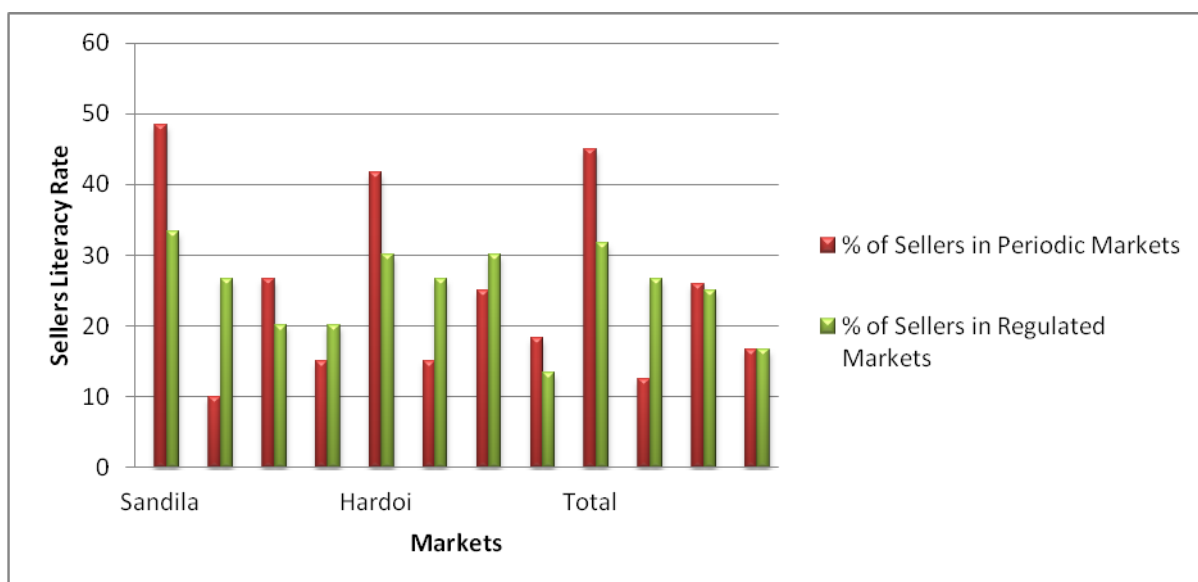
Sr. No	Name of Markets	Education Groups	No. of Sellers in Periodic Markets	% of Sellers in Periodic Markets	No. of Sellers in Regulated Markets	% of Sellers in Regulated Markets
1.	Sandila	Illiterate (No formal education)	29	48.3	10	33.3
		Primary Education (0-5 th class)	6	10.0	8	26.7
		Secondary education (5-10 th class)	16	26.7	6	20.0
		Above Senior Secondary Education	9	15.0	6	20.0
2.	Total	Education Groups	60	100	30	100
3.	Hardoi	Illiterate (No formal education)	25	41.7	9	30.0
		Primary Education (0-5 th class)	9	15.0	8	26.7
		Secondary Education (10 th 12 th class)	15	25.0	9	30.0
		Above Senior Secondary education	11	18.3	4	13.3
4.	Total	Education Groups	60	100	30	100
5.	Markets Tot.	Illiterate (No formal education)	54	45.0	19	31.7
		Primary Education (0-7 th class)	15	12.5	16	26.7
		Secondary education (8-10 th class)	31	25.8	15	25.0
		Above Senior Secondary education	20	16.7	10	16.7
6.		Education Groups	120	100	60	100

Source: Primary source of Data, 2015

The above table 3.3 shows the various results into periodic and regulated markets. The proportion of illiterate sellers in the periodic and regulated markets have different results,

48.3% of sellers in Sandila’s periodic market and 41.7% sellers in the Hardoi’s periodic markets have not taken primary education, but in Hardoi regulated market share is 30% and in Sandila regulated market is 33.3%, which are lower to periodic markets. So, it shows that those higher numbers of illiterate sellers are in periodic market and in the regulated market, it is comparatively low.

Figure 3.3 Sellers Literacy Rate in the Periodic and Regulated Markets



Source: Primary source of data, 2015

So, from Data it is proven that in the periodic markets 45% of sellers are illiterate, but on the other hand there has been some different results found in educational groups. The primary educations of sellers are greater in the regulated market, which is 26.7% in regulated market and 12.5 % in the periodic market. There are also differences in the Hardoi and Sandila’s periodic market, 10% of sellers in Sandila’s periodic market, and 15% of sellers in Hardoi’s periodic markets sellers have not got primary education. There is also a little bit difference of secondary education in the periodic and regulated market.

Educations of sellers above the senior secondary education have found different result in the study area. In the periodic and regulated market percentage are same (16.7%) in the above senior secondary education. However, 15% and 18.3% periodic market sellers of Sandila and Hardoi have got above the senior secondary education and in the regulated market, 20% sellers of Sandila and 13.3% of Hardoi regulated market sellers have taken above senior secondary education. So, it’s a fact that highest numbers of educated sellers are in the regulated market instead of periodic market.

3.7 Landholding of sellers in Periodic and Regulated Markets

There is inverse relationship found between size of land holding and participation of sellers in the market, like higher concentration of sellers belong to lower size of land holding. Table 3.4 shows the landholding wise participation of sellers in selected periodic and regulated market of the study area. In the table it has been shown different categories of landholding size such as landless, marginal farmers (<2.5 acres land), small farmers (2.5-5 acres land), medium farmers (5-10 acres land) and large farmers (>10 acres land). The study shows that 71.66% of sellers are belong to marginal categories and 18.33% of sellers belong to small categories in the selected study area. Whereas in the regulated markets the share of sellers in marginal categories (38.33%) has decreased and small farmers share (26.66%) has increased in comparison to periodic market. So, it shows that marginal farmer's sellers shares are higher in the periodic markets and are lower in the regulated market and small farmer's categories shares are higher in the regulated market and lower in the periodic markets.

Table 3.4 Landholding Size of sellers in Periodic and Regulated Markets

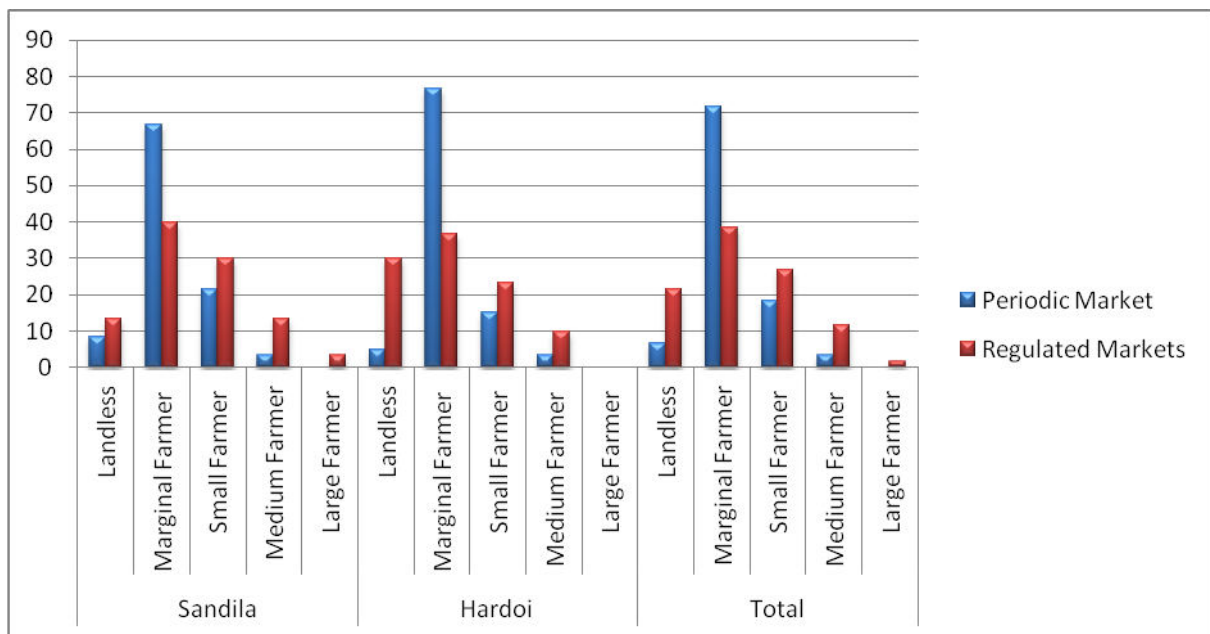
Sr. No.	Name of Markets	Landholding Size	No. of Sellers in Periodic Markets	% of Sellers in Periodic Market	No. of Sellers in Regulated Markets	% of Sellers in Regulated Market
1.	Sandila	Landless	5	8.33	4	13.33
		Marginal Farmer (<2.5 Acres)	40	66.66	12	40
		Small Farmer (2.5-5 Acres)	13	21.66	9	30
		Medium Farmer (5-10 Acres)	2	3.33	4	13.33
		Large Farmer (>10 Acres)	0	0	1	3.33
2.	Total	Landholding Groups	60	100	30	
3.	Hardoi	Landless	3	5	9	30
		Marginal Farmer (<2.5 Acres)	46	76.66	11	36.66
		Small Farmer (2.5-5 Acres)	9	15	7	23.33
		Medium Farmer (5-10 Acres)	2	3.33	3	10
		Large Farmer (>10 Acres)	0	0	0	0
4.	Total	Landholding Groups	60	100	30	
5.	Total Markets	Landless	8	6.66	13	21.66
		Marginal Farmer (<2.5 Acres)	86	71.66	23	38.33
		Small Farmer (2.5-5 Acres)	22	18.33	16	26.66
		Medium Farmer (5-10 Acres)	4	3.33	7	11.66
		Large Farmer (>10 Acres)	0	0	1	1.66
6.	Total	Landholding Groups	120	100	60	100

Source: Primary Source of Data, 2015

There are some differences in the share of sellers in medium and large farmers in periodic and regulated market of the study area. The study shows that the medium and large farmer share is higher (13.32%) in the regulated market in comparison to periodic market (3.33%), which is lower.

In individual category of market wise study has found dissimilar results in the periodic and regulated markets. The share of landless sellers is high (8.33%) in the Sandila periodic markets and low (5%) in the Hardoi Periodic markets, whereas in the regulated market, landless sellers percentage is higher than that of periodic markets. The share of marginal sellers is higher (76.66%) in the Hardoi's periodic market and lower (66.66%) in the Sandila periodic market, whereas in the regulated markets, marginal sellers share are lower than periodic market which is 40% in the Sandila regulated markets and 36.66% in the Hardoi regulated market. The share of small sellers are higher in the both regulated market compared to periodic market. However, in the other categories has different result in the periodic and regulated markets. The shares of medium and large farmer are higher (16.66%) in the Sandila regulated markets and lower (3.33%) in the Sandila periodic market, whereas higher share 10% in the Hardoi regulated markets lower share 3.33% in the Hardoi periodic market.

Figure 3.4 Landholding Size of sellers in Periodic and Regulated Markets



Source: Primary Source of Data, 2015

Thus, it is shown that above 90% of marginal and medium sellers engage themselves in the periodic markets which is comparatively lower than regulated market and medium and large farmer sellers are higher in the regulated market compared to periodic market.

3.8 Income of sellers in Periodic and Regulated Markets

Income has positive bearing on the market and vice versa. As we have discussed before, farmers with lesser agricultural surplus would prefer to sell it to Hats therefore Hardoi, having greater number of marginal farmers show up in lesser income group due to lack of

alternative livelihood. In the table 3.5 has shows the monthly income of sellers in the periodic and regulated markets of the study area. The table 3.5 has shows the different categories of sellers income in the study area, such as less than 5000₹ , 5000₹ -10000₹ , and above the 10000₹ .

Table 3.5 Incomes of Sellers in Periodic and Regulated Markets

Sr. No.	Name of Market	Income groups (in monthly)	No. of Sellers in Periodic Markets	% of Sellers in periodic Market	No. of Sellers in Regulated Markets	% of Sellers in Regulated Market
1	Sandila	Less than 5000₹	40	66.7	7	23.3
		5000-10000₹	18	30.0	8	26.7
		Above 10000₹	2	3.3	15	50.0
2	Total	Groups of Income	60	100	30	100
3	Hardoi	Less than 5000₹	47	78.3	9	30.0
		5000-10000₹	9	15.0	15	50.0
		Above 10000₹	4	6.7	6	20.0
4	Total	Groups of Income	60	100	30	100
5	Total Market	Less than 5000₹	87	72.5	16	26.7
		5000 – 10000₹	27	22.5	23	38.3
		Above 10000₹	6	5.0	21	35.0
6	Total	Groups of Income	120	100	60	100

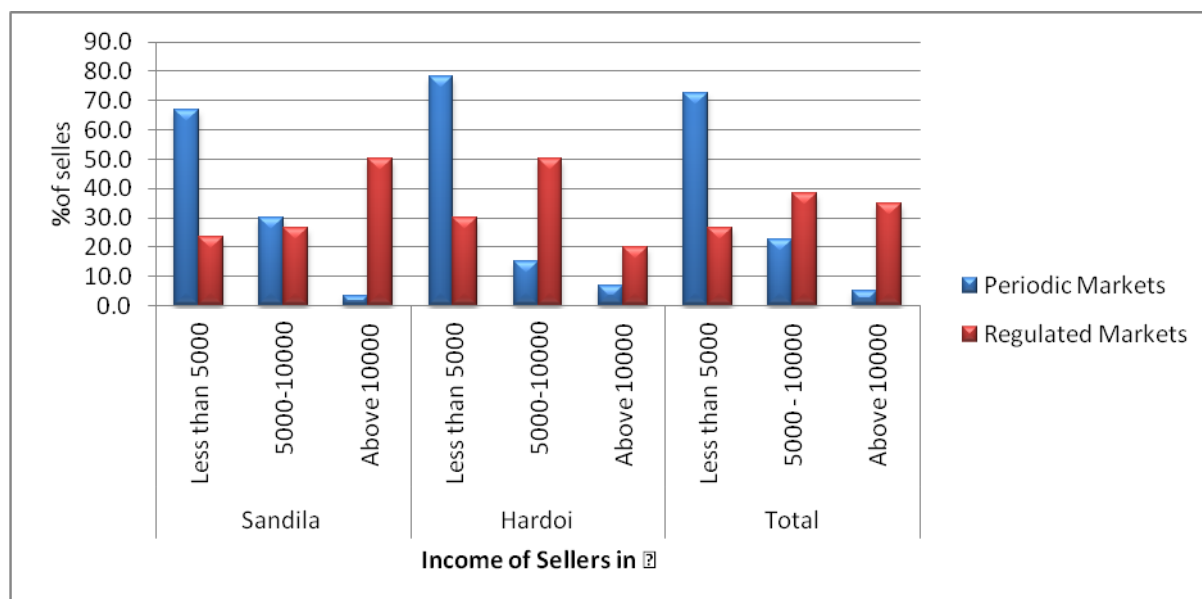
Source: Primary source of Data, 2015

There are different results found in both periodic and regulated markets. From the table 3.5 it shows that 72.5% of sellers monthly income are less than 5000₹ in the periodic markets, whereas in the regulated markets 26.7% sellers incomes are less than 5000₹ , because of participation of marginal farmer larger in the periodic market compare to regulated market. However in the group of 5000-10000₹ the 22.5% of sellers in the periodic market and 38.3 % in the regulated markets sellers income is greater than 5000₹ and less than 10000₹ . In the periodic market very less sellers income is greater than 10000₹ , which is 5% and in the regulated market 35% of sellers income are greater than 10000₹ in the regulated market because in the regulated market most of sellers are medium and large farmer and it's also depend on nature of perishable commodities in the study area.

In the individual analysis sellers income in periodic and regulated market has found different result in the both markets of the study area. The highest share of seller's income is less than 5000₹ of monthly income in the Hardoi periodic market because of larger marginal farmers share. However, in the Sandila periodic market sellers share is 66.7 % which is lower than Hardoi's periodic market. Whereas in the periodic markets very less sellers income falls in the groups of 5000-10000₹ and above 10000₹ , because most of sellers are marginal and

small farmers in the periodic market.

Figure3.5 Incomes of Sellers in Periodic and Regulated Markets



Source: Primary source of data, 2015

In the Sandila regulated market about 76.7% of seller's income is more than 5000₹ whereas in the same place in the periodic markets the share is 33.3%. This difference is due to nature of sellers in the periodic and regulated markets. In Hardoi regulated markets about 70% of seller's income is more than 5000₹ but in periodic markets 21.7% of seller's income is above 5000₹, and it is a major difference in the periodic and regulated markets.

3.9 Conclusion

There are various results which have been found in this chapter, explain the socio-economic condition of sellers in the study area. Based on the above observation, striking differences which were assumed to be significant has, ironically, come out to be narrower in terms of age. This is inferred that there is no significant differentiation except for the slightly higher age in the regulated market. This may be related to the fact that mostly elderly members are in business unlike in agriculture where any member of the household can be sent to the market.

In relation of the social groups, it is mostly the OBCs and General category people dominating the trade affairs in regulated market. The proportion of the SCs declined from periodic to regulated market forms. Another reason attributed to the fact is the declining proportion of SC farmers in the agricultural sector who could have brought the marketable surplus. The percentage of other backward class of sellers are higher in the periodic and

regulated markets but in the regulated markets share of OBCs percentage is comparatively lower than periodic market because of increase of share of general caste groups in the regulated market.

The scheduled caste sellers share is lower than OBCs social groups but greater than general caste group. General caste share is higher in the regulated market. Higher number of illiterate sellers is higher in the periodic market because of their backwardness and lower in number of illiterate sellers in the regulated market.

There have been different results found of percentage of landholding size in the study area but as per the assumption that marginal farmer with lesser surplus would venture in low quantity and retail market transaction has been found correct. In both the market forms as well as areas same patterns has been observed but in regulated markets, the proportion is lesser than that of periodic market even if it is highest for marginal category within the regulated markets.

The study found most striking differences in between the market only with regard to income of the participants. Greater numbers of people are in greater income brackets and vice versa. Age is not significantly showing any differences. Another relevant observation is that there exists an inverse relationship between size of land holding and participation of sellers in the market, like higher concentration of sellers belongs to lower size of land holding.

CHAPTER IV

Accessibility of Sellers to the Periodic and Regulated Market with difference size categories

4.1 Introduction

Farmers (sellers) accessibility to the periodic and regulated market is a major challenge, because accessibility of farmers in the market is very important for development of rural areas. Market accessibility is important, because a large number of marginal and small farmers are engaged in agriculture. Therefore, it is necessary to enable the farmers' access in periodic and regulated markets. This step can reap incentives for farmers, which ultimately will be invested in agriculture and will certainly result into rise of agricultural productivity and living standard of farmers. In rural areas, most of these sellers operate under miserable conditions due to lack of market access. They are unable to reap appropriate returns for their goods. Here farmer appears as a businessman, who is desperate to sell his commodities, because he needs money for buying commodities of daily need and to meet contingencies of social and family life. Often because of lack of demand for his goods, a farmer is compelled to sell his commodities at lower prices. This adds to the distress of the farmers. It's a widely accepted fact that, accessibility to market is one of the most important factors for agricultural development and, it impacts sellers like marginal and small farmers in remote areas very badly, because farmers are not able to reap appropriate return. So, the poor access environment has been for the most part of history responsible for sluggish productivity, which has compelled many rural farm household families to remain stuck in chronic poverty.

In the remote areas lands are often less productive. There exists also high marketing and servicing charges. Due to lack of transportation facility and infrastructure, farmers are not able to access the markets. Therefore, it is important to note that there is a strong relationship between the market, production and the distance. *Von Thunen (1928)* had developed a basis analytical model of the relationships between markets, production and the distance. The price of commodities depends on production cost, transportation cost from farm to the market center.

$$R=Y(p-c)-Yam$$

The farmer seller's main aim is to maximize the profit, which is simply the market price minus the transport and production costs. Thus, the farmer seller's profit depends on nature of

perishable commodities and distance of production center from the market center.

High marketing cost is most important barrier the market access, especially for the perishable commodities, there is price related problems as these tend to be extremely volatile due to low shelf life, variable qualities as well as demand fluctuations. It has been shown that accessibility of market affects the rural development directly and indirectly in agriculture markets of Bangladesh (*Khandar, 2006*). In the periodic markets, marginal and small farmers dispose their surplus production and get quick return. Most of farmers prefer periodic markets instead of regulated markets due to many factors like higher market demand, accessibility, nature of produce, transportation facility, market size and fair price (*M. Khan et al 2012*).

This chapter will investigate the differences in accessibility of sellers' in the periodic and regulated markets. The rural periodic markets, surrounding Sandila and Hardoi regulated markets play a vital role in the business of perishable commodities and its transportation from farm to market. In the market systems there are many barriers impeding the sales of surplus production. These barriers include price, transportation, market charge, market size information and so on. In this chapter the study is based on primary data, which is 120 samples from periodic markets and 60 samples from regulated markets but at the time of data analysis number of frequency has increased (during the data calculation) due to number of farmer sellers to visit many other market and sells many number of perishable commodities in the periodic and regulated market.

4.2 Frequency of sellers visit to the Periodic and Regulated Markets

This section describes the frequency of seller's visit to the periodic and regulated markets in a week. The periodicity of markets in a week is different for periodic and regulated market. The tables 4.1 and figure 4.1 have depicted, how many days in a week sellers visit the markets. In the periodic market about 66.82 % of farmer sellers pay two days a week visit to market, 22.42 percent of sellers visit one time and 9.34 % of sellers visit three times in a week. The case is quite different of seller's accessibility in the periodic markets; because the accessibility of sellers is influenced by sellers economic conditions i.e. landholding size, social group of sellers and so on. Most of large landholders prefer to visit regulated markets instead of periodic one. Very less number of farmer sellers visit periodic markets for four or five days a week. This situation is due to fragmented land holding in rural areas, which leads to less production of perishable commodities. In regulated market the result is different. About 36.66% percent of sellers attain markets for 6 days a week and 33.33 % of sellers attain 3 days a week. Difference in periodicity of sellers in regulated markets is mainly due

difference in nature of seller i.e. producer or non producer sellers. But in the both markets, about 54.37% of sellers visit two days in a week and 18.62 % of sellers visit one day in a week. Hence it can be inferred, that periodicity of sellers in a week is not uniform.

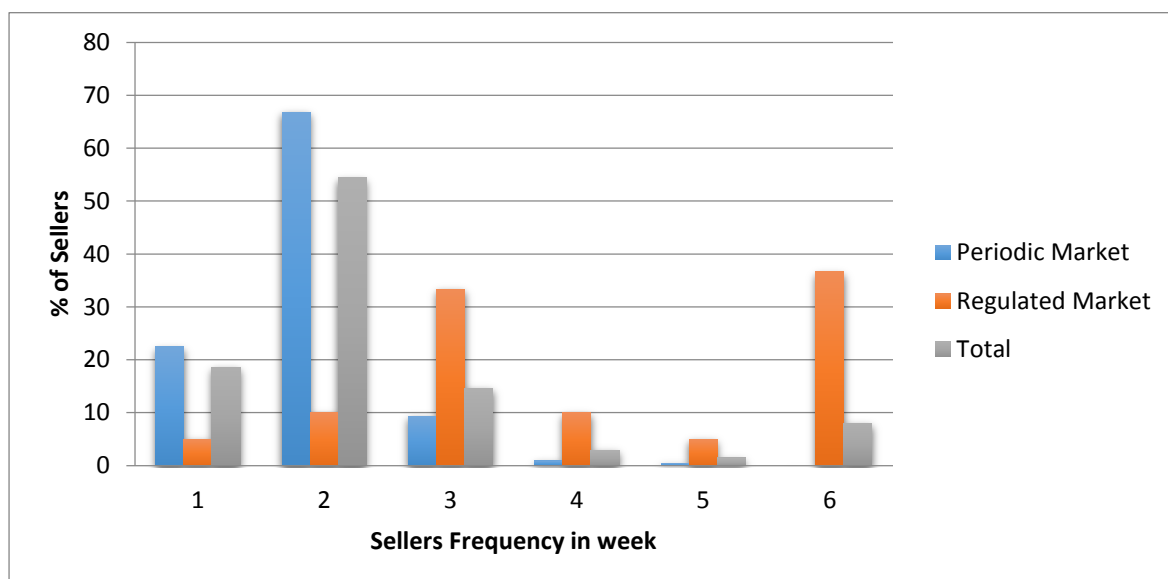
Table 4.1 Frequency of sellers visit to Periodic and Regulated market

Frequency of sellers visit in week of Market	Market Types					
	Periodic Market		Regulated Market		Total	
	Number	%	Number	%	Number	%
1	48	22.42	3	5	51	18.61
2	143	66.82	6	10	149	54.37
3	20	9.34	20	33.33	40	14.59
4	2	0.93	6	10	8	2.91
5	1	0.46	3	5	4	1.45
6	0	0	22	36.66	22	8.02
	214	100	60	100	274	100

Source: Primary source of Data, 2015

So, it shows that, highest numbers of sellers are attending two times in a periodic market compared to regulated market. In the regulated markets, there are some differences like highest number of seller attend 6 day in a week and 33.33 of sellers are visit 3 times in a week, which are depend on the many factors and controlled the accessibility of sellers in the periodic and regulated market.

Figure 4.1 Frequency of visit to Periodic and Regulated market



Source: Primary source of Data, 2015

4.3 Distance and time for coming in the Markets from seller Residences

Accessibility of markets is an important factors influencing farmer to take their produce to the market.⁶ In table 4.2 and figure 4.2 the distance has been categorized into five groups, which are 0-2, 3-4, 5-6, 7-8 and above 8 kilometer.

Table 4.2 Distances of Markets from Sellers' Residences

Distance of Markets (in KM)	No. of Sellers in Periodic Markets	% of sellers in Periodic Markets	No. of Sellers in Regulated Markets	% of sellers in Regulated Markets	Total Number of Seller in Markets	% of sellers in markets
0-2	79	36.92	16	26.67	95	34.67
03-04	88	41.12	2	3.33	90	32.84
05-06	36	16.82	8	13.33	44	16.05
07-08	9	4.21	14	23.33	23	8.39
>8	2	0.93	20	33.33	22	8.02
Total	214	100	60	100	274	100

Source: Primary source of data, 2015

Table 4.3 Total expend time for coming in the Market

Time for coming in the Markets	% and share of seller in groups wise					
	Periodic Market		Regulated Market		Total	
	No.	%	No.	%	No.	%
30 Minute or Less	70	32.71	30	50.00	100	36.49
31 – 60 Minute	112	52.34	28	46.67	140	51.09
More than 60 Minute	32	14.95	2	3.33	34	12.4
Total	214	100	60	100	274	100

Source: Primary Source of Data, 2015

Marketing is the most economical phenomena in India and it contributes significantly towards development, Periodic market have been around for 200 years and offer an indigenous system of low cost selling (*Marketing and Research Team, MART*), the accessibility of market has also been made effective by time of start of market business for the day and time devoted for selling in the periodic and regulated market.

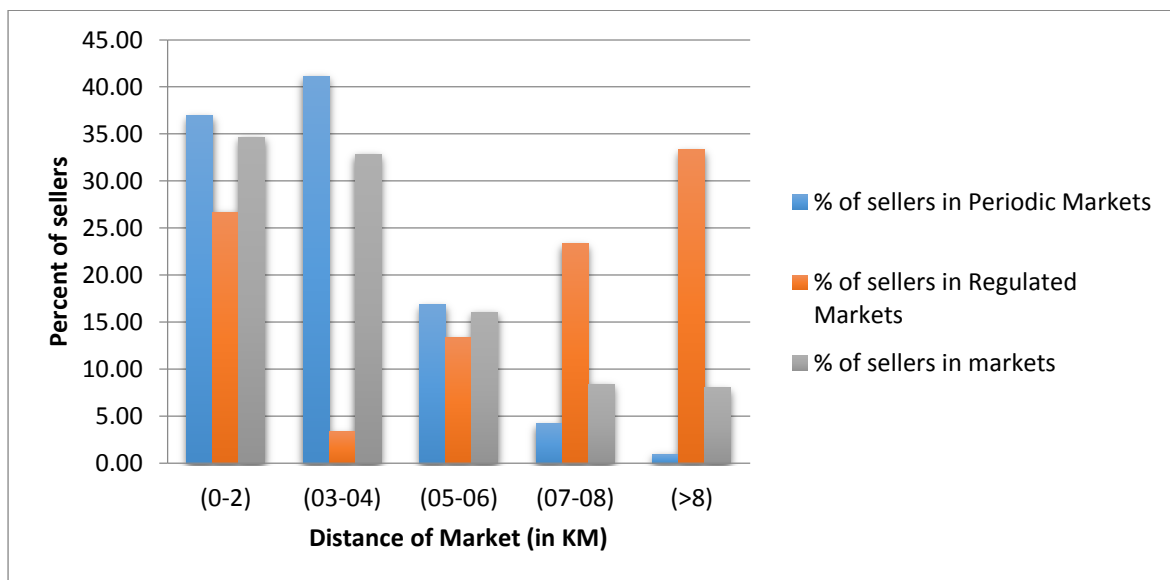
The study suggest, that about 78.04 % of sellers of the periodic markets visit within 4

⁶ National Institute of Agricultural Marketing (NIAM)

kilometer of the study area, which are comparatively lower (29.90%) than regulated markets. Although, in the group of 0-2, because some of sellers are non producer who are living near the surrounding area of market.

In the marketing system there is correlation between distance of the market and time for coming in such as in the table no. 4.2 and 4.3 has shows that in the lower groups (0-2, 2-4 km distance) 30 minute and or less than have more participant of periodic market sellers and in higher groups more participant of regulated market sellers in the study area. In the Higher groups, more participant from regulated market in the group of distance markets, but lower in the time coming in the markets. This difference is due to many factors like landholding size of farmers, nature of perishable commodities, because most of the sellers are illiterate, lack of information in the study area, due to these factors sellers accessibility are effect the sellers. In the table 4.2, highest accessibility of sellers in the group 0-2 km which is 34.67 and lowest is 8.02 % in the periodic and regulated market.

Figure 4.2 Distances of Markets from Sellers’ Residences



Source: Primary source of Data, 2015

4.4 Sellers accessibility in the Markets by Size of Landholdings

Landholding is also a major factor, which determines access of farmer sellers in the periodic and regulated market. Small and marginal farmer constitute 80 percent of total farm landholding. This includes 50 percent of rural households and 36 percent of total households in India. Thus, integration of small farmers with the market is the only way of ensuring better return for produce (NIAM 2012). Most of household’s income depends on agriculture. The

study has revealed accessing of market by different landholding farmer sellers in the periodic and regulated markets of the study area. The distribution of landholding pattern is depicted group wise in Bigha, which are 0-2, 2-4, 4-6, and more than 6 Bighas of land holding farmer seller. In the group of 0-2 Bigha of land holding 50.83% and 23.33 percent are farmer sellers in the periodic and regulated market respectively. On the other group of like in the group of 2-4 Bigha 29.17% and 35. % are farmer sellers in periodic and regulated markets. In group of 4-6 Bigha 13.33 % and 21.67% are farmer sellers in periodic and regulated market respectively, and in last group of above the 6 Bigha of landholding 6.67 percent and 20 percent are farmer's sellers in the periodic and regulated market respectively.

Table 4.4: Distribution of Sellers in Periodic and Regulated Markets by the Size of Landholdings, 2015

Size of Landholdings (in Bigha)	No. of sellers in Periodic Markets	% of sellers in Periodic Markets	No. of sellers in Regulated Markets	% of sellers in Regulated Markets	Total No. of sellers	Percent of sellers
0-2	61	50.83	14	23.33	75	41.67
02-04	35	29.17	21	35.00	56	31.11
04-06	16	13.33	13	21.67	29	16.11
>6	8	6.67	12	20.00	20	11.11
Total	120	100	60	100.00	180	100.00

Source: Primary Source of Data, 2015

The data shows that there is a huge difference of market attendant in the periodic and regulated market of landholding wise of distribution. In the periodic market almost share of marginal farmers their land holding is very less. On the other hand in the regulated market most of sellers are medium and large farmer. So, land holding plays a remarkable role in the access of periodic and regulated in the study area. It's a fact that most of lower landholding farmers are engaged in the periodic market because of low surplus production and negligence of transportation facility. On the other hand in the regulated market farmers almost have larger lands, they mostly participate in the regulated market instead of periodic market. Because they have high surplus of commodities and they have own transport facility they are mostly attained in the regulated market instead of periodic market.

4.5 Quantity of commodities in different groups wise in the Market

India is the second largest producer of fruits and vegetables in the world after china, but there is minimal attention on perishable commodities. This indifferent attitude of government has resulted into poor management of perishable commodities like fruits and vegetables. There are gaps between price received by farmers and price paid by consumers (M.B. Dasgir et al 2013). Quantity of commodities play pivotal role in clearing the hurdles to get access to the market by farmers in the periodic and regulated market of the study area.

4.5 Quantity of commodities in different groups wise in the Periodic and Regulated Market

Quantities of Commodities in Different Groups	different quantity groups in periodic market	% of quantity groups in periodic market	Different quantity group in the regulated market	% of different groups in regulated market	total number of different quantity groups	% of quantity groups
0-25 kg	84	45.41	6	6	90	31.57
26-50 kg	65	35.14	17	17	82	28.77
51-100 kg	28	15.14	21	21	49	17.19
>100 kg	8	4.32	56	56	64	22.45
Total	185	100.00	100	100	285	100

Source: Primary source of data (2015)

There are lots of differences for accessing market through the quantity of the commodities. The study has shown group wise the periodic and regulated market. Which are 0-25, 26-50, 51-100 and more than 100 kg of perishable commodities? The result found is different for each group. In the group of 0-25 kg in the periodic market 45.41 percent of farmer sellers bring less than 25 kg of perishable commodities on the other hand in the same group of regulated market, less than 6% perishable commodity less than 25 of kg perishable commodities, due to many reasons like periodic market are more nearer to farmers, and regulated markets are far away. So, most of farmer sell their perishable commodities in the periodic market instead of regulated market. In the other group of 26-50 kg of perishable commodities, in this group periodic market attracts 35.14% of commodities groups who comes in the periodic market. In the regulated market margin is lower than periodic market. In the next group like 51-100 kg of perishable commodities results are different as compared to the prior group, in the periodic market perishable commodities is lower than regulated markets.

4.6 Average price of different commodities in the Periodic and Regulated Market

Farming of perishable commodities is not specialized in Indian agricultural system, because there are high risk and uncertainty of output, lack of marketing facilities, and lack of market information. So, most of the sellers opt for alternative crops. It affects socio-economic condition of sellers. Farmers cannot decide how to earn satisfactory income from perishable commodities. Prices of commodities are affected by the place of sale, which may be urban or rural market (periodic or regulated market). It is conventionally a fact that price is high in the urban market and low in the rural market (*D.S Devraja 2004*) Price of commodities affect the accessibility of sellers in the periodic and regulated market and its play a significant role to uplift the economic condition of sellers as well as to increase the production, productivity and availability of perishable commodities in the market.

The study has revealed that price of perishable commodities of different groups like price of other commodities, expected price and price of previous market day which is different to each other of study area. There are different types of commodities and average price of commodities differs in the periodic and regulated market and some commodities have higher standard deviation and some have lower standard deviation in the study area. The price of perishable commodities in the study area is different for each commodity

Table 4.6 Average price of different commodities in the Periodic and Regulated Market

Name of Commodities	No. commodities	Market Price		Expected Price		Price of Previous Mar.		
		Average Price	Std. Deviation	Average Price	Std. Deviation	Average Price	Std. Deviation	
Carrot	Periodic	8	9.37	3.20	13.38	3.70	10	3.25
	Regulated	1	12.34	0.00	15.34	0.00	12.38	0.00
	Total	9	9.44	3.00	13.22	3.49	10	3.04
Cauliflower	Periodic	15	11.33	2.41	15.8	2.98	13.46	3.52
	Regulated	3	12.67	1.15	14.68	2.88	11.98	1.15
	Total	18	10.88	2.44	15.11	3.28	12.77	3.59
Potato	Periodic	41	6.53	3.14	10.24	3.34	7.75	4.67
	Regulated	30	7.23	5.66	9.46	8.20	8.03	6.44
	Total	71	5.93	4.41	8.99	6.03	7	5.52
Tomato	Periodic	15	21	2.80	28.2	9.18	22.33	4.16
	Regulated	4	23.89	4.08	25.61	6.29	23.19	3.31
	Total	19	19.73	3.89	26.74	8.98	20.89	4.85
Coriander	Periodic	5	22	4.47	25	5	22	4.47
	Regulated	1	22.56	0.00	23.14	0.00	22.86	0.00
	Total	6	21.66	4.08	24.17	4.91	21.66	4.08
Chili	Periodic	9	40.55	11.30	44.44	8.45	40.55	11.30

	Regulated	2	41.25	7.07	46.67	0	41.25	7.07
	Total	11	39.54	10.59	45.45	7.89	39.55	10.59
Pea	Periodic	31	27.41	4.25	34.52	5.96	28.16	6.25
	Regulated	21	30.36	3.74	38.11	3.34	31.86	3.34
	Total	52	26.05	4.35	32.6	5.55	27.4	5.31
Cabbage	Periodic	9	9.66	2.64	13.56	3.50	10	2.17
	Regulated	2	12.39	0	14.78	0	13.11	1.41
	Total	11	9.72	2.37	12.91	3.44	10.18	2.04
Guava	Periodic	13	12.69	3.30	18.15	4.22	13.23	4.81
	Regulated	7	15.64	0.75	17.37	1.46	15.18	2.23
	Total	20	11.85	2.90	16.75	3.97	12.8	4.07
Soya Methi	Periodic	11	20.45	3.50	26.36	5.04	20.45	1.50
	Regulated	1	20.22	0.00	25.06	0.00	21.02	0.00
	Total	12	19.58	4.50	25.42	5.82	19.58	3.34
Garlic	Periodic	6	41.66	7.52	48.33	4.08	39.16	6.64
	Regulated	4	42.48	4.08	43.1	6.29	41.78	2.5
	Total	10	35	10.54	41.5	10.01	34	8.43
Onion	Periodic	14	23.57	7.18	31.79	8.68	23.92	7.11
	Regulated	7	25.11	6.72	26.97	5	25.61	6.89
	Total	21	20.95	7.84	27.86	9.43	21.57	7.67
Orange	Periodic	1	25	0.00	30	0.00	25	0.00
	Regulated	2	27	3.53	27.68	7.07	28	0
	Total	3	26.66	2.88	33.33	5.77	28.33	2.88
Brinjal	Periodic	2	20	0	27.5	3.53	20	0
	Regulated	2	30	0	32.18	0	31.56	0
	Total	4	25	5.77	33.75	7.5	25	5.77
Ginger	Regulated	1	30	0.00	40	0.00	30	0.00
	Total	1	30	0.00	40	0.00	30	0.00
Papaya	Regulated	2	35	7.07	42.5	10.60	45	7.07
	Total	2	35	7.07	42.5	10.60	45	7.07
Banana	Regulated	2	12	0	15	0	12	0
	Total	2	12	0	15	0	12	0
Bottle guard	Regulated	2	14	5.65	15	7.07	14	5.65
	Total	2	14	5.65	15	7.07	14	5.65
Onion green leaf	Regulated	3	12.66	4.04	16.67	5.77	12.66	2.51
	Total	3	12.66	4.04	16.67	5.77	12.66	2.51
Ber	Regulated	1	10	0.00	12	0.00	10	0.00
	Total	1	10	0.00	12	0.00	10	0.00
Total	Periodic	185	17.73	11.44	23.01	12.91	18.42	11.36
	Regulated	100	23.08	13.19	25.72	15.04	23.41	13.72
	Total	285	17.02	12.10	21.93	13.75	17.92	12.24

Source: Primary Source of Data, 2015

In the study area there are two major commodities like Potato and Pea, of which 123 samples have been taken in both markets but the price of commodities is high in the regulated market rather than periodic market like average price of Potato, ₹ 6.53/kg in the periodic market and ₹ 7.23/kg in the regulated market. Elsewhere, average price of pea is Rs. 27.41/kg in the periodic market and ₹ 30.36/kg in the regulated markets but expected price and previous price is high in both markets and also standard deviation is high in the study area. And, other most important perishable commodities in the study area like Cauliflower, Potato, Cabbage, Guava, Onion and Garlic, of which 18, 19, 11, 20, 10 and 21 samples have been taken in both markets, but price of commodities is high in the regulated market and low in the periodic market.

Expected price of almost every commodity is higher in the regulated markets and lower in the periodic markets, when compared to exact price of commodities and previous price of market days, but the prices are different to price of previous market days like Potato, Pea, Tomato, Cauliflower, Cabbage, and other commodities price are higher than exact price of commodities and lower than expected price of commodities of the study area.

Thus, it is a fact that price of perishable commodities in the regulated markets are higher, because the regulated markets are controlled by the government authority and it has prices of commodities in accordance with minimum support price (MSP). The regulated markets are better in comparison to the periodic markets because there is a large number of traders (buyers) in the regulated market than the periodic markets. Thus, price of commodities play an important role to provide access to farmer (seller) in the periodic and regulated market.

4.7 Market Charge in the Periodic and Regulated Market

Periodic and regulated markets are most widespread exchange systems and play a remarkable role in the rural social-economic development. Periodic markets are the first contact corner of farmer seller and consumer. These markets centers are nerve of economic, social and cultural development in the study area. Farmer sellers are not dependent only on the periodic market but they sell their product nearest in the regulated market. But this accessibility depends on many reasons. Market charge also plays a cause of accessibility of perishable commodities in the periodic and regulated market. In the study area market charges are different to each market which depends on many reasons, because, it depends on market authority...

In the periodic market, there is vast irregularity with respect to regulation of market authority, some markets are regulated by gram panchayats some are regulated by private individuals and others by government regulation and some markets have no regulating agency. In the periodic

market, equal market charges are applied on producer seller and non producer seller on the market. There is no difference of market charge on the bases of nature of commodities, quantity of commodities and place of stall in the market. On the other hand in the regulated market, There are no market charge applied on the farmer sellers but some charge applied on the trader sellers vary in the both market like Sandila and Hardoi regulated market

Table 4.7 Average Markets Charges in Periodic and Regulated Markets.

Name of Periodic and Regulated Market		Average	Number	Std. Deviation
Hardoi	Periodic	2.66	96	2.69
	Regulated	20.38	53	38.026
	Total	8.96	149	24.19
Sandila	Periodic	2.26	89	3.186
	Regulated	14.04	47	25.679
	Total	6.33	136	16.215
Total	Periodic	2.46	185	2.938
	Regulated	17.4	100	32.802
	Total	7.71	285	20.776

Primary Source of Data, 2015

The marketing charges vary from market to market, its effect on sellers income in the study area, the study has depicted that market charges fairly influence seller's income, because in the periodic market

There is huge deviation have found in the regulated market, which is 38.026 in the Hardoi regulated market and 25.679 in the Sandila Regulated market. In the periodic market there are 2.690 in the Hardoi periodic market and 2.938 in the Sandila periodic market. So, the market charges have play remarkable in the access of periodic and regulated market of the study area.

4.8 Mode and Price of transport in Periodic and Regulated Market

Periodic and regulated markets have been widely recognized by government in the role of rural development, but market facilities are not robust and even basic infrastructure facilities are not available at the meeting places of buyers and sellers. These markets are affected by accessibility of transport facilities and other amenities services. Transport system plays important role in reducing the prices of commodities and enabling dynamic transaction of perishable commodities in the periodic and regulated markets. Transportation facility play important role, when it comes to perishable commodities, because most of perishable

commodities are wasted due to lack of transport facility, thus transportation reduces the price of commodities in the market and also effect the income of farmer seller.

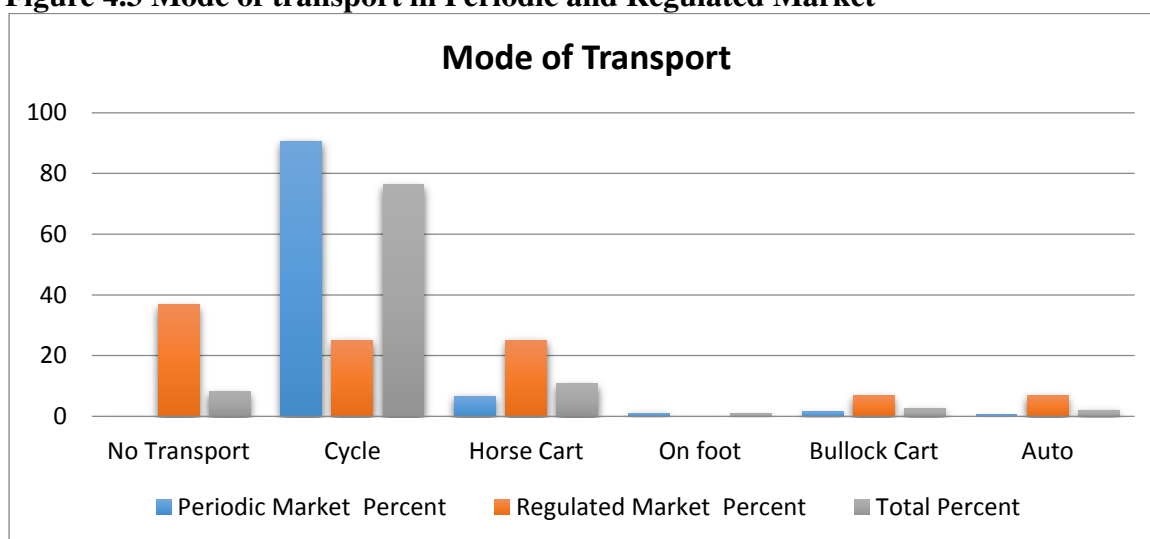
The study has revealed the importance of modes of transport for reaching the periodic and regulated market of the study area. Different results have been found in the periodic and regulated markets. In the periodic market, 92.8 % of sellers use cycle instead of other transport facility and in the regulated market use of cycle is very less, it is 7.2 %. On the basis of aggregate of transportation facility in the market which is 90.65 % in the periodic market and 25 % in the regulated market

Table 4.8 Mode of transport in Periodic and Regulated Market

Mode of Transport	Periodic Market		Regulated Market		Total	
	Number	Percent	Number	Percent	Number	Percent
No Transport	0	0	22	36.66	22	8.02
Cycle	194	90.65	15	25	209	76.27
Horse Cart	14	6.54	15	25	29	10.58
On foot	2	0.93	0	0	2	0.72
Bullock Cart	3	1.4	4	6.66	7	2.55
Auto	1	0.46	4	6.66	5	1.82
Total	214	100	60	100	274	100

Source: Primary Source of Data (2015)

Figure 4.3 Mode of transport in Periodic and Regulated Market



Source: Primary source of Data, 2015

There are many other mode of transportation facility are used by sellers in the periodic and regulated markets. 6.54% of sellers in the periodic market, 25 % of seller in regulated markets use Horse carts, which aggregate to 10.58% in the both market. Other transportation facilities are also used by seller like 2.55 % of sellers use Bullock Carts and 1.82 % of sellers use auto which is lowest in the both market. In fact 8.02 % of seller has no transportation facilities. In the periodic and regulated markets most of transport facilities are used in the form of cycle. Highest share of it has been found in the periodic market and lowest in the regulated market. It depends on the quantity of commodities because most of farmer has very less commodities but for the bulk of commodities other transportation facilities are used like Horse cart and Bullock cart. So, the modes of transportation facilities are also effect the accessibility.

Price of transport also affects the accessibility of Periodic and Regulated market of the study area. The prices of transport are also affected by the distance in the market from consumer residence. The study have revealed that about 88.77 percent of farmer seller are paid less than 10 Rs of per piece in the both market which highest in the periodic market and lowest in the regulated market.

Table 4.9 Price of Transport in the Periodic and Regulated Market

Price Category	Periodic Market		Regulated Market		Total	
	Number	Percent	Number	Percent	Number	Percent
< 10 rupees	174	94.05	79	79	253	88.77
10-20 rupees	11	5.94	12	12	23	8.07
>20 rupees	0	0	9	9	9	3.15
Total	185	100	100	100	285	100

Source: Primary Source of Data

The price of transport is most remarkable indicator for accessibility of sellers in the study area.

4.10 Conclusion

It comes out from the earlier chapter that smaller farmers are able to avail benefits of regulated markets less regularly. With better prices in the latter but more non-producers crowding the regulated markets, the farmers cannot fully take the advantages that the market may offer. Percentage of sellers visiting the market 4 and 5 days a week is much greater in regulated markets than in periodic markets. . Percentage of sellers having houses at a distance of 0-2 KM constitute majority in both markets taken combined. Highest percentages of sellers visiting regulated markets have their houses more than 8 KM away from the market and 3-4 KM in case of the periodic markets. Landholding affects the accessibility of seller participants considerably. The persons having a landholding of 0-2 bigha constitute majority in case of periodic markets. Group constituting majority in case of regulated markets are those having a landholding of more than 6 bigha, this group constitute least percentage in the periodic market; however group having least percentage in the regulated market is that of 0-2 bigha landholding. Prices of commodities also play a major role for farmers to access in the markets the result has shows that most of marginal and small farmers visit periodic market rather than regulated market because of fewer commodities and for better price.

CHAPTER V

Summary and Conclusions

Summary

Agriculture sector is most important sector in terms of rural employment, because it provides livelihood to majority of population in rural India. It is a fact that the share of agriculture in GDP has declined since 1951. According to Central Statistics Office (CSO), the share of agriculture sector in GDP of the country was 51.9 percent in 1950-51; it has now come down to 13.7 percent in economic year 2012-13 at 2004-05 as base year. Though the numbers of periodic and regulated markets as well as production of perishable commodities have been increasing, the former has increased at a slower pace compared to the latter. Without access to proper markets, the farmers fail to get the entire benefits of the production. Periodic and regulated markets differ in their characteristics in terms of prices, market size, nature of participants, the volume and nature of products sold etc. Periodic markets are authorized gathering of market participant like farmers, sellers, buyers, and commodities at a certain place during a fixed time period, whereas regulated markets are controlled by State Agricultural Produce Marketing Board, Uttar Pradesh constituted under aegis of Market Regulation Act. Regulated markets cover large areas as well as different types of commodities. However, the functions of both markets are different.

The concept of market and marketing is not new. It has existed from ancient period, but with time, it is expected that better marketing facilities must improve the periodicity, accessibility, price regulations in market. Function of markets affects the socio-economic conditions of market participants especially farmer sellers. The first chapter is related to conceptual and methodological framework, which has discussed theoretical aspects of periodic and regulated markets. This chapter has also covered the differences between periodic and regulated markets, in terms of perishable commodities, marketing channels in the both markets. The chapter also discusses the data base, methodological aspects, and research design and research questions. The study area of periodic and regulated markets have been also discussed. The study area is Hardoi district of Uttar Pradesh. The study covers two biggest regulated markets and surrounding periodic markets. The study area produces large amounts of horticultural commodities which are perishable in nature, especially fruits. For instance, Sandila regulated market is most important market in terms of mango production. In spite of being a focus point of mango production and marketing, living standards of farmer sellers has been by and large poor.

The second chapter is related to characteristics features of the periodic and regulated markets in

Hardoi district with special reference to horticulture crops in the both markets in Hardoi district. In the district, the market growth and distribution of markets block wise shows considerable result. The number of periodic markets has increased across blocks except in Suras, Ahrori, Behandar and Sandila during 1995 and 2013 and also the number of villages which are more away from periodic markets have decreased across blocks during 1995 and 2014. Thus, it can be argued that the numbers of those kinds of villages which have its own periodic market have increased sharply across blocks, as also demand for commodities in these markets. The number of both kinds of markets has increased more in the first part of the study period. It is surprising that the later part of the reform periods, which depend on market efficiency, has experienced low growth of agricultural markets that has such vital bearing on farmers' lives. Consequently, the number of villages during 1995 and 2014 that have periodic markets above five kilometre distance has also increased though the number of villages having markets within the villages has also increased, albeit more slowly.

The study has demonstrated that most of the markets are held two times in a week and Sunday is most common day for periodic markets. Periodicity is higher than two days a week in some of the periodic markets. Most of periodic markets open after 2 o'clock, but some markets open early in the morning though in both cases, the periodic markets are open more than average 5 hours in the study area. Most of periodic markets are regulated by private authorities. Regulated markets are similar to that of the periodic markets, but there exist some differences. Regulated markets are regulated by State Agricultural Produce Marketing Board, Uttar Pradesh under Market Regulation Act. Regulated markets open early in the morning and remains open till night and these markets remain opened except on Sunday. It serves large surrounding area. There are huge differences in number of shops. There is also difference in average area served by market and average number of villages served by markets. In both periodic and regulated markets, there are differences on the basis of market participants for examples in the periodic markets 70 to 80 percent of sellers are farmer sellers but scenario in regulated markets is different. Farmers also sell their commodities here but traders act and work like both purchasers and sellers. Transaction of perishable commodities in both market are different. Most of markets deal with vegetables.

The third chapter is related to demographic and socio-economic condition of market participants especially sellers of commodities in the both market. The study has covered various indicators like average age of sellers, social group wise distribution of sellers, literacy wise distribution of sellers, landholding wise distribution and income wise distribution of producers and sellers. This is inferred that a participant with slightly higher age attends the regulated market compared to its counterpart. This may be related to the fact that mostly elderly members are in business unlike in

agriculture where any member of the household can be sent to the market. The participant of sellers of social group wise is mostly the OBC General Category people dominating the trade affairs in regulated market and the SCs proportion has declined from periodic market to regulated market in the study area. The proportion of other backward class sellers higher in the periodic and regulated market. The scheduled caste sellers share is lower than OBCs social groups but greater than general caste group. General caste share is higher in the regulated market. Higher number of illiterate sellers is high in the periodic market because of their backwardness. There are different results found in percentage of landholding size in the study area. In the periodic market most of sellers are marginal farmers. The study found most striking differences in between the two types of markets with regard to income of the participants. Greater numbers of people in greater income brackets attend the regulated markets, and many of them are non-producer participants. Chapter four deals with accessibility of farmer sellers in periodic and regulated markets with different size categories. Accessibility of sellers depends on many factors like number days of market visit by sellers, distance of markets from sellers house, size of landholding by sellers, quantity of commodities, price of commodities ,charges levied in markets and so on.

In the study area most of the sellers visited markets twice a week followed by those visiting once a week both in periodic as well as in regulated markets. Percentage of sellers visiting the market 4 and 5 days a week is much greater in regulated markets than periodic markets. Those visiting 6 days a week constitute a significant percentage in regulated market. In the study area most of sellers are attending markets within four kilometres squares areas and lower, but in the regulated markets higher percentage of sellers are attend more than 8 kilometre far of the regulated market, because those are large size of sellers, and much commodities in compared to periodic market. In the periodic and regulated market sellers spend more about 30 to 60 minutes of time, but there is difference in the periodic market and regulated market, in the periodic market most of sellers spend 30 to 60 minutes of time but for the regulated markets sellers it takes less than 30 minutes. On the basis of size of landholding there has been different results found in the study area. In the groups of 0-2 Bigha landholding most of sellers visit the periodic market rather than regulated market but result have different. On the basis of quantity of commodities, there has been a different result found in the study area. In the periodic market most of sellers visit in the group of 0-25 kg, which is higher than regulated markets. In the regulated market most of sellers visit in the group of more than 100 kg of perishable commodities. Price is most important determinant of accessibility of market. Sellers tend to move to those places, where they expect to get good returns. In regulated markets commodities are generally traded in bulk hence it lowers the price of commodities. Market charges play a significant role in market accessibility. Markets having zero

market charge witness highest accessibility. Market charge does not plays a role always in regulated markets there is no market charge, hence relationship between accessibility and market charge become insignificant here. Most of sellers in periodic markets use cycle as dominant mode of transport. Auto is the dominant transport in case of regulated market for sellers. Other modes of transport like horse cart and bullock carts are also used frequently by sellers of both markets. On foot seller constitute a considerable percentage in periodic market, however this percentage is zero in case of regulated markets. Transport price paid by sellers is mainly determined by income of sellers. Transport cost affect accessibility significantly. So, there is various result have found in the study area.

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Questionnaire for Periodic Market

Information of Market

1. Name of Market Centre _____
(a) Days of market in week _____
2. [a] Time of market, opening time _____ closing time _____
[b] Area of market _____
3. Periodicity of Market One day Two day
 Three days in a week Daily Bi-weekly
4. Location of market
 grampanchayat office main road
 Temple/Mosque/other religious place open space
5. Average area served by market in sq.km _____
6. Number of village served by periodic market _____
7. What are the supervising agencies
 Grampanchayat other authority
8. Tax paid for installing the market to grampanchayat or other authority.
(a) Grampanchayat Tax in Rs. _____ (b) Other authority of Rs. _____
9. What are the infrastructures facilitates in market?
(a) Go down (c) Drinking water
(b) Cold store (d) transport facility
10. Number of participants in market
(a) Number of seller _____
(b) Number of buyers _____
(c) middleman _____
11. . Number of shops and types of commodity

Types of shops	Commodities types	Number of shops	Quantity (Tonnes)in year	Price of quantity in year
Vegetables	Seasonal and vegetables like Potato, tomato, onion, pea etc.			
Fruits	Guava, banana, papaya etc.			

Date: _____

Place: _____

Name: _____

Signature of Authority: _____

Questionnaire for Periodic Market

Information of seller (Farmer/ Trader)

1. (a) Name of seller (farmer/trader) _____
(b) Sex _____ (f) Religion _____
(c) Age _____ (g) Caste _____
(d) Village _____ (h) Caste category _____
(e) Tehsil _____
2. Nature of seller who are involve in the marketing process.
(a) Producer seller []
(b) Village trader []
(c) Urban trader []
3. Education of seller
(a) Illiterate _____
(b) Continue of study (class) _____
(c) Dropped out of study (class) _____
4. Total land holding (acre) of sellers?
(a) Total own land _____
(b) cultivated land by self _____
(c) Cultivated land by other _____
(d) cultivated land of others _____
5. What is main purpose to visit in the market?
(a) _____
(b) _____
6. What is the main occupation of sellers?
(a) Main _____
(b) Subsidiary _____
7. What is the selling process of commodities by seller?
(a) Only sell own product []
(b) Own and other []
(c) Only others product []
8. Generally, the commodities are purchased by whom and share.
(a) Pre harvest contractor [] _____
(b) Commission agent [] _____
(c) Wholesaler [] _____
(d) Retailer [] _____
(e) Consumer [] _____

9. How much your monthly income in agriculture?

(a) Total income _____

(b) Marginal income _____

10. Are you satisfied with your marginal income from agriculture commodities?

(a) Yes [] (b) No []

11. What are the reasons you can sell commodities in other markets. Why are you selling here?

(a) _____

(b) _____

(c) _____

(d) _____

12. Which commodities brought for selling and other information like types of commodity, quantity, price, expected price, distance etc.

	1 st commodity	2 nd commodity	3 rd commodity	4 th commodity
Commodities Name				
Quantity of commodities				
Price of commodities/ kg				
Expected price /kg				
Price of previous market day of commodities/kg				
Market charge				
Weight charge				
Packing charge				
Transportation charge				
Labour charge				
Commission charge of agent				
Other charge				

13. Market visited, for selling commodities, frequency of visit, mode of transport & other associated information.

Ser. No. Of Markets	Name of markets	Market Day	Distance of Market from sellers house	Frequency of visit in week	Name of nearest permanent market	Distance of permanent market	Mode of transport	Charge of transport	Mode of payment	Are you satisfied with mode of payment	Time taken coming to the market	Time devoted for the purpose of selling	Are you satisfied with tax of commodities and other charge	Are you satisfied with the mode of weight and measure.	Are you satisfied with the infrastructure facilities
1 st															
2 nd															
3 ^d															
4 th															
5 th															

14. How many member are support you in the marketing process?

Ser. No.	1 st person	2 nd person	3 rd person	4 th person
Name				
Sex				
Age				
Marital Status				
Relation				
Education				
Main occupation				
Secondary occupation				

15. What types of your home?

- (a) pucca (cement) house [] (b) kuchcha (soil) house []
 (b) semi pucca [] (d) others []

16. Do you have electricity facility?

- (a) Yes [] (b) No []

17. What types of have kitchen items?

- (a) Chula (Firewood) [] (c) Gas Stove []
 (b) Kerosene stove [] (d) others []

18. What are the any facilities provide by government, grampanchayat and market authorities?

- (a) _____ (c) _____
 (b) _____ (d) _____

19. If you want to give any suggestion and comment.

- (a) _____
 (b) _____
 (c) _____

Date:

Place:

Signature of Sellers

Questionnaire for Regulated Market

Information of Market

1. Name of Market _____
 [a] Town/ city _____ [b] District _____
2. Time of opening and closing time From _____ To _____
 [a] Which days are close _____
 (b) Area of market _____
3. Name of supervising agency _____
4. Average area served by market in sq. Km _____
5. Number of village served by regulated market _____
6. What is the location of regulated market?
 (a) Connected to national/state highway []
 (b) Location in any municipal corporation []
 (c) Location in town/ tehsil/ administrative office []
 (d) others []
7. What are infrastructures facilities in market?
 (a) Cold store facility []
 (b) Go down facility []
 (c) Banking facility []
 (d) First aid facility []
8. Number of market attendance
 (a) Seller (farmer) _____ (c) wholesaler _____
 (b) Commission agent _____ (d) Retailer _____
 (c) Consumer _____
9. Number of shops and types of commodity

Types of shops	Commodities types	Number of shop	Quantity In year	Price of commodity
Vegetables	Seasonal and vegetables like Potato, tomato, onion, pea, etc.			
Fruits	Guava, banana, papaya, apple, orange etc.			

Date: _____ Name of authority _____

Place: _____ signature of authority _____

Questionnaire for Regulated Market

Information of seller (farmer/seller)

1. (a) Name of seller Farmer/trader _____
(b) Sex _____ (f) Religion _____
(c) Age _____ (g) Caste _____
(d) Village/ town _____ (h) Caste Category _____
(e) Tehsil _____
2. Nature of seller who are involve in marketing process?
(a) Producer seller []
(b) Non producer seller []
3. Education of sellers/ traders completed or dropped out
(a) Illiterate _____
(b) Continue of study (class) _____
(c) Dropped out of study (class) _____
4. What is the occupation of seller?
(a) Main _____
(b) Subsidiary _____
5. What is selling process of commodities by seller?
(a) Only sell own product []
(b) Own and other []
(c) Only other product []
6. Total land holding of seller?
(a) Total agriculture land _____
(b) Cultivated land by self _____
(c) Cultivated land by other _____
(d) Cultivated land of others _____
7. Generally, the commodities purchased by whom and share.
(a) Pre harvest contractor _____ []
(b) Commission agent _____ []
(c) Wholesaler _____ []
(d) Retailer _____ []
(e) Consumer _____ []
8. How much your monthly income of agriculture
(a) Total income _____
(b) Marginal income _____
9. Are you satisfied with your marginal income from agriculture commodities?
(a) Yes [] (b) No []

10. If no then why?

(a) _____

(b) _____

11. The commodities brought for the purpose of selling and associated information?

Ser. No.	1 st commodity	2 nd Commodity	3 rd commodity	4 th commodity
Name of commodities				
Quantity of the Commodities				
Price of the commodities/ kg				
Expected price /kg				
Price of the commodities on the previous market day /q				
Price of transport cost/kg				
Market charge/q				
Rate of licence of market Shop				
Weight charge				
Packing charge				
Transportation charge				
Labour handling charge				
Commission charge of Agent				
Maintenance charge				
Loss of product of cost/q				
Miscellaneous charge				

12. What is the reason behind your selection of regulated market over the periodical market for the purpose of selling your commodities?

- (a) _____
 (b) _____
 (c) _____

13. Information about distance of market, mode of payment, transport etc.

Ser. No.	Regulated market
Day of market visit	
How many times do you visit this market within week?	
Distance of market from your home	
Mode of transport	
Name of the nearest periodic markets	
Distance of the most nearest periodic market	
Time taken coming to the market	
Time devoted for the purpose selling	

14. Are you satisfied with the selling process?

- (a) Yes [] (b) No []

15. If no then why?

- (a) _____

16. Are you satisfied with tax of commodities and any other charge like commission charge, weight charge etc?

- (a) Yes [] (b) No []

17. If no then why?

- (a) _____

18. Are you satisfied with mode of weight and measurement?

- (a) Yes [] (b) No []

19. Are you satisfied infrastructure facility?

- (a) Yes [] (b) No []

20. Why are you selecting this particular regulated market?

(a) _____

(b) _____

(c) _____

21. How many members are supporting you in the marketing process?

Ser. No.	1 st person	2 nd person	3 rd person	4 th person
Name				
Sex				
Age				
Marital status				
Relation				
Education				
Main occupation				
Secondary occupation				

22. What types of your home?

(a) Pucca (cemented) house [] (c) kuchcha (soil) house []

(b) Semi pucca [] (d) others []

23. Do you have electricity facility?

(a) Yes [] (b) No []

24. What types of have kitchen items?

(a) Chulha (Firewood) [] (c) Gas stove []

(b) Kerosene stove [] (d) others []

25. Do you suggest any suitable suggestion for better marketing function?

(a) _____

(b) _____

(c) _____

Place:

Date:

Signature of seller

Appendix- II

Number and name Periodic and Regulated market

Name of District	Name of Regulated Market	Name of Periodic Market surrounding Regulated Market	
Hardoi	Hardoi Mandi	Bawan	
		Jagdeesh Pur	
		Pura Bahadur	
		Bargawan	
		Khajur Mai	
		Lalpur	
		Pachkohara	
		Gursanda	
		Itoli	
		Tandiyawan	
		Sandila Mandi	Tiloeya Kala
			Som
			Gaudara
	Behandar		
	Malehara		
	Moh. Belwaran		
	Sikrohry		
	Sarwan		
	Hardal Mau		
	Behasary		

