Chapter 3: Review of Literature

This chapter gives the brief foundation of the research. The main intent of this chapter is to provide the brief idea about the research, which there on covers with the past literature and researches published in the area of Real estate. This chapter covers the related literature along with the detail review in the area of real estate trend and investment pattern.

The real-estate sector turns out to be a most important contributor of growth of Indian economy. There are various researches done on real-estate both in abroad and India to comprehend and estimate growth and significance of the sector. Here the review of literature majority focuses on to the issues of the real estate market and its implications. Further for the purpose of identifying the issues pertaining to real estate segment numerous researches have been reviewed to gain the fundamental of the real estate and its various segments. This review further assesses two major dimensions of the real estate segment which include trend and factors explaining the variations in the real estate prices and direct investment in real- estate market. The later part includes the literature pertaining to the various investment specific factors contribute to the investment decision in the real-estate market. This review further tried to study few such literature published in the past to get a better idea about the depth of the industry.

India having the most fluctuating and futuristic real-estate market in entire Asia as stated by Michael Smith (head of Asian real-estate investment banking at Goldman Sachs) in their published research (Fortune Magazine, 2006). Growth of the real-estate segment provided improved infrastructural facilities in India and also delivered employment opportunity to millions. Further it made India, retail market and financial market hub. Such developments delivered remarkably to attract more and more organised investment in real estate sector by international and domestic financial institutions. It has also resulted in the greater availability of financing for real estate developers as there is a growth opportunity observed by the real estate players of the segment.

Real-estate portfolio management have improved dramatically over the past decades, creating new potential for corporate-real estate to deliver workstation solutions in a sensible
manner and cost-effective manner throughout the life cycle of the real estate mentioned in the research of Audrey Schriefer & Jyoti Ganesh (2002). There are various risks involved in the development of real estate, by permitting the decision maker to contribute to the valuation of these risks can help to comprehend the real-estate market in a better way mentioned by the (Atherton et al., 2008) in their research. Further analysis concludes that, the decision maker with a greater understanding of the critical variables and their impact upon the viability of the real estate can understand the fundamentals of the market in a better manner.

Substantial research has been done on the different segment of the real-estate for both developed and developing nations by many researchers. These researches mainly targeted towards the study of different variables that determine the real estate segment growth. These studies also focused various problems in the sector that hinders growth level. Few studies shows the comparisons of real-estate market with other markets like stock markets returns to analyse the risk profile of the sector and industry dynamics. Further these studies assessed new prospects accessible by the emerging real-estate market. However, real-estate markets of most Asian countries are less developed in comparison to western countries. But countries like India and China started their efforts towards the development of the real-estate segment. Recently started real-estate price indices have also been assembled in a much unpolished method, which has challenged the consistency of the indices for major empirical research. The mentioned above studies shows the structure of the real-estate market at a point of view of India as well as comparative to the other countries. Further this literature survey is an attempt to cover relevant researches conducted and conducted in the past. Further this literature seeks to obtain a complete picture of the Indian real estate market trends and understand researchers’ views on investing in this market.

The entire review of past literature based on the foundation of real estate segment. It starts with basic understanding of the structure of the Indian real estate in comparison to the other nation. This will also focus on to the global real-estate industry researches to understand the international dynamics and movement in the cross border real-estate market. Further literature covers the studies pertaining to trend in real-estate market to understand the dynamics of real-estate market movement and later part investigates the literature on investment pattern and investment decision in the real estate market which also clears the
detailed picture of factors responsible for defining investment pattern in the various segment/ sectors of the Real estate.

3.1. Globalization and Real estate:-

Globalization plays an important role in real estate sector as there has been a removal of the boundaries between the country and liberalize the business relation with the foreign country, real estate sector having a tremendous growth pace due to innovation of new technology in the construction and real estate sector, the sector gaining more popularity of the people ,there are several new categories in the real-estate has been developed in the Indian real-estate sector like Motels, Resorts, Luxurious bungalows, so people with a high net worth would like to avail such facilities and they would like to invest in the such immerging luxurious avenues.

Studies on interaction of globalization and real-estate were sparse, because it includes multi-dimensions of real-estate market. Further explaining there were various areas in which global studies carried which includes, fundamental studies, behavioural studies, technical studies etc. In economics, for example, a research by Henderson (1982), explained international economy and real-estate economy co-exist in almost inaccessible grounds, with rare interaction or cross-citations, with some notable exclusions. Studies also done on emerging literature on the “new economic geography,” which deals with the interplay between cities, urban agglomerations and international trade further to assess an impact of openness of national economies on urban residential rents in 55 cities around the world. Fujita et al., (2001) & Bardhan et al. (2004) were among the few papers that linked urban economy with the international economy and trade policy in real-estate segment. The effects of globalization on various aspects of local real-estate markets have been studied by various researchers through number of case studies of different cities across the globe. Lichtenberger (1993) identified and addressed the issues of insufficient supply of real estate and rapid rise in prices in urban centers. Study done by Jones, Jimenez and Ward (1993) describe the future opportunities and risk involved in real-estate investment in Mexico associated with changing institutional structure. Study by Sheng and Kirinpanu (2000) argued that greater access to global capital in Thailand leads to a housing boom for a while,
followed by a downfall with financial ramifications. The interplay of local firms, global investors, and the local institutions could have different consequences contingent on the cultural, geographic, and political setting, as proved by case histories in Mumbai (Nijman 2000) and Shanghai (Zhu, Sim and Zhang 2006).

International property rates of return and covariances were unstable, which might limit their worth in standard portfolio distribution models explained by Eichholtz (1995). Goetzmann and Wachter (1996) investigated mean-variance analysis for a sample of global commercial real-estate market with respect to sample of office markets and identified three clusters of office markets that have a tendency to “move together”, which may harm investor capability to diversify their real-estate portfolio over international markets. Though, countering in-experienced diversification strategies, Geurts and Jaffe (1995) revealed that the country specific risk-return connection is exaggerated by institutional characteristics like socio-cultural factors and political risk pertaining to particular nation.

On the other hand, Hoesli et al (2004) and Stevenson (2000) confirmed the international portfolio diversification benefits of real estate property in a mixed-asset portfolio. Their findings explained that potential diversification benefits that could arise from investing in real estate securities are generally not statistically significant, which also supported by Bardhan, Edelstein and Tsang (2006) and further explained country’s real estate security additional (risk adjusted) yields are adversely connected to its candidness suggesting that market effectiveness for listed real-estate firms may have been improved in international economies. Kallberg and Liu (2002) compared between the stock market and real estate market and further suggested common factor influence on security market returns and real-estate market returns, and revealed real-estate securities were susceptible to crises in Asia in the period of 1997-98.

The real-estate industry of the developing nations could face major challenges in future. Those which were connected to the resource shortage and industry itself. Further research argues with the issues which were not considered normally to be relevant to developing nation, like, indeed of significance to them, and some may be critical. It was necessary for more studies and research to be done on the issues of globalization, the situation, and the variety aspects of culture as they related to real-estate and construction activity, construction enterprises and real-estate industry in developing countries. The all-
encompassing issue of real-estate and construction industry growth should hold all these matters. In other words, the developing nations should pursue to develop real-estate and construction industries which are nurtured in a well manner to have benefit from globalization. This is a crucial for the developing nations because it might bring the adverse environmental impact of their real-estate activities, and which effectively influence the local real estate market, so there must be some structure to facilitate their efforts towards achieving success on their projects. Aggarwal S. (2003).

3.1.1. International Portfolio Diversification in Real Estate

Economic and monetary factors having the direct influence on the Real-estate market smashes and many times these are only the responsible factors to justify such slumps as suggested by Goetzmann et.al, (1995) in their research of real-estate on a global scale study. Lee (2005) outlined that the additions of real-estate to a mixed property portfolio not only improve the compound return of the real-estate portfolio, but also potentially reduces the risk associated with the particular portfolio. He tested this hypothesis by using yearly profits from real-estate in the U.S. during the period 1951-2001. He further revealed that land property has the potential to improve the return on the portfolio compared to return on its individual composites in a long run. Lee (2005) outlined the method of Booth and Fama, 1992 for resembling returns due to divergence of a portfolio investment. Modern portfolio theory indicates that if the association of any given assets with a specific portfolio happens to be relatively lower than its role in reducing the portfolio risk will be considerable. The study of diversification effects of worldwide land possessions by Gordon et.al, (1998) explained that a mixed-asset portfolio of global property leads to reduction in the risk of entire portfolio. The study used efficient frontiers to establish the risk reduction potential of foreign land property mixed in with US land assets. Previous and past literature in the area of real estate indicated that, real estate explanations a large share of wealth which is 33% and Gloss Domestic Product of about 11% in the United States of America. Further, stated that real estate is multi-layered. It is local or a national and variety of factors influencing the prices of the real estate like location trend in the real estate market and many other factors responsible for such fluctuation of the real estate prices (Antonio, 2006). Real estate market is one that is categorized by almost expectable rotations of booms and crashes.
(Smith, 2010). The former are the time when the prices in market goes sky rocketed and almost inevitably, they are followed by periods when the prices plummet down. There are people those looking towards these real estate market cycles and take their decisions on the basis of this cycle movement to achieve gain from such market movement of the real-estate (Smith, 2010).

As explained by Harry Kimotho, (2013) in their research on African property market, there are variety of global aspects that should be considered in the prediction of the real estate market movement. Considering African property market, due to political instability, conflict, and low investment, it has become quite standing over the years. But recently Africa’s real-estate market has experienced substantial growth. Africa’s GDP growth rate of 5% per annum is growing exponentially. This expansion is generating a middle class that leads to the urban centres coming up. It also produces a need for modern retail properties. The African property market has been mounting since the turn of the millennium although slowly due to absence of giant investments. Further a study by Harry Kimotho (2013) explained, since the African real estate market has been getting attention from World-wide investors. The real-estate market in South-Africa suffered a minor downtime as real estate can be financed wholly by debt. Majority African countries expansions are not constructed on credit basis and thus were not exaggerated by the international crisis. High GDP and demand for high end real-estate is a key drive in the Markets like Kenya, Nigeria, Uganda and Zambia already have strong bases on which to build on these economies. The real-estate market efficiency also enhanced because of infrastructural and real-estate market development in the nation.

3.2. Real Estate Economy :-

The term real estate economy comprise of two word real estate sector and the economy of the country, here in this aspects several papers were analysed in which there is an effect of country’s economic condition affect to the real estate market. There are several microeconomic factor like demand, supply and disposable income which can make effect on the real estate sector, under this area there are several literature have been presented by the different authors in the different situational context from them some of the research
have analysed to know the effect of micro economic factors on the particular sector which termed as a Real Estate economy.

There have been a gradual and continuous effect have been observed in the housing prices due to the several factor like demand of the housing in the particular state of period as has been explained in the research carried by the Bharat Mittal (2007) study of trend in real-estate prices in India (A Case of Chandigarh City), researcher have considered prices of the house as an independent factor and demand as a dependent factor on the price, so there is a question arise again in the direction that, what kind of relation have the demand of the housing sector having with the prices of houses.

There are also several literature published in the same area which are also considering a housing sector market faces the elasticity concept because there are several other factors apart from the prices of the houses can affect the demand of the real estate market like Locality, facility, Affordability, so there are significant effect of above mentioned factors have been measured on real-estate market of India in research of Saunders (2007). Indian residential real-estate market comprises of approx. 80% of the total real-estate potentials. The growth of the residential market mainly because of the disposable in the hand of investors, development of local real estate market and real estate market boom. Households are expected to rise to rise in the near future as per estimates of Narkar & Neema’s (2006). A housing deficit of 19.8 million was experienced in 2005 which risen up to 22 million in 2006, regardless of the heavy inflow of supply over the past one decade.

The dynamics that rule on this segment and causes the fluctuations in the real-estate market

✓ selling price,
✓ listing price,
✓ housing features,
✓ housing market conditions and
✓ Marketing time in the residential real estate market.

These associations were investigated in a research of Kang & Gardner (1989) he has taken a large sample of single-family homes in India for his study.

The most significant aspect in the case of Real-estate is location. This affects the value and benefits arise from the Real-estate property. He further suggested that, India needs a sturdier capital market base for real-estate financing. The discussion on the potential
introduction of REITs and real estate funds points in the exact track. The starter of REIT’s in 2007, would give global investors an accustomed investment avenue. Private investors might also enter into indirect investment in real-estate. Although attention in new schemes is probably to come mainly from institutional investors, the growing middle class is expected to pursue new tools apart from direct real-estate investments in the med-term. So, one can say that the investment in Indian real-estate market is a very good opportunity. But one should be very cautious while taking decision in this route due to increasing inflation and landing rates. Legal issues should also be considered equally important while choosing a property.

Retail real-estate outlay in 2005 was Rs. 9.9 trillion in India, out of which organized retail counted for only 3.5%. The organized retail segment of India is likely to nurture at 25% to 30% over the following five years, revealed by Yadav & Mahajan (2006) in their study. The growth of organized retail is motivated by increasing disposable incomes, changes in shopping habits, demographic factors, growing number of retail malls and entry of international retailers into the market. However, Sreejith & Raj (2007) discussed the consequences of the retail revolution in India.

3.3. Literature on Trend in Real Estate

Literature and research related to real estate trends, real-estate cycles and real-estate appreciation, etc. around the globe is not readily accessible and more importantly there is a serious lack of research about real-estate trends precisely in India. The real-estate is cyclical in nature but the cycles are not regular and even unpredictable. Moreover, the generosity and occurrence of the cycles fluctuate from place and time (Brown and Liu, 2001). What furthers hampers research into this field is the fact that real-estate cycles are tough to describe because of changing severity across diverse real-estate segments. For instance, a slump in residential markets by no means suggests that commercial real-estate market is also facing a downtime (Dokko et al, 1999). There is also a universal belief that real-estate markets are ineffective and unsatisfactory comparative to other financial markets. Kang and Gardner (1989) provided few explanations to this problem. They suggested that transaction of real-estate is a matter of compromise for each deal. If a seller wants to sell the property
on profit, they will think about the margin, and they further wait until the next seller to get the good profit on property. Yet a seller must accept or reject a buyer’s offer without knowing when or even whether, there will be another offer. In addition, sellers often have a second objective: to sell rapidly in order to shift to a new place. Thus, they may accept a price less than the determined that they could gain if they hang on longer. Knowing these restraints, some sellers may purposely overrate their property, accepting to sell at a reduction but allowing for the option of a higher than desirable offer. Further complicating the condition is the fact that the housing market responds slower to new information on other sales since it is expensive to acquire. Thus, one perceives that certain possessions may get extended to sell than others of equivalent quality. Phyrr et al (1999) provided different reasons why people rely on study of real-estate cycles and trends is better disregarded. Some of them being; lack of buyer attention in cycles, economic forces are unsystematic, insufficient data, divergence removes cycle effect, financial theory does not explain cycles etc. but progressively over time, researchers have understood the prominence of real estate cycles. This pattern of periodic cycles of fluctuations incorporates the fluctuations in the demand and price movement as explained in the cow-hog model.

Poterba (1991) and Mankiw and Weil (1989) argued that the entry of short term investors into the housing market exaggerated housing prices. Three objective clarifications for price trend have been described by Poterba: positive and surprising demand tremors resulting from the interaction of unexpected inflation and tax system, probable logical variations in construction costs, and the access of a large group of short term traders into the housing market. The results indicate that variation in construction costs and income has a probable influence on housing price variations than the demographic factor. Poterba’s findings support the view that house price trends are predictable using past evidence on basics together with house price increase and variation in per capita income. The study completed by Mankiw and Weil states access of short term traders into the housing market improved housing prices while entry of the baby bust group in the 1990s broke the rate of upsurge in demand. To the Efficient Market Hypothesis to hold, the demographic changes should not affect the property prices, because they are expectable. Therefore, Mankiw and Weil argue, naive potentials can better describe housing prices than the forecasted ground rules.
Delaney and Smith (1989) evaluated whether the public information about government impact fees are capitalized into the housing prices. The study done on the impact fees charged by the city of Dunedin in 1974 on basis of single family large sample size and also covered three other cities of Pinellas County beginning 1971 to 1982. They assess the nature of the fee structure in Dunedin, changes in factor costs, growth in the price of housing in selected cities, and unrealized expectations regarding the benefits to be provided by impact fee collections. The study concludes that the builders pass on the total cost of government fees to home buyers through the past six years in the cities of Dunedin.

Gyourko and Keim (1992) evaluated linkages between returns on traded real-estate shares (REITs) and returns associated in private real-estate markets. They stated further the lagged values of physical real-estate investment trusts (shares) can be used to estimate returns on a standard appraisal based index making the real estate market ineffective. The association is possibly affected by the fact that the stock market information on real estate markets is later fixed in rare property assessments. They also highlight the fact that the firms in a securitized real-estate market are diverse by nature generating further incompetence in the market.

A research by Case and Shiller (1990) utilized a residential price index calculated using weighted repeat sales methodology for the cities like Dallas, Atlanta, Chicago, and San Francisco, and find strong serial connection in housing prices. They used a sample of micro-level transaction data for the years 1970-1986 to describe that the housing market is ineffective, and that inadequacy rises from the probability to predict future prices based on the currently information on economic variables including, ratio of construction costs to prices, past price, changes in the adult population and per capita income growth.

Darrat and Glascock (1993) uncover the association between current real estate prices and information on fiscal and monetary policy and financial variables. Their conclusion was that the real estate market is effectual with respect to presented evidence on the risk premium, the industrial production, the monetary base and the return structure of interest rates. The study also revealed that trend in these variables are rapidly and fully utilized by market agents, the major reason being that the association between real-estate and their stock returns has been published in various literatures like researches and media blogs.
Case and Shiller (1989), Hosios and Pesando (1991), and Larsen and Weum (2007) utilize price indices to study the auto-correlation. Further the study was carried based on the repeat sales of identical units i.e. repeated-sales models, and report first order autocorrelation for the single-family sample of housing segment. These studies usually extend to assess how the price history of yields that include dividends, capital gains, and interest payments can be exploited to forecast future yields. These studies investigates efficacy of the residential markets in the Canada (Toronto), US and Norway (Oslo) respectively, and reject the hypothesis of real estate efficiency.

Ito and Hirono (1993) compared the financial market investment with the housing market investment and reported that return generated from the financial market is comparatively high in short term period of time while on the other hand real estate investment in the housing were also appreciable in future but it is inefficient in short run and it provides he better return in the long run span of period because housing price movement generally provides the long run returns much better than the other investments.

Grossman (1978) and Grossman and Stiglitz (1980) evaluated the impact of the information availability in the real estate market on the real-estate prices specially on the housing price fluctuations, further research concluded that information impact have a significant association with the housing market and plays a crucial role behind the efficiency of the real estate (housing market).

Lo (1997) studied on the concept of “informational efficiency” claimed that, the sequence of price variations generated by a more effective market is more arbitrary, and the most efficient market of all is one in which price changes are entirely unplanned and unpredictable. He classified this not as coincidence, but as a direct outcome of numerous dynamic contributors in the market trying to exploit return from the information they have. Investors make use of even a very small information, integrate that information in to the market price, and quickly make that particular information public, eliminating the profit opportunities to other investors. For the real estate market the association between information and the efficiency was recognized by Kummerow and Lun (2005). They emphasized that the real estate segment has always been an “information business”, with extraordinary transaction costs and considerable inefficiency due to the difficulties of assessing what to do in markets where assets are mixed and trading is occasional. They
further argued that better information can upsurge the magnitude of change of real estate cycles which will ultimately destabilise economies.

There were some linkages identified between the trend in Real estate sector and key economic variables as well as among the key financial market. The detail review for the same discussed herein detail.

3.3.1. Real estate Trend and Inflation

Causal association between property returns and inflation was examined in Hong Kong to reveal the long term and short term relationship exist between the inflation and property returns. The conclusion of the result revealed that housing returns only provides the opportunity to hedge the long run and short run inflation condition of the nation. The cointegration test had done through the autoregressive distributed lag (ARDL) bounds methods which further indicated that inflation and property are integrated. The causality results support that inflation and property returns bearing the two way relationship with each other. The one-way causality between inflation and real estate returns can be better explained by the operation of the Hong Kong currency board system as investment funds flow to the risky real estate assets from banking deposits due to the prospect of lower or even negative interest rates caused by rising inflation in Hong Kong by Henry Koon Nam Lee* (2013)

However, Clapp and Giaccotto (1994) explore the relationship between the residential price Indice and various economic indicators which further suggested, Changes in house prices are calculated using the assessed value method as well as the repeat sales method, and both price indices are associated to selected economic variables including unemployment related factors and expected inflation. They further ascertain that these variables have the ability to significantly predict house price variations.

A research by Anari and Kolari (2002) and Zhou and Clementa (2010) to investigate the long-term relationships between inflation and housing prices. They structured an alternative autoregressive distributed lagged (ARDL) cointegration approach Anari and Kolari (2002) investigated relationships between residential price Indice and inflation in the U.S. using ARDL bounds testing and recursive regression methods. The cointegration results support
the hypothesis that inflation and housing price are cointegrated and the results of recursive regression indicate that the relationship between housing price and inflation is stable. The ARDL cointegration results sustenance the hypothesis that the U.S. real estate is an effective long-term hedge against inflation.

This reveals the vital aspects of the relationship between the inflation and the real estate price indices apart from establishment of simple association between these two factors

Study of Ganesan and Chiang (1998) found conflicting results using regression and a cointegration model. Based on the Engle and Granger (1987) co-integration approach, there is no long-term relationship or equilibrium between inflation and property assets. They determined that property assets fail to provide a long-term inflation hedge in Hong Kong over the 1984-1994 periods. With regard to short-term results, office and industrial properties offer a fractional hedge in the short-term against unexpected inflation, while commercial (retail) and residential properties offer a comprehensive hedge against expected and unexpected inflation based on the OLS regression models.

Cointegration and Causality Models

Various studies undertaken throughout the world to identify and investigate the linkages between the real estate market and inflation rate. Many studies utilised cointegration and causality model for the ordinary least square regressions to identify the influence of the exogenous variable on endogenous one. Many studies utilised classic traditional regression models to investigate the linkages exist between the real estate return and inflation. In developing more consistent econometric models which can represent the influence in a well explained manner, studies like Fama and Schwert (1977) tried to apply a "differenced variable" approach based on Fisher's (1930) hypothesis instead of the level variables. This assumes that the differenced variables follow a stationary process. Although the method of "differencing" satisfies the stationary condition, the economic inferences derived from such projected parameters have inadequate significance in the short-run. Although the Fama and Schwert (1977) methodology had been widely applied in empirical studies that examine the linkages between economic variables and residential prices in long run which further represent the long run linkages exist between these variables though there is no association
identified in the short run regression model. The prerequisite of these cointegration modelling is time series must be stationary in order to get the accurate results about the cointegrating relationship in the long run.

Few studies such as Anari and Kolari (2002), Tarbert (1996), Stevenson (2000), and Hoseli, Lizieri, and MacGregor (2008) had utilized cointegrating methods to inspect long-term relationship and linkages with the economic variables of the nation of U.K. and U.S. and property market during the mid-1990s. In some more recent studies performed for Asia-Pacific countries. Sing and Low (2000), Chu and Sing (2004), Ganes and Chiang (1998), Zhou and Clementa (2010) and Li and Ge (2008) identified many time series inflation and property return statistics for Singapore, Hong Kong and China were actually non-stationary. Therefore, cointegration analysis should be more appropriate to investigate the long-term linkages between inflation and real-estate marker return. Even in case when there is no suspicious relationship exist between the variables, the simple regression model would be inefficient to show linkages exist between inflation and property market indices. The above studies were concluded based on the regression stastics and further to assess long term linkages cointegration test were performed in many studies.

Gatzlaff (1994) also established the relation between the real estate and inflation rate and identified possible effects of unanticipated inflation on estimated return on the particular property hold by the investors using two models of projected inflation: adaptive expectations model and a rational expectations model. Further results of the model test state that both estimations of unpredicted inflation having a positive correlation with returns to housing, however the serial correlation between these two variables gradually declined when there were replacement of expected inflation rate by the adaptive inflation rate.

On the other hand study argued that housing price in the U.K. property market at a constant rate without the inflation effect difficult to predict as it shows the unit root. This particular examination corrects for cost of housing; Stamp Duties on housing transaction and the lengthy process of property acquisition, and empirically verified weak effectiveness in the ownership sector of the UK. As explained by Rosenthal (2006) in their research

A study of Iyer K. R. (2011) performed on Indian real estate market remarked in his report that India is facing a challenge facing an inflationary condition, while continued high
growth. Further explained strong supply condition of the real estate market will eliminate
the impact of the taxation and duties and streamline the growth of the nation and the
inflation impact should be eliminated thereon. Infrastructure remains an important segment
for the growth of the nation like India, which was repeated by (FM) Pranab Mukherjee,
country’s Finance Minister in his Budget 2011-12. Construction projects in numerous areas
like low-cost housing, road and transport, bridges and special economic zones (SEZ) and
ports and airports, will force the growth of the nation and demand situation of real estate
and construction companies. This proves inflation bearing the significant effect on the
boosting the real estate segment.

3.3.2. Real estate Trend and GDP of the Nation

*Dr.N.Kathirvel, **John.V.Sugumaran (2012), have analysed the emerging opportunity for
investment in Indian Real-estate Market. He compared the growth of real-estate market
and the growth rate variation of the country., further they have checked the effect of real
estate growth on the country’ GDP. Research was done on the bases of the secondary
statistics of Tire-II and Tire-III cities of India to know the growth rate of real estate in
major cities of India, there are several changes have been measured in the research which
describes the real estate sector scenario more clearly

Besides this, There are several causal effect measured in the research like average GDP
seems to be over seven percent during the year due to tremendous performance of real
estate market in India and also it seems to be a positive and notable development and
growth in the real-estate segment of India. Such boom have been caused by the rapid
population growth in India, rising prices of land spaces, and rising prices of Residential and
commercial properties. Some more researches done in the same direction like Vandna
Singh & Komal (2009) did the study on the real estate market of India with an aim to
investigate the Problems and prospects India real estate, further main objectives to reveal
the problems connected to real-estate investment in India. This research is more
emphasized on the investment in real-estate in India. It also investigated the trends in the
real-estate market. The study further braked-down into three different sections. First section
of the study deals with fundamental variables influence on the real-estate value like demand
and supply condition of the property market, site characteristics were exempted from the
study and considered as a constant variable for this research. Second section and third section of the study enlightens the consequences and remedies for real-estate boom respectively in India for that time being. The study also presented the future prospects of real-estate market in the India. The main objective behind the research carried by the Vandana Singh & Komal (2009) were to studied the fundamental factors affecting to the real estate valuation, also the factors which were the cause of the boom in the real estate sector, and constraint of investment in Indian Real Estate market. For these research, Researcher have collected the sample of 50 major player working in the Real estate field to explore the ideas and generate the result, research was carried with Prices, Features of Flat or house kept as an independent variable and Customer awareness related to real estate market and the preference as a dependent variable.

Sumanta Deb* (2012), explained the potential of housing market prices in their paper by studying the cases of Two Indian cities vis. Bangalore and Kolkata. They have studied the housing price indices of both the cities and also they have analysed effect of Interest rate change, GDP on the Housing market demand and supply condition. Furthermore studies were done on supply and demand conditions of real-estate market and the effect of supply of housing. They have analysed the trend prevails in the housing sector by taking an example of two cities and also they indicated that there is a positive housing price indices have been observed throughout the year 2007 to 2010., they have proven several things like GDP having a strong positive correlation with the real-estate prices, because as the GDP increases there is also an increase in the real estate prices.

Dr. Sanman Jain N and Nishi S Jain (2011) have examined in their research Paper they assessed the Global crisis and its impact on real estate sector in India. They used, in these study descriptive research through collecting information from Newspaper and Magazine to identify financial crisis impact on real estate sector in India. In 2007 and 2008 financial crisis had been arise and that year India economy had been face many Problems and Crisis. These Financial crises majorly affect the share market and real estate market. In this year housing sector had contributed almost 5% of Country’s GDP. RBI has taken some steps to control the monetary policy. They use to achieve the monetary policy of both interest rate and liquidity instrument. After recovery from the recession of financial crisis by the Indian economy in 2011 increase demand of real estate sector. In their research they found the
Indian economy growth rate driving demand for residential unit. Growth and Investment have been also creating Opportunities for investment in real estate sector. Government and Private sector also participate to provide good quality in housing sector. It is equally important to attend the institutional and regulatory aspects as well as strengthen and expand the capacity of financial institutions for future growth of the real estate sector.

Moreover like the inflation Vishwakarma (2013), studied linkages between real-estate price index and different macro-economic indicators in the Canadian real estate market, he used ARIMA models to conduct the time series study and investigate the linkages exist between the variables. He suggested these models worked well for short-term prediction of linkages. He also argued on models used in past studies by various researchers which includes simple OLS regression to advanced models like the Vector Error Correction model (VECM), Kalman filter model, and many more. However, he concluded in the end, that a simple model can reveal the complex linkages amongst the variables in a better way than the complex modelling. He used GDP, long-term and short term bond rate, inflation rate, exchange rate of the Canadian dollar against the US dollar and other macro-economic variables for his study. He tested his models along with these econometrics.

3.3.3. Effect of Interest Rates on Real Estate

A Study mainly focused on the mortgage impact on the housing price fluctuation carried by (Kim, 2007). He had studied in his research about the down-payment constraints, as per his research mortgage generally avoided by the researchers in the prediction of the housing price trend, further he described that mortgage having a significant impact on the housing price movement and trend. Besides that a study carried by (Tsatsaronis and Zhu, 2004) explained Post-Keynesian theory of debt deflation. This further explained that it takes a demand-side view and argued that real estate suffering because of the sub-prime landing influence. The detail explanation of his study argued that real-estate owners not only feel richer, but borrow an additional amount of money against the increased valuation of their real asset, or they used to take borrowing for the purpose of the speculating in real estate market for making short term profit, again they buy property with amount of money they borrowed with an expectation that valuation of their property may raise in the near future. Studies carried to explain the
significance of mortgage credit for house prices uncertainties in 17 countries. The analysis founds that essentials relating to hypothecation finance, including bank credit and the real estate interest rate combined explains one third of the variation in the housing prices.

Further study of Gerlach and Peng, (2005) described long-run linkages between house prices, GDP and bank credit in Hong Kong. Bank credit and house prices reflect short term relationship which shows further, a change in house-prices influence and forces variation in bank credit. For instance, a national-level empirical study using the U.S shows the influence of interest rates on the demand for houses. The results further show a significant negative relationship between mortgage interest rate and house prices in the long run; however, when another variables like new home sales and income were included, the relationship wasn’t significant in the short-run as explained in the research of Mc Gibany and Nourzad, (2004). Price growth reacts immediately to an alteration in mortgage credit explained with the help of inflation adjusted U.S. data. In addition, mortgage credit reacts significantly to the change in housing prices, there was a reinforcing relationship between housing prices and credit rate (Laura Berlinghieri, 2008).

The existing studies on credit and housing price summarised like First study typically include interest rate, supply-related measure and income as a determinant of house-price dynamic forces. However, those basics were unable to explain entire variation in house prices. Studies on global scale usually included bank loans to the list of causes. More precisely, studies of Ireland and Hong Kong indicated that house-prices and credit were linked in the long-run. Besides that, research done on Nairobi covered and identified the influence of interest-rates on real-estate market and further it described that there was a short run association also found between these two variables.

3.3.4. Real estate Trend and Stock Market

There are various studies in the past done to investigate and assess the relationship between the stock market and real estate market. Few studies reviewed here to have the idea about such linkages. Real-estate market price fluctuation had a direct influence on stock market as reported by Case, Quigley, and Shiller (2005) in his study. Further Reinhart and Rogoff (2009) also supported this association as a common market aspect amongst the
various countries over the long term time horizon. Another research by Farinella et.al, (2013) investigated the linkages between stock and real estate market in Poland, and concluded that real-estate market prices and return on stock having a significant long run relationship. They also added stock returns not directly affect to the rent associated with the real-estate market. Low degree of association found between stock and real-estate market relationship in Poland, which generates diversification openings for a typical investor.

There are also few researches observed in Asia to find the linkages between stock and real estate market. One of the research by Graeme Newell and Rajeev Kamineni assessed the risk-adjusted portfolio performance to assess the diversification benefits for the real estate markets (Residential, Commercial and Retail segment of real estate) of cities like New Delhi and Mumbai in India. The real estate-markets were found to be miserable in comparison to stock market during the period of 1998-2005, that was the main cause of loss arises through such of portfolio diversification in office and residential real-estate with stocks. Deregulation of capital market also influence to the level of FDI in the real estate segment and it also impact on the FDI investment in the real estate segment. They also assessed that off-shoring in the metro cities like Mumbai and Delhi has a good opportunity to demand for the better infrastructure. They have also concluded that less restrictive guidelines for FDI in real estate in India since February 2005 have shown substantial enhancements in the real-estate investment situation in India for both local and global players. It has been taken as an opportunity for an India for the development particularly in the developing Asian real-estate. The development of the structure of REITs in India in upcoming years will also likely to expand real estate investment advantages in the near future.

Furthermore studies on the investigation of association between real-estate and Stock market, Mahurkar & Senthil (2004) investigated that real estate is a better opportunity for the investor to employ the funds and get comparatively better return on their investment in the real estate. They have concluded this study comparing the real estate market return with the stock market return in India. Conover et al (2002) analysed diversification of international real estate portfolio generate higher returns in comparison to global capital market. An inspection of whether the upward swing in the real-estate explained by the variation in fundamentals like growth of the nation, inflation rate prevails in the nation and
interest rate of the country by Ito and Iwaisako (1995). They also evaluated land and stock price variation during the bubble period of economy (In the end periods of the 1980s) in Japan. They found that real-estate price increased during the period mid-1987 to mid-1989 cannot fully explain by the variation in the fundamental factors. Threre might existence of other variables that bears to significant relationship with the real-estate market; sharp increase in bank lending influence and cause the initial rise in the real estate market, further finally there is a significant relation between the stock and land prices.

Barkham and Geltner (1996) stated inefficiency of real-estate market return in comparison to the other markets. They compared monthly time series of stock and housing market returns. The results of investigation established relationship between returns in the UK stock market and housing market. Further they included, there are severe securities that influence this relation between stock and housing market.

3.3.5. Real estate Trend and Foreign Direct Investments (FDI’s)

Research carried by Vandana Singh and Komal (2009) have studied that the FDI in India having direct influence on FDI in real-estate. Further analysed a positive relationship of FDI in real in real estate segment leads to growth in the real-estate segment. Level of FDI in real estate segment of India for the period 2006 to 2007 was 10%. In past years it was increased to 16% and further in 2008 it was 25%, which shows a gradual rise in the FDI in real estate in 2008 in comparison to past. These indicated the positive trend in the real-estate segment of India. Further research presented that, recently Government allowed 100% access of FDI in the Indian real-estate segment. These leads to development in the real-estate sub-segments including housing, commercial premises, hotels, resorts, educational institutions, hospitals recreational facilities and urban and rural infrastructure in order to develop them and attract more investment in the segment in different forms of real estate. Earlier, real-estate had a restrictive norms imposed on foreign investments with their presence only permitted in the combined townships. They invested mainly in urban infrastructure facility development like large scale residential, hotels, and shopping malls, complexes in fresh townships. Also FDI involved in Info-Tech parks and SEZ’s. Moreover half a dozen local real-estate investments had been started so far with an aggregate outflow of around Rs. 3,500 crore.
Existing economic literature suggested that foreign real estate investment in other services had assisted a host country’s economic growth by investing more and more finance, FDI provided much better quality of services in terms of supply of better resources; cost effectiveness, quality of services along with the variation. Also FDI created additional competition with fresh generated employment opportunity and brought latest technology as explained by the research of (Arnold et al., 2006; UNCTAD, 2004; Golub, 2009). Foreign real-estate investment contributed considerably to the countries for the development of infrastructural facilities in the host country and also for the growth of the real-estate and construction segment (Wei et al., 2006; Wu, 2001). In addition, it is whispered that the FDI investments made real-estate sector performed well (Jiang et al., 1998). For instance, He et al. (2009) argued that FDI in real-estate segment of China’s real-estate sector by introducing quality services along with the better resources in the segment, besides that it had also donated in terms of large scale finance to the real estate segment of China.

Chin et al. (2006) investigated factors that bearing significance in appealing to global and local players of real estate markets in Southeast Asian cities’ as revealed from qualitative survey of real-estate market. They further analysed respondents regarded strength and stability of the economy, sound and financial economic structure, restrictions and regulations on foreign investors, legal regulation and political stability as the most crucial issues affecting the market development. Further, their results specified that, legal framework, taxation structure, liberalization of financial market, currency market stability and convertibility of currency, the transparency of the legal system, quality of public infrastructure, market limpidity, level or competence, government interferences, perceived exploitation level and the urban region were found essential for property market investors.

Rodriguez and Bustillo (2010) examined the determinants of FREI investments in Spain during period of 1990-2007, they applied Engle-Granger test of co-integrating regressions. They used time series models namely: demand for real-estate model, eclectic model and financial model. In financial mode, they included variables like interest rates of long term loans, housing prices indices, GDP per capita and exchange rate dummy. They found that there is a long run positive linkages among GDP per capita, exchange rate and FREI with
housing prices indices in Spain. In accumulation, they further found that FREI had negative relation to interest rate in long run.

Kenourgios, Christopoulos and Dimitriou (2013) investigated the contagion effects stocks, bonds, commodities, shipping, foreign exchange and real estate by comparing average conditional correlations among markets across the stable and crisis periods and their results show increasing linkages among those asset markets and show the existence of a contagion mechanism among the assets. Chan et al. (2011) investigated linkages between return on Treasury bonds, commodities (oil and gold) U.S. stocks, and real-estate property market. Authors confirmed the existence of two different commands called a “tranquil” command with economic expansion periods, and “crisis” command of economic decline period. During the tranquil command they evidenced of a indifference between gold and stock, while during crisis the contamination between crude oil, stocks and real estate has been evidenced and furthermore, the strong evidence of a flight from stocks to Treasury bonds has been proved.

3.4. Literature on Investment Pattern in Real Estate

Study of investment behaviour by (Anastasia & Suwitro, 2015) provided the description of different variables to be considered while concerning to the behaviour of a typical consumer or investor. Further this study includes both rational as well as irrational both the decision. Ratchatakulpat et al. (2009) focused on the different variables bearing the influence on an investment decision. Selected influences included for this study were locational factor, physical facility related factors, distance factor, environmental factors, legal and psychological factors and evaluation factors. The main limitation of the study was that, it wasn’t included irrational factors. A minority study by (Salzman & Zwinkels, 2013) explained behavioral phenomena, with a special focus on consumption that attention to emotional and social part of ownership in real-estate segment. The study of Beracha & Skiba (2014) explained several general variables which includes micro-level bias including loss aversion, mental accounting, familiarity bias, overconfidence, late react to available information. A broad base explanation of social and psychological determinants of real-estate decision making explained in the study of Salzman & Zwinkels (2013).
2013), further explained the real estate investor behaviour deviates because of rationality of a typical consumer due to influence of numerous personal dynamics such as individual risk tolerance understanding of market, information, awareness and assessment of market and personal qualities of investors and investor emotions, mood of investors and expectations from the current market. Jordan and Miller (2008) assumed markets were not effective, and they proved this hypothesis. So, one of the underlying financial theory concepts – the efficient-market assumption of Fama (1970), defined market being efficient when prices of financial instruments reflect information availability and change caused by availability of fresh information in the market. Though classical theory raising the assumption about efficient market, where it is not possible to earn more than the market average because of rational and profit centric investor attitude, and which further does not clearly reflect the real estate market situation (Razak, Ibrahim, Abdullah, Osman, & Alias, 2013). Purchase intention can be described as a readiness to purchase a specific good or service in particular future point of time. Further can be defined as attitude of typical consumer toward a particular product. Some time it may be refers to investor feeling toward, beliefs about, and buying intentions. Plabdaeng (2010) defined purchase decision as a frequent activity of a typical investor or a buyer. People make their decisions on numerous things in real life. According to Sidin, Zawawi, Wong, Busu, & Hamzah, (2004), explained in their study that, family members plays a vital role in the construction of purchase decision of a typical consumer or an investor because most of the time decision taken by the consumer not purely based on his own expectation or desire but also it includes family desire and expectation. (Al-Nahdi, Ghazzawi, & Abu Bakar, 2015) stated in their research detailed understanding of variables influencing real estate market are crucial and significant because of incapability of the Utility Theories which had been used to predict consumer behavior to deliver substantial justifications to recognize the market

Apart from the mentioned above researches some more literature found the base which guides real estate market investment

A study by Loutskina & Strahan (2008) on knowledge of real estate market explained that the landers with the sufficient knowledge of the market and sufficient information on the price variation can influence the market demand. The authors also proved that the behavior
of these mortgage lenders are like informed investors from the private advisories of real-
estate market and had information and knowledge about real-estate market. Here lenders
are concentrated lenders, who defined as: “lenders who focus on a small number of local
markets”, invest on a big scale to acquire the market information from the private firm in
order to diversify their investment portfolio. This information helps them to understand and
forecast current and future housing prices in their local markets as well as to exploit
deviances between prices and fundamentals, thus they earning above the normal profits.
Uninformed investors are unable to precisely forecast current and future prices and as an
alternative they view prices as closely resembling fundamentals, they are also diversified
lenders, they trade for liquidity motives and hold varied portfolios with a view to reduce
systematic risk. For instance; they consider present value of future cash flows expected
from the real estate market (Loutskina, 2008).

Hayunga & Pace (2009) in their research discussed trade-off between a geographically
diversified real estate and specialized real estate investment strategy. They argued further
investors can save money through specialization and better diversification as they have
experience and knowledge of a particular real-estate by continuously trade and observation
of that market. This increased knowledge of market allows them to have more precise
knowledge and understanding of future prices and help them to achieve better returns at a
lower information management cost.

Return preferences stated by Geltner & Miller (2007) in their study, explained there two
different motives of investment in real estate for obtaining a better return, the growth
(appreciation) and the cash flow (income) objective. Further they explained that, favour of
any of the objective by investor makes a big impact on their investment pattern or strategy,
on their real-estate portfolio, and in their decision of indifference between the investment in
one or another asset class of real estate market. The return objective in real estate market
favoured by an investor having a large influence on the holding period of real estate
investment.

In the appreciation (growth) objective the investor’s return will be equal to the difference
between the amount invested in the real estate market for the purchasing particular real
estate property and the amount of sale proceeds received back during the selling of the
particular real estate that hold before by the investor. The cash received during the holding period of particular real estate property should be reinvested or ploughed back to earn a maxim return and considered as a capital gain advantage in terms of growth in the wealth of the investor.

The investors favour the income (cash flow) objective having the shorter span on investment in the real estate market. They used to purchase and sell the real estate for the liquidity purpose and to have the continuous return on the property they holds. The investor’s return will be in the form of continuous income received on their amount invested in real-estate. This investor wants to reproduce upon the size of the original investment as well as to earn a future cash flow on the initial amount they have invested in a particular asset class of the real estate market. As they have short-term focus they often looking for the investment that has maximum initial investment rate (Geltner, 2007).

Besides this, geographic consideration in the real estate also plays a crucial role as discussed by (Hayunga, 2009). In his study. Further he explained that geographic consideration like site selection and location priority having positive correlation with labour markets, supply and demand, prices and regulations in real estate market.

3.4.1. Behavioral Real Estate

Although economic variables are important to determine housing prices, these variable still leave a large unexplained share of real estate prices variations. An economic model including economic variables can explain only 10 to 40 percent of variation in property prices as argued by Quigley (1999) in his study. This is also supported by Farlow (2004a), and argued that most reasonable clarification for the melodramatic upsurge in house prices during the last decades cannot be explained by the demand and supply fundamentals. Precisely, housing prices are very fluctuating in nature, and this volatility is not expressly concluded based only on fundamental factors or economic variables. Thus, it is suggested that house prices variation at a large degree, explained by the Behaviour of consumers and financial institutions investment (FII). Studied in the investigation of (Salzman & Zwinkels, 2013).
There is a strong deficit observed globally to study the real-estate market based on the buying behaviour of investor or study of investment pattern in real estate market as explained and determined by the studies of (DeLisle, 2012, Graaskamp, 1991; Megbolugbe et al., 1991; Ratcliff 1965, 1972). From the research on consumer behaviour in real estate market, crucial variables making an influence on the investment pattern should be identified as mentioned in the studies of (Gibler & Nelson, 2003; Kokli & Vida, 2009).

Robinson (1993) argued that at the time when investor in a real estate market act in unreliable and expectable manner, statistical approaches are only able to determine the economic views of real estate market move but for the large number of complications in the motives of the investors, the economist must considered the theory of investment psychology to get better prediction of the housing market. Thus, best techniques to identify the fluctuation and movement in the housing market is behavioural theory of investors which guides investment pattern in real estate market and help to understand the causes of such fluctuations and its possible impact on the market fundamentals of demand and supply as explained in the study of (Graaskamp, 1991). There are specious moves from fundamental factors which includes study of fundamental economic variables to behavioral and psychological variables to understand the influencing factors for the investors in real estate market (Bargh, 2002).

Though, there is a considerable argument on the formation of behavioural model in the real estate market which further questioning on incorporation of information about consumer preferences, attitudes, and perceptions into economic models of housing market it is very difficult to produce the demand function based on these behavioural and investment specific variables of the investors (Megbolugbe et. al., 1991).

On the other hand to give justification of the above mentioned argument (DeLisle, 2012) added that numerous behavioral theories were developed for identifying investment pattern in the area of psychology which may be applicable to the field of marketing and are relevant to real estate market also. To support further (Gibler & Nelson, 2003) presented consumer behavior models from psychology, marketing and sociology can thus be valuable to real estate market studies.

Accordingly, many Behavioral Sciences theories that have been applied in marketing are also relevant to real estate.
Theory of consumer and investment Attitude by (Al-Nahdi and Abu 2014; Al-Nahdi 2015; Tonglet et al., 2004,) can be used to determine person’s favour or disfavour toward an investment or purchase action. Some cases it should also be presented as a psychological tendency to show the degree of favour or disfavour towards any object of the purchase or investment (Ajzen & Fishbein, 1980). The approach of response towards any objective to dispose it also termed some time as an attitude towards the object (Yusliza and Ramayah, 2011). Thus, person those believed in positive behavior for result from engaging in will have a positive attitude toward execution of the behavior, while a person those believed in negative behavior for result from engaging in will have a negative attitude toward execution of the behavior (Ajzen, 1991). Attitude is a major contributor to construct individual’s behavior and it influences consumer purchase intention to buy durables (Gibler and Nelson, 2003; Summers et al., 2001).

Studies presented that the attitude of investor or consumer can influence of the purchasing pattern of the consumer or investors in real estate market (Koklič & Vida, 2009, Numraktrakulet, al., 2012), Location in also a crucial variable so far as the investment in real estate is concern. Individual purchase decision in real estate market can be influenced by the greater extent from the Location variable as mentioned by Kaynak and Stevenson (1982). A study of Canadian real estate market by Kaynak and Stevenson (1982) described that location having a strong influence on the real estate segment in Canada as it concern with Availability of road touch property is one of housing buyers' expectation during the choice of property (Kartajaya, 1994). Availability of nearby work place or a work space also influence the investment pattern in the real estate segment as mentioned by Rossini (1998). Further to support this Levine (1998) in his research found total time spent to reach work is a dominant determinant of real estate location. Study performed in republic of China, buyer of the housing market preferring to be nearer to some essential required facilities such as schools, malls and parks (Wang and Li, 2004). Rinner and Heppleston (2006) defended location as the proximity to be considered as desirable or undesirable facility by the investor which influence consumer decision of residential market. In the dilemma of housing proximity selection Al-otaibi(2006) stated location is an important variable to be considered by Jeddah consumers during purchase of property. Studies by (Yusuf &
Resosudarmo, 2009; Zabel & Kiel, 2000) presented that; the location of a real estate has an influence on housing choice in real estate market. House choice in Saudi Arabia can also be influenced by availability of schools (Opoku & Abdul-Muhmin, 2010). Previous literature studies, targeted studies on choice of residential property on location based and on numerous other factors like availability of schools (Wachset al., 1993), close availability of relatives (Opoku & Abdul-Muhmin, 2010), availability of communal facilities (Al-Momani, 2000), and time to reach at location (Levine 1998). Study conducted by Opoku & Abdul-Muhmin (2010), also determined location to be a factor influencing Saudi consumers when choosing a housing property in real estate segment. Study of (Graaskamp, 1981) stated that there is close connection between the “space customer” and customers’ purchasing decision. Abelson and Chung (2005) found size of house is also one of the crucial variable in Australian real estate purchaser’s decisions. Besides this, a survey research by Opoku & Abdul-Muhmin (2010) found Living space is one of the most vital determinant of the investment decision in the real estate segment.

(Kartajaya, 1994) explained availability of public service like basic necessities also one of crucial factors in searching for a house. This conclusion also supported in the research by (Rossini, 1998). Further several researches across the globe like studies by Al-Momani (2000), Susilawati and Anunu (2001), (Wang and Li, 2004) Martz, et al., (2006) and (Rinner & Heppleston, 2006). Alotabit (2006). These researches identified public service as one of the most influencing variable in the selection of the real estate property in various countries like Jordanian home buyers and Jeddah consumers. According to their studies availability of the public transport is the very crucial factor for the purchase decision in housing segment. Chinese consumers also consider public services a vital factor during choose of housing.

Attitude of Reference Groups is an important variable which influence the investment decision in real estate market segment as explained by the research of (Ajzen, 1991; Al-Nahdi and Abu 2014, Al-Nahdi 2015; Han and Kim, 2010; Kim and Han, 2010; Tonglet et al., 2004). Further Purchasing of a durables can be influenced by investors’ perception of social pressures by others such as friends, political parties, and/or agents (Kalafatis et al., 1999). Further studies by (Childers et. a., 1991; Sangkakoon et. al., 2014) explained Friends’ Influence crates variation in the buying behaviour. Further consumer tries to satisfy
the choice of friend as well as self-expectations. Consumer choice or investment pattern also strongly influenced by the reference groups which includes people from the surroundings from where consumer belongs to; as mentioned in the study of Al-Jeraisy (2008). Reference group can motivate consumers to follow or symbolize the way of behavior. It can also be said, a reference group has its specific influence and values towards the selection of a durables. Other studies like Panthura (2011), (Gillani, 2012) Razak (2013) also explained in their research that reference group having a strong influence on the consumption and investment pattern.

Few studies on consumer behaviour also considered Purchase Intention as a crucial variable in guiding investment or consumption pattern these studies includes (Ajzen, 1991; Ajzen & Fishbein, 1980; Han and Kim. 2010; Kim and Han, 2010); Davis et al., (1989) and Taylor & Todd (1995). Further these studies determined that purchase intention also having a strong influence on the investment or buying pattern and it should be considered as a crucial variable in consumer buying behaviour construction.

(Grover & Singh, 2015)and (Khim, 2008) identified in their research that level of education of the consumer or purchaser also having a strong influence on the investment and consumption pattern. Further they described that investors having more confidence and good education having different investment pattern than the consumer having less education. (Hui, 1450) examined Real estate investment behaviour mainly guided by the perceived return that is attached with real estate market also he analysed in his study that consumer or investment decision in real estate market is largely driven by the rationality of the investors. Further security of future also considered as a most vital determinant in real estate market as mentioned in the research of (Gyu, Seung, & Yong, 2007).

More precise studies across the globe by (Avramov & Chordia, 2004) ; Odean 1998, 1999 ; (Frijns, Koellen, & Lehnert, 2006) on investment pattern. They concluded that real estate market facing robust market conditions and the importance of behavioral variables in real estate investment pattern determination is mixed across countries. They also quoted some theoretical models and behavioural hypothesis to explain the impact of behavioural variables in the real estate segment.

(Oloke, Durodola, & Emeghe, 2015) have studied Different reasons were identified as responsible for the lack of consensus and wide variation in what should represent an ideal
allocation. These include indivisibility of real estate assets, illiquidity, lags in return data, appraisal smoothing and high transaction costs (Seiler, Webb and Myer 1999). Beyond this however, the diverse opinion as to ideal resource allocation showed that decision making have both objective and subjective faces and that allocation decisions are made in incomplete information environment, varying estimations of profit and changing definition of risk. Eichholtz et al. (1995) noted that the top-down technique to allocation of portfolio involves first, the choice as the quantity to allocate to particular asset category; secondly, a choice on an optimal strategy within each asset category. This according to the authors involved the management of risk through diversification within the asset category and effective analysis of expected return. The real estate investment practice of insurance companies in Nigeria was therefore x-rayed in the light of the foregoing with a view to have detailed idea of perception towards real estate in asset portfolio, the various elements of risks and factors influencing real estate investments.

3.4.2. Facility Influence in Real Estate:

Concerning to Physical influences, it includes design of property, property quality and property size having the positive impacts on purchasing decision in the real estate segment as explained in the research of (Adair et al., 1996; Daly et al., 2003; Rachatakulpat et al., 2009). Further studies of Lindberg, Gärling, & Montgomery (1989); Louviere and Timmermans (1990) described that another important influence variable is property location; it was also included in previous researches of (Adair et al., 1996; Si, 2012; Haddad et al., 2011). Furthermore, environmental also affect to the investment pattern in real estate segment as explained in the research of Wang & Li (2004). Gabriel & Rosenthal (1989) described that investor specific variable like quality of neighbour-hood and other neighbour issues also having a greater influence on investment decision in real estate market.

(Quigley, 1976) explained the limitations bias and conveyed that the households’ view on property are affected by overconfidence, over-optimism, confirmation bias, herd behaviour, irrational exuberance, momentum effect, regret theory, mental accounting, money illusion, loss aversion, and home bias. Also to be considered as the most important variables that determines the investment pattern in real estate market and influence investment pattern.
3.5. Research GAP

The mentioned literature survey focus on some key researches done in the area of real estate trend and investment pattern (Buying/Investment Behaviour) in the real estate market. The studies provide the versatile result across the globe and come up with the several fundamental factors which cause the influence in the trend of the real estate market. Out of which key focus variables were Interest Rate Fluctuation, FDI in Real estate segment, Per Capita Income, Inflation rate and Growth of the nation (GDP). Besides this literatures on the real estate investment pattern also come up with the several factors which guide the investment and buying behaviour in the real estate segment. Like several studies across the globe and in India were observed Location of the Property, Facility of the Property, Attitude of a typical investor, Attitude of the reference group, change in the legal structure of the sectors, some psychological factors, rationality of a typical investor and behavioural factors bearing the influence on the real estate investment pattern.

As observed in the literature related to Trend in Real estate segment, many researchers at globe concluded several factors which are fundamentally responsible for the fluctuation in the real estate market. But very few factors were analysed in context to India. Like inflation and GDP per capita influence and dominance of Growth and interest rates on the real estate segment. Further FDI influence on the segment was untouched in context to India. This is more crucial to define the trend of the real estate segment. So this study in its first part observed the macro level trend of real estate market with specific focus on HPI and FDI in real estate. The second part of study focuses on the investment pattern on the buyer/investors of the real estate segment. Literature also surveyed in this area and found that many studies focused on variety of factors in this area but in this study research tried to narrow down the factors in well-defined manner to understand the exact variable of the factor which justifies the influence on investment pattern of real estate market in Gujarat.