Chapter 1

1.0 Introduction

1.1 Motivation behind the research

In the power and property matrix, land is the most important possession of man - since its holding can influence both economic and political power. Whenever there is any threat of losing the ownership of land, conflict ensues. In the early societies ownership of land was mostly with the clans or with the communal groups. This made the early conflicts on land primarily of communal nature. In some of the societies there were conflicts even between the individual and the family on the ownership of land and to resolve such conflicts states had to make laws to define the relationship between them (Johns C. H., 2009). Koutilya's Arthasastra (in India) lays down rules for resolution of conflicts between villages on boundary disputes over fields where elders of the two villages would mediate (Kautilya's Arthasastra: Book III, "Concerning Law", Collected on 10/03/2009). Over time state-societies stabilized. King became the lord paramount. He held the ultimate title to the land he ruled. To suit his needs and fancies he parceled the land to his vassals and their dependents and made rules for its perpetuity. The concept of individual ownership of land set in. New laws were made to define the relationship between the state and the owner. With time the land use and its social value have changed. But its mesmerizing attraction has not lost its charm. Leo Tolstoy wonders "How much land does a man need?" and in the story a man who in his lust for land, runs for more and more and finally ends up in a grave of six feet long. In Gone with the Wind, Gerald O'Hara tells his daughter Scarlett that "land is the only thing in the world that lasts. This is the only thing worth working for, worth fighting for - worth dying for" (Mitchell, 1936).

1.1.1 Eminent Domain

Land has been the biggest single source of conflicts among humans, even though it is not a product created by him, rather a produce of geologic and geomorphic processes. Land being the primary producer of food and one of the most important assets, the principles of ownership and usufruct rights has drawn attention of thinkers in all ages. Manu in India

or Aristotle in early Greek civilization documented rules on ownership and management of land. In the Egyptian and Sumerian history or the Inka civilization, land related principles abound. However, the guidelines differ.

The situation today, however, is no different. However, there is a broad unanimity in following the policies and processes related to land acquisition. The guidelines of the legal treatise of De Jure Belli et Pacis, written by the Dutch jurist Hugo Grotius in 1625, used the term dominium eminens (Latin for supreme lordship). This is being followed not only by USA, UK and others with free economies but also by the single party ruled countries like China or Vietnam. He has upheld the authority of the State to infringe upon the property of subjects on all occasions, where ever the public good was involved. This authority was subject to the following two conditions:

> Expropriation was for public purpose and fair compensation was paid without delay for such loss.

In theory, this is supposed to put the owner in the same position "pecuniary" before and after the acquisition. But in practice this is subjected to varying interpretations. In spite of the differences there is a near unanimity among the states in the amount of compensation to be paid. The guiding principle is “it should be fair to the public as well as to the property owner” (Searl v.School Distric No. 2 of Lake County, 1890). Without an appropriate computational basis of meeting both the objectives, determination of what should be a just compensation remained unresolved. Subjectivity in determining the amount of compensation paid is unavoidable since it is measured by the owner’s loss than by the condemner’s gain. Absence of any well-defined methodology in the determination of “fair value” which can be rationally defended for paying compensation, has made it often a political decision rather than rational. The amount varies depending on the bargaining power of the evictee. Study conducted in New York State between 1990-2002 in 89 condemnation award, had revealed that nearly half of the owners were paid either 150% and above or 50% and below the fair market value even though the average compensation was paid very fair (101%). Over and under payments had clear correlation with the value of the property and in turn the owner’s

capability to fight the quantum decision (Chang Y.-C. , 2008). In a similar study in Chicago, Munch found that "low-valued properties receive less than market value and high-valued properties receive more than market value" (Munch, 1976). States have been trying to overcome this shortcoming through solatium. Since one size does not fit all, an ad hoc solatium as a percentage of the erroneously computed "fair market value" cannot make the compensation "just". This anomaly has affected the poor and politically weak population which becomes apparent in the state's apathy to relocate the development affected people in a humane fashion. The underpaid people are mostly from the weaker section of the society. In India around 50 million people have been displaced due to development projects in over 50 years (after independence) without proper compensation (Lok Sabha Secretariat, 2013 -December). Expert panel set up by Planning Commission of India had identified displacement of 2.4 lakhs tribal people who were not rehabilitated as one of the important issues for extremism (read Maoist) in India (The Hindu, 2010). Sanjoy Chakravorty writes "when many landowners refuse to sell, if some are willing to die rather than sell – something must be seriously wrong with the price of land acquisition- it is a fact and not hype." (Chakravorty, The Price of Land- Overview, 2013).

India's land acquisition statute LARR 2013, has inherited the essence of colonial Land Acquisition Act (LAA 1894) in computing "fair market value". This does not differentiate the agricultural land market which is thin compared to the western developed countries where the agricultural land markets are active. This also ignores the fact that land is typically not a fungible commodity here. The price is generally influenced in a pre and post-acquisition scenario. Its price varies for the purpose it is used. This makes simple averaging not logical in the Indian context. Any value computed using simple average is not a "fair" estimate of the market determined price of the acquired land. Broad guideline of World Bank is to ensure that the land givers are not pecuniary loser in the expropriation process when land is taken from them for development projects. The objective is to make the development cost not passed on to a particular section of the society disproportionately. This demands the compensation amount should be adequate to provide the land owner an opportunity to buy a replacement land to continue his livelihood. This is far from true, especially when the

compensation is paid based on the average of past sale prices since development projects pulls the price of adjacent lands.

1.1.2 Fragmented land ownership and computing compensation in India

India is one of the most densely populated countries in the world. On the other hand, of the 1.21 billion people of India nearly 70% live in villages and depend directly or indirectly on agriculture for livelihood. Due to her predominantly caste based social structure and a colonial past of 200years, the land holding in India has become highly skewed. All India Report on Agriculture Census 1991-2000, in 1995-96 reveals that as many as "61.2% of holdings accounted for only 17.2% of the total operational holdings" confirming high fragmentation. This has resulted in smaller plot divisions. Quality and locational attributes vary among the plots and so also the price. In absence of active land markets, information related to land prices are generally scanty and it is more so for agricultural lands. For the compensation purpose, in LARR 2013 fair market value is derived from the average sale price during the previous 3 years. It assumes all lands in near location command the similar premiums or sufficiently close to permit averaging and their average represents the market value of the acquired land. But the land value varies based on their qualitative and quantitative attributes and with smaller plots this is more so. Further in a thin land market, number of recorded sales is normally not many. And when it comes to comparable land sales with similar attributes it is even fewer. Simple average of the local sales data without making suitable adjustments in their price figures for the varying attributes, cannot meet the accuracy demand of a fair estimate. Solatium is used to pay the compensation more than the fair value estimate but it cannot take care of the variation between under and over valuations of individual land plots, which is common in a normal plot. Since one size does not fit all, an ad hoc solatium without appropriate adjustments for attributes which are land specific, cannot meet the requirements of "making victims subjectively indifferent to whether [the taking] . . . took place or not" (Craswell, 2003).

The compensation decided by the acquiring authorities often fall short of rational basis. A study conducted between 2010-11 on litigation over compensation in the state of Punjab and Haryana and UT of Chandigarh revealed that there were significant increases in compensation by High Court over the LAC, as is given below.

Table1.1: Increase in Compensation

Percentage increase in the compensation by HC over LAC			
Cases Adjudicated in 2010 Number of Cases =862		Cases adjudicated in 2011 Number of Case 517	
Mean	265.6047	Mean	363.0225
Standard Deviation	442.4263	Standard Deviation	1657.334
Min	0	Min	0
Max	8370	Max	36810.26

The table sourced from (Singh, 2013)

The mismatch between the LAC awarded compensation and the High Court award was on average higher by about 266% in 2010 and 363% in 2011. The standard deviation between the compensation and court award was as high as 1657.334 in 2011and 442.426 in 2010, indicating huge variation in the LAC determined compensation rate and the court award. The above raises the need to review the methodology of computing the "fair market value" (Singh, 2013).

Further when land is acquired for infrastructure or industrialization, it opens up opportunity of non-agricultural use of the adjacent agricultural land for higher returns; price shoots up. This brings discontent among the evictees, who get compensation based on past use. Solatium is aimed to take care of the gap, and the owner gets a share of the future value increase. But the land is valued by comparison. Uniform rate of solatium cannot bridge that.

India's new land acquisition Act, LARR 2013 has introduced a sliding rule in the solatium payment in the calculation of percentage based on the land's distance from the urban areas for compensation. First Schedule of the Act has given a derivation rule which

states that for rural area, the fair market value is to be considered as 1 (one) to 2 (two) times of the average sale value (Section 26 (1) read with First Schedule) depending on the distance of the acquired land from the urban area. 100% solatium is to be added thereafter for just compensation. Since land acquisition is a concurrent subject in the constitution, LARR 2013 has allowed the states to decide the market value depending on the distance of the rural land from the urban centers. No computational basis is provided. In absence of a laid down policy, derivation of the market value varies from state to state and hence the solatium. As a result the new Act has only increased the compensation amount, giving more solatium but has failed to meet the test of rationality.

Land assembly in India is difficult because of smaller plot sizes and fragmented ownerships, especially when large projects are in question. Litigated lands, which cannot exchange hands without government interventions through land acquisition route makes the process of direct transfer even more difficult. Huge number of projects with large investment proposal is getting delayed. In a report published by Financial Express (India) on 21st November 2014, it has claimed that there is over Rs 1,80,000 crores of investment stuck up due to land acquisition woes. The new Act, LARR2013 which came in place since 1st January 2014, had failed to break the logjam. The woe is far from over. There is a need to define the parameters that can objectively quantify the value of agricultural land, which may be used to quantify the fair market value to pay just compensation.

1.2 Research Objective

Across the world the compensation for the acquired land is paid using comparative sales approach, where an earlier sale is taken as base and adjustments if any are made for the difference in the attributes. This necessitates a computation mechanism to quantify the change in the price of land for each of the significant attributes. Since the earlier sale is used as base, the price changes for the significant attributes need to be computed for a period - for our study it is considered per year. Land markets vary. In developed countries land markets are active. Sales are mostly arm's length sale. In active land market sale and the land attribute information are well documented and available. But in India the agricultural land market is thin. Sales are mostly among the people of the same localities.

Buying and selling are with limited price and availability information. It is not an arm's length sale. The averaging computed from such sale figures are not the fair market value of the acquired plot. Lot of work was done in building land valuation models to estimate fair market value- but in almost all cases these were carried out in active land markets and focused to location specific variations in the attributes. But societies value different land attributes differently and it varies with the location and the local area's socio-economic perspective. There was a need to identify those variables that could make the land price to change. From the literature survey and discussions with the subject matter experts, number of important variables was identified. Common underlying variances were identified with a manageable number of components without losing the variance of the identified variables. This required identification of significant attributes from among the many perceived variables using principal component analysis which could account for most of the variance of the variables. These attributes were used to build the model for land valuation with the price change per year as the dependent variable. In a country like India which has many cultures and varying socio-economic priorities, perceived variables which can affect price change vary and so also the underlying factors as attributes. There was a need to identify those factors from the variables for computation. The objective was to build a model which could help in computing the change in agricultural land prices. This when added to the historical sales price would give fair market value in a comparative sales approach.

The objective of the study thus can be summarized as

Objective 1

To identify factors which determine the agricultural land price in a free market sale.

Objective 2:

To build a model of fair market value computation to pay compensation in a thin land market of India.

1.3 Research Methodology

Valuation of agricultural land has been done for ages and that is market driven. As it is for any other products, the land price is valued by its attributes. The importance of the

attributes to impact the land price keeps on changing with time, social and economic priorities of the habitants. With the present research objective, the study was first aimed at identification of the significant factors in the current Indian environment in a free market sale.

India is a large country with varying culture, economic and social priorities. Land holding varies. In Punjab, Haryana and adjoining Rajasthan average land holdings are higher. Average size of operational land holding for all social groups in Haryana is 2.25 ha, Punjab 3.77 ha. and in Rajasthan 3.07 ha. In Madhya Pradesh it is 1.77ha. On the contrary average land holding in the hills of Uttarakhand, is 0.89 ha .and that in the coastal state of Tamil Nadu is 0.80 ha. West Bengal has the lowest land holding which is 0.77 ha when all India average is 1.15 ha (Agriculture Census Division, Ministry of Agriculture Government of India, 2014). Variables impacting land prices also vary. To understand the factors which are most significant in effecting change in the agriculture land prices, literature review was carried out. Most of the studies were carried out in the western world with active land market. India's agricultural land market is thin. This necessitated realignment of the results of literature review to suit thin market and was then further adjusted for unwilling sale in a compulsory purchase. Subject matter experts were consulted to further review the variables for convenience of response by the targeted respondents who would be mostly landed peasantry and semi-urban people having knowledge of agricultural land valuation.

1.3.1 Research Design

- Research Design is Quantitative & Qualitative.
  - Quantitative research for Objective 1 & Objective 2.
  - Quantitative and Qualitative for Validation
- Sampling –Judgmental.
- Data Source – Primary data from stake holders
  - Secondary data from Census 2011
- Sampling locations - Primary data- from different states of India
  - Secondary data- from state of West Bengal
- *Sample size – 10:1 (Osborne, Jason W. & Anna B. Costello, 2004)*

1.3.2 Research Methodology for Objective -1

Source of data is primary.

- Sampling is *based on the study by Osborne, Jason W. & Anna B. Costello (2004)*
- Sampling is Judgmental
- Data collected from Stake holders *such as registration authorities, land brokers, sellers and buyers using questionnaires.*
- Factor Analysis is used for the identification of factors from the variables taken from the literature review and rationalized for Indian condition.
- Adequacy of sample was tested using Kaiser–Mayer–Olkin (KMO) test and Bartlett's test of sphericity .

  Reliability test was done from Cronbach's Alpha test.

1.3.3 Research Methodology for Objective -2

- Source of data -Secondary.
- Location Judgmental - 7 Districts of State of West Bengal
- Basic Data Source- Census Data for all factors excepting Land price which is from Sale deed and cross-checked with one to one interview and year on year Inflation data from published sources. Google map was used for village location and to locate the land plots where necessary.
- Focus – to build village/local area indices from Census data and to ensure data source from varying level of industrialization to make it representative.

1.4 Chapter Scheme

Beyond the Introduction and the Conclusion Chapters the thesis is organized into eight additional chapters. The eight chapters can be regrouped as a constituent of 4 major parts. **Chapter 2, 3 and 4** deals with the land acquisition context starting with the historical evolution of land ownership concept and accepting sovereign's right to expropriate land. With time the concept of paying just compensation has become integral to expropriation but what is "just" in paying compensation to the land owners remains an unresolved conflict even in the twenty first century. These three chapters deal all these in great details. Broad references of the eminent domain laws are also made for different

countries in these chapters. Chapter 4 has a special focus on India where the gap and inadequacies of the new Act LARR 2013 are discussed. In **Chapter 5 and Chapter 6** literature reviews are being carried out. In Chapter 5 discussions are on the relevant aspects of land acquisition which have been dealt by subject matter experts across the world. Various contextual directions given by the judiciaries of different countries have also been discussed here. The central gap remains in defining "fair market value" which may be rationally defended as "just" in paying compensation to the land losers. In Chapter 6 the literature reviews are carried out on various valuation approaches and the theoretical premises of land valuation. Understanding the gap between the thick and thin land market which requires varying land valuation approach to determine fair market value is also being discussed in this chapter. **Chapter 7** traces the research gap in the computation of fair market value in thin land market. From the gap, research problems are identified. The research problem leads to core research questions and from there the current research objectives. **Chapter 8 and Chapter 9** are two data collection, analysis and results sections to meet the two objectives of the research. Identification of variables is important in deciding the theoretical model for land valuation. Variables listed from the literature reviews are generally contextual to the field of study. Chapter 8 discusses the approach in identification of the 31 variables which are most relevant to build land valuation model in India. This includes detailed literature review along with the discussions with the subject matter experts and finally rationalized to suit Indian condition. This Chapter extracts latent variables that are used as factors to build land valuation model in a thin market. Factors thus identified are used as attributes for the computation of land valuation. Parameters for developing proxy indices for all the attributes based on census data (Census 2011) have been identified and discussed in this chapter. Research methodology followed has been discussed and the results obtained have been interpreted in this Chapter. Chapter 9 uses the significant factors computed in numerical proxy indices to build the land valuation model. It starts with a literature review to discuss different land valuation models, which forms the basis to identify the most suited land valuation model that would meet the research objectives. Sourcing of data, its analysis and the results are discussed in this chapter. The model here is built using multilinear regression model. The linearity and homoscedasticity of the variables

are tested to meet the requirements of theoretical foundation of the models built. The model thus built is tested for its validity. Both Quantitative and Qualitative validations are also discussed in this Chapter. **Chapter 10** deals with findings and recommendations. Contributions of the current research in the theoretical premises of the study are also discussed in this chapter along with its limitations. The scope of further research and the conclusions are also discussed in this Chapter.