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**BACHELOR THESIS**

**ECONOMIC ANALYSIS OF REAL ESTATE  
SECTOR IN VIETNAM**

**Author: Trong Duc Do**

**Supervisor: Ing. Petr Prochazka, Ph.D**

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**!!!**

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**!!!**

Declaration

I hereby declare that I have worked on my Bachelor thesis titled “ECONOMIC ANALYSIS OF REAL ESTATE SECTOR IN VIETNAM” solely and completely on my own and that I have marked all quotations in the text. The literature and other material I have used are mentioned in the References section of the thesis.

In Prague on 28<sup>th</sup> of March 2012

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# **Ekonomická analýza realitního sektoru ve Vietnamu**

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## **Economic Analysis of Real Estate Sector in Vietnam**

### **Summary**

Real estate is a very important sector in Vietnam. As the Vietnam economy is booming, the living standard was increasing significantly. And this has driven the huge demand for housing like never before. Especially when Vietnam joined WTO in 2007, a great amount of Foreign Direct Investment was flown into Vietnam, include the real estate sector, with the expectation of satisfy the market demand in housing in the country. Along with it, the government has developed the new urban area to provide a modern and environment-friendly housing. However, low income, high inflation and the economic crisis in 2008 made almost of the consumers impossible to afford to purchase a house for living or investment. This bachelor thesis is aimed to evaluate the performance of residential market in Vietnam by analyzing two biggest cities, Hanoi and Ho Chi Minh City, and define how the economic indicators, GDP growth rate, inflation, average income per capita affected these residential markets in each quarter from 2008 to 2011.

### **Keywords:**

Hanoi, Ho Chi Minh City, HCMC, residential property, Real Estate, Real Property, Vacancy rate, GDP, income, inflation, Vietnam, Serviced Apartment.

## **Souhrn**

Ve Vietnamu je realitní sektor velmi důležitý. Vietnamský ekonomický rozmach je následovaný značným zvýšením životního standardu. A právě to vedlo k velkému rozšíření poptávky po bytové výstavbě tak jak nikdy dříve. Především to bylo v roce 2007, kdy se Vietnam přidal do organizace WTO. Tehdy proudilo do Vietnamu obrovské množství přímých zahraničních investic za účelem uspokojení poptávky na trhu s tanními nemovitostmi. Zároveň s tím vláda vytvořila novou městskou část pro zajištění moderního a ekologického bydlení. Nicméně nízký plat, vysoká inflace a ekonomická krize v roce 2008 zapříčinila téměř nemožné podmínky pro koupi nemovitosti jak pro účely investice nebo vlastního bydlení. Tato bakalářská práce se zaměřuje na zhodnocení chování obchodu s nemovitostmi ve Vietnamu. Analýzou dvou největších měst Hanoj a Ho Chi Minh a definováním jak čtvrtletně mezi lety 2008 až 2011, ekonomické indikátory (hrubý růst HDP, inflace a průměrný plat) ovlivňují trh s nemovitostmi.

## **Klíčová slova:**

Hanoj, Ho Či Minovo Město, HCMC, rezidenční nemovitost, nemovitost, nemovitý majetek, Míra neobsazenosti, HDP, příjem, inflace, Vietnam, Apartmány.

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## **1. Introduction:**

Real estate is an important asset in the economy of every country. Real estate accounts for almost 40% of global equity. The real estate sector also boosts the other markets as improving the infrastructure, transportation, entertainment, import, export and housing in a local area. Real estate is one of the most interesting topics all the times since every consumer must some time makes a decision about real estate purchasing or rental. It has been a dream for every person to possess a house, create his or her own world and live a comfortable life. This demand has driven the price of real estate became unstable since the economy of many country increases significantly within the modern world of globalization nowadays.

Not an exception, the economy of Vietnam has been booming since the economic reform in 1986, especially when Vietnam joined the WTO in 2007. Along with the economics growth exceed 7% every year, the living standard of the common people has grown manifold. However, the price of housing real estate increased also dramatically compared to the income of an individual. The gap between income and real estate pricing has put Hanoi, the capital of Vietnam, and Ho Chi Minh City, the heart of Vietnam economy, into the list of 100 most expensive cities in the world. In this thesis, the residential property sector in Vietnam is analyzed in the following chapter 4.1, 4.2. In the chapter 3 literature review, the thesis will define the most basic information about real estate and real estate market analysis.

## 2. Aim and methodology of the thesis:

This bachelor thesis aims to evaluate the performance of residential property sector in Vietnam by analyzing the residential property for sale and serviced apartment for rent market of two biggest cities Hanoi and Ho Chi Minh City. In the own input chapter, the market demand and supply is reflected through the prices of three submarket High End, Mid End, Affordable condominiums and the vacancy rate of serviced market.

From the perspective view of macroeconomic level, the housing market demand and supply is affected by economic indicators like GDP, average income of individual, inflation, interest rate, investment, import, export and employment rate of local area. However, due to data unavailability and scarce data resources in these two cities, three main indicators GDP growth year-on-year rate, average monthly income per capita, and inflation in each quarter from 2008 to 2011 are chosen.

To achieve this goal, the main method is based on Ordinary Least Square Regression. In the business statistic, there is a significant relationship between two or more variables. The dependent variable is chosen as the market price of each sector, while three economic indicators are put as independent variables. By using Gretl program, the function of statistical relationship will be created with the correlation equation:

$$Y = a \cdot X_1 + b \cdot X_2 + c \cdot X_3 + \text{const.}$$

<sup>1</sup>Where Y is market price of chosen condominium, X<sub>1</sub>, X<sub>2</sub>, X<sub>3</sub> are the economic indicators as following of GDP growth rate, average monthly income per capita, and inflation. a, b, c and const are the correlation coefficients, which indicate the statistical relationship between independent and dependent variables.

<sup>2</sup>For the hypothesis testing, p-value stands for probability level of each correlation coefficient in the equation. If the p-value is higher than 0.1(10%) the null

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<sup>1</sup>Sonia, Taylor. Business Statistics. 3rd ed. 2007 ISBN: 978-0-230-50646-6. page 192

<sup>2</sup>Sonia, Taylor. Business Statistics. 3rd ed. 2007 ISBN: 978-0-230-50646-6. page 62

hypothesis will be accepted, as the statement “there is no statistically significant relationship between two variables”, while if less than 0.05(5%), the null hypothesis will be rejected, as the statement “there is a statistically significant relationship between two variables”. (Figure 1)

---

Model 1: OLS, using observations 1-10  
 Dependent variable: y

	coefficient	std. error	t-ratio	p-value
const	6.42039	0.690854	9.293	1.46e-05 ***
x	8.48380	0.951270	8.918	1.98e-05 ***

Mean dependent var	10.96830	S.D. dependent var	4.596633
Sum squared resid	17.37866	S.E. of regression	1.473884
R-squared	0.908611	Adjusted R-squared	0.897187
F(1, 8)	79.53782	P-value(F)	0.000020
Log-likelihood	-16.95268	Akaike criterion	37.90535
Schwarz criterion	38.51052	Hannan-Quinn	37.24148

Figure 1-example of Gretl regression

### 3. Literature review

#### 3.1 Definition and characteristics of real estate:

Real estate or realty is defined by many authors, in both simple terms and very detail terms: Denise L. Evans JD and O. William Evans wrote in “The Complete Real Estate Encyclopedia” : ” Land and everything above and below the soil<sup>3</sup>”. While Kimberly Amadeo said:” Everyone who owns their own home owns real estate”. “An A to Z Guide to Investment Terms for Today's Investor” by David L. Scott : “The land, buildings, and improvements thereto. Also called real property.”

In the longer term, in business dictionary, real estate is defined as: “Land and anything fixed, immovable, or permanently attached to it such as appurtenances, buildings, fences, fixtures, improvements, roads, shrubs and trees (but not growing crops), sewers, structures, utility systems, and walls. Title to real estate normally includes title to air rights, mineral rights, and surface rights which can be bought, leased, sold, or transferred together or separately.”<sup>4</sup>

So we can define real estate as the land and all things permanently attached to it by either nature or by man (by improvement). The real estate plus the interests, benefits, rights inherent in the ownership and right to use the real estate is called real property. Three rights of land are surface right, subsurface right and air right<sup>5</sup>. There are three types of characteristic of RE: economic, physical, and social

#### **Economic characteristics<sup>6</sup>:**

**Scarcity:** The old Vietnamese said:” Man can be born, but land cannot be “born””. Land itself cannot be produced more than what exist today, which mean that as the population grows this characteristic appears more and more clearly.-

**Improvements:** The improvement of land can influent the neighborhood’s value, normally will increase the value. Such as the shopping centre, stadium can increase the value of surrounding area price.- **Permanence of investment:** We can understand

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<sup>3</sup> Denise, L. Evans & O. William Evans. The Complete Real Estate Encyclopedia: From AAA Tenant to Zoning Variance and Everything in Between. page 239

<sup>4</sup>Definition of real estate. <http://www.businessdictionary.com/definition/real-estate.html>

<sup>5</sup> Real Estate Principle. 2nd ed. Rockwell Publishing, 2010 ISBN: 978-1-887051-70-5, Page 25

<sup>6</sup>Real estate characteristics. <http://ezinearticles.com/?Real-Estate-Characteristics&id=424776>

permanence as infrastructure of building, such as sewers, electricity, drainage and water. The price of land or real estate is affected by infrastructure. If we buy a piece of land without electricity, sewers, drainage, the price will likely be lower than a parcel of land with utilities intact and developed on it. -**Area preference**: This refers the choices of people in any given area. We usually talk about real estate: "location, location, and location". The location of real estate is the biggest factor that influences its value.

#### **Physical characteristics<sup>7</sup>:**

**Unique**: Also known as "non-homogeneity" or "heterogeneity". To put simple that no two parcels are the same. They may look similar, but every single parcel is located in a different spot. Even two lots right next to each other.- **Immobile**: Land cannot be moved. Even when the soil is torn from ground, the part of Earth's surface will always remain. Immobility of land explains why real estate laws and markets are local in nature. -**Indestructible**: Land is durable and cannot be destroyed. It can be damaged by storms or disaster. But erosion, fire, flood and volcanic actions may change its value.

#### **Social characteristics<sup>8</sup>:**

**Social esteem and domination**: from the ancient time till today, the ownership of big land proves the power in the society. In some places, in arrange marriage case, quantity of land ownership is the measures in deciding right man or woman to marry. And even wars started with human desire to control the land along with any resources above and within the land. - **Life insurance**: a lot of people think investing in land business is to secure the future, whether they are in the city, suburban or rural area. Rural people are so close to land for living and earning. Moreover, each square meter of ground is priceless in the cities.

### **3.2 Transactions:**

A Real Estate transaction is the process whereby rights in a unit of Real Estate are transfer between two or more parties, for example in case of conveyance, one party

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<sup>7</sup> Real estate characteristics. <http://ezinearticles.com/?Real-Estate-Characteristics&id=424776>

<sup>8</sup>Characteristics of Land- Physical, Economic, Social.  
<http://taheruddin.hubpages.com/hub/Characteristics-of-Land-Physical-Economic-Social>

being a seller, and the other party being a buyer. There are three types of transaction in Real Estate market: conveyance, mortgaging, lease, and rent. However, in most cases, even in the world of huge information nowadays, it is not easy for sellers to find their suitable buyers and vice versa. The clients can find the useful information and advices from real estate brokers. The real estate brokers or agents are middle men, negotiators to arrange contracts for property. They can involve into selling, buying, lease or rental of real property<sup>9</sup>.

**Conveyance:**

Transfer of title of some or all the ownership rights to real property from one to another person<sup>10</sup>. The person (seller) who transfers the property is called grantor, while the receiver (buyer) is called grantee. In general the conveyance can involve the mortgage, purchasing, selling, lease and rent of properties<sup>11</sup>. The documents proving the ownership of real property that being transferred between two parties is called deeds. There are four types of deed: the General Warranty Deed, the Special Warranty Deed, the Bargain Warranty Deed and the Quitclaim Deed<sup>12</sup>.

**Mortgage:**

A debt instrument that is secured by the collateral of specified real estate property and that the borrower (mortgagee) is obliged to pay back with a predetermined set of payments for the lender (mortgagor). Mortgages are used by individuals and businesses to make large purchases of real estate without paying the entire value of the purchase up front. Or at the most basic, mortgage is the loan used to purchase a house. There are two common types of mortgage: fixed rate mortgage and variable rate mortgage.

Fixed rate mortgage: is a loan with fixed payment which includes the interest over the long period of time. Enable the mortgagor to spread out the cost of paying by making smaller and predictable payment.

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<sup>9</sup>Definition of broker. <http://legal-dictionary.thefreedictionary.com/broker>

<sup>10</sup> Daniel, F. Hinkel. Practical Real Estate Law. 5th ed. Cengage Learning Inc. ISBN: 1-4180-4841-0. page 214

<sup>11</sup> Grant, S. Nelson & Dale, A. Whitman. Real Estate Transfer, Finance, and Development. 3rd ed. West Publishing Co., 1993. ISBN 0-314-35161-2, page 123

<sup>12</sup> What Are the Types of Deeds to Convey Title in Real Estate? [http://realestate.about.com/od/realestatebasics/tp/types\\_of\\_deeds.htm](http://realestate.about.com/od/realestatebasics/tp/types_of_deeds.htm)

Variable rate mortgage: also commonly referred to as an adjustable-rate mortgage or a floating-rate mortgage, is a loan where the rate of interest can change over time. The payment usually changes as the interest rate increases overtime. However the variable rate mortgage has lower initial interest rate, related to lower initial payment. The mortgagor (lender) can afford to purchase more expensive house than fixed rate mortgage<sup>13</sup>.

The mortgage contract is called a note, which provides all the information of mortgaged real property, the contract time to pay off the loan and the right to exercise the property if the borrower defaults<sup>14</sup>. In some countries, it is more common to use deed of trust in place of mortgage. In the transaction, the borrower conveys the deed of trust to a trustee, who holds the deed on behalf of both lender and borrower. If a loan is paid off in a contract time on the note, the trustee will return the deed to borrower. If the borrower defaults, the trustee will dispose the real property by the power of sale on behalf of the lender.<sup>15</sup>

### 3.3 Types of residential real estate<sup>16</sup>:

Residential real estate is defined such as property which is zoned for single-family homes, multi-family apartments, townhouses, condominiums, and co-ops.

**Condominiums:** An individual ownership of a building in a common area includes pool, spa, tennis courts, walking path and more within the complex of all residents. The owner must pay the association fee to maintain, repair and improve the common area, which shared by all residents. Banks and lenders often finance condos at higher interest rates.

**Condotels:** A “condotel” is a sort of mix between condominium and hotel. Condotels typically have a reception desk providing different kind of services like daily cleaning services, good and telephone service, and operate as hotels despite the fact that units are

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<sup>13</sup> Types of mortgages. <http://www.lendersmark.org/types-of-mortgages.htm>

<sup>14</sup> David, C. Ling & Wayne, R. Archer. Real Estate Principle: A Value Approach. 3rd ed. McGraw-Hill/Irwin (Mcgraw-Hill Companies, Inc. ), 2010. ISBN: 978-0-07-337732-2. page 227

<sup>15</sup> David, C. Ling & Wayne, R. Archer. Real Estate Principle: A Value Approach. 3rd ed. McGraw-Hill/Irwin (Mcgraw-Hill Companies, Inc. ), 2010. ISBN: 978-0-07-337732-2. page 228, 229

<sup>16</sup> Types of residential real estate.. <http://www.thetruthaboutrealty.com/types-of-residential-real-estate/>

owned individually. Condotels are usually mentioned as short-term occupancy, although they can serve as long-term residences as well.

**Investment properties:** Mainly for the purpose of financial gain by appreciation or renting, the owners or investors do not occupy the property. Single-family residences and multi unit properties usually are the target of investment property investor as long as the investors do not live in the house. Multi-unit investment belongs to the most expensive properties to finance.

**Manufactured Homes:** Known as “mobile homes” or “trailer park”, usually provide low-income housing. They are designed to be transported. These properties are often located on leased land like trailer park. Financing may be in the form of a personal property loan, at a premium to mortgage loans.

**Multi-Unit Properties:** Multi-unit properties can be primary residences or investment properties. A multi-unit primary residence usually known as a 2-unit property, one unit can be occupied by the owner, while the other is used for renting. And a multi-unit investment property, defined as 3 or 4-unit property is mainly for rental services. Multi-unit properties carry additional financing adjustments to fee, more substantial for 3-4 unit properties

**Second Homes (Vacations Homes):** Second Homes, also known as “vacation homes”. This type of resident are typically found in the area of resorts as seasonal housing, can be condominiums or single-family residences. These properties are design in addition to a primary resident and common in ski resort, and beach, which can be used for renting when not in use. Financing in Vacation Homes is in more expensive than single –family housing but less than investment properties.

**Single-Family Residences:** This is the cheapest properties to finance that do not include the common area like condominium. This type of property, designed for one family housing, do not share wall with neighboring properties and have a separate land from all side. Another type of Single-Family Residences is a Townhouse, which share walls with nearly identical properties. However tenants have a common area such as pool, spa, tennis courts and more. Many banks and lenders consider townhouses single-family residence, making mortgage financing more affordable.



### 3.4 Real property market:

Analyzing the real estate market has many obstacles. The market is affected by macroeconomics and financial market. However for analyzing the market, we use the micro-level to understand the supply and demand of space. The real estate or housing is understood as spaces for living and assets for selling, purchasing or exchange between two or more owners, investors.<sup>17</sup> The real estate market is divided into real estate market for space and real estate market for assets for those purposes as the figure below.

Later, the real estate market analysis is developed based on similar thinking as four markets: Space market, the land market, Market for new construction and Land market<sup>18</sup>. In the figure 2, the real estate market is defined as four quadrants with four functions: demand function (NE quadrant), Price function (NW quadrant), Construction level function (SW quadrant) and Stock adjustment function (SE quadrant).

The demand function (D) is the relationship that stocks of the building (S) determines the rent price (R) with the condition of economy (E). With the given rent level (R), the price function will value the price of real estate assets (P) through the capitalization rate (i) like interest rate, or return rate of stock, deposit fund. With the construction cost (CCost) function, the construction level (C) is determined by the given price (P). If the construction level is low (construction can be supplied with any level almost same costs), the project will make profit, while higher level of construction would be unprofitable (bottleneck, scarce land and supply inelasticity). With the new level of construction (C), the stock adjustment function with the depreciation rate (d) will determine the new level of stock (S)<sup>19</sup>.

(Figure 2) In a short-time, the demand increases will cause the reduction in vacancy rate. The rent price will be higher to adjust new equilibrium in space market, which relates to higher price of building in asset market. The investors, owners will

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<sup>17</sup> Denise, DiPasquale. William, C,Wheaton. Journal of the American Real Estate and Urban Economics Association. 1992. V20. 1: page. 181-197. The Markets for Real Estate Assets and Space: A Conceptual Framework. page 181-182

<sup>18</sup> Nico Rottke, Martin Wernecke, Real estate cycles in Germany. page 1

<sup>19</sup> Denise, DiPasquale. William, C,Wheaton. Journal of the American Real Estate and Urban Economics Association. 1992. V20. 1: page. 181-197. The Markets for Real Estate Assets and Space: A Conceptual Framework. Page 187-189

consider replacement and improvement of the building lead to new level of construction, and increases the stock of building<sup>20</sup>.

### Real Estate: The Property and Asset Markets

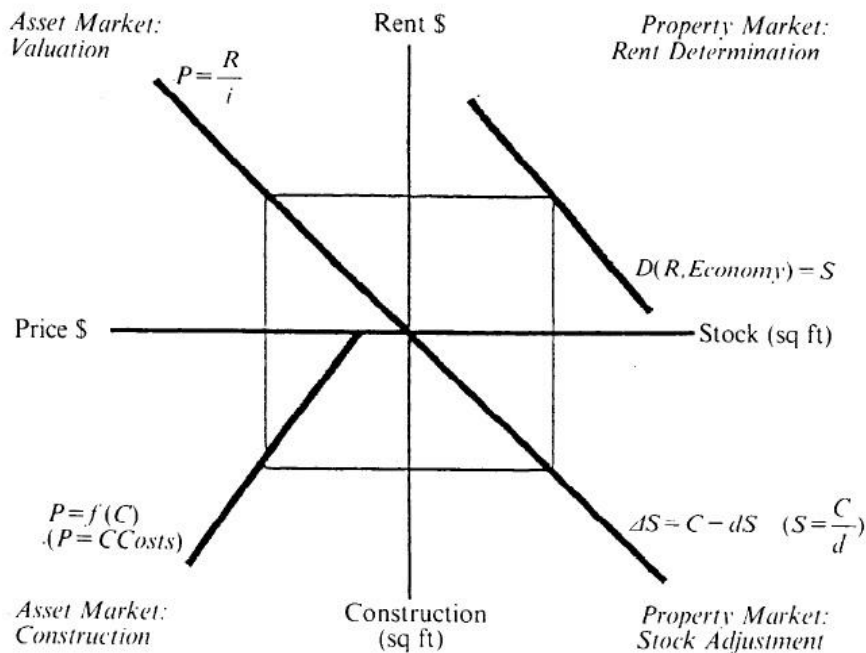


Figure 2-the Property and Asset Markets - source: Denise, DiPasquale. William, C,Wheaton. The Markets for Real Estate Assets and Space: A Conceptual Framework

### 3.5 Factors influent the real estate market:

**Demography:** Composition of population, preferred as age, race, gender, income, migration and population growth of local market. This factor belongs to the current or future demand. It decides how real estate market is priced, and types of properties are demand<sup>21</sup>. For example high immigration and population growth will demand more space for accommodation, while age and income level will need different types of housing, retirement people tend to live in vacation house and younger age want to live in near central business area. A major shift in structure of population will have a significant impact on real estate trend.

<sup>20</sup> Nico Rottke, Martin Wernecke, Real estate cycles in Germany page 2

<sup>21</sup> Factors affecting real estate. <http://www.investopedia.com/articles/mortgages-real-estate/11/factors-affecting-real-estate-market.asp#axzz1pKvl6MdH>

**GDP (Gross domestic product):** GDP is defined as “the total market value of all final good and services produced in the economy in a given period of time, usually one year”<sup>22</sup>. GDP growth rate compares the economics growth of the certain period of time with previous period (year-on-year, quarter-on-quarter even month-on-month). Total GDP is computed by total sum of Consumption, Investment, Government expenditure and Net export. The GDP indicates how well the local market economy is performed, includes the real estate market. A country with healthy GDP can support the real estate market<sup>23</sup>.

**Inflation rate:** Inflation is an increase in the average level of price; in a simple way it explains the percentage of how less a dollar will buy this year compared with the previous year<sup>24</sup>. Usually there are two types of inflation, demand-pull inflation when there are not enough goods and services to meet market the demand and cost-push inflation by decreases in aggregate supply result from increases in production cost, and then push the price level higher<sup>25</sup>. An area with high inflation, the other goods market will force the real estate market crunched. High inflation makes the consumer to tighten consumer spending budget, and less people will invest or spend on properties. As the demand go down, the real estate price will also decrease.

**Interest rate:** Interest rate is the proportion of a sum of money that is paid over a specified period of time in payment for its loan. Or how much value a dollar today compared with tomorrow? The relationship between nominal interest rate is called the **Fischer equation:  $i = r + \pi$** <sup>26</sup>, where  $i$  is nominal interest rate,  $r$  is real interest rate and  $\pi$  is actual inflation rate. Low interest rate will attract more investment and spending in real estate market, as people borrow more money from bank, which drives the demand increase and the price of real estate will also increase.

**Government policies, subsidies:** Legislation is a strong impact from government on property demand and price. Tax credit, deduction and subsidies are some way for the

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<sup>22</sup> Mansoor, Maitah. Macroeconomics. CULS in Prague, 2009. ISBN 978-80-213-1904-2. Page 27-30

<sup>23</sup> Making Money In Residential Real Estate. <http://www.investopedia.com/articles/mortgages-real-estate/09/residential-real-estate-invest.asp#axzz1pKv16MdH>.

<sup>24</sup> How does inflation affect house prices? [http://www.ehow.com/how-does\\_4564234\\_inflation-affect-house-prices\\_.html](http://www.ehow.com/how-does_4564234_inflation-affect-house-prices_.html)

<sup>25</sup> Mansoor, Maitah. Macroeconomics. CULS in Prague, 2009. ISBN 978-80-213-1904-2. page 93.

<sup>26</sup> Mansoor, Maitah. Macroeconomics. CULS in Prague, 2009. ISBN 978-80-213-1904-2. page 94.

local government to temporarily boost demand for real estate<sup>27</sup>. On the other hand, the government also has a right to regulate land use and take a private property for public use (infrastructure and public facilities) and tax property. To ensure the health, safety and welfare of citizens, the local government must enforce the economic and environmental requirements to prohibit the low level construction, and replace a new one<sup>28</sup>.

**Investment:** Investment belongs to supply size, when an investor use his or her money to purchase a property in expectation of earning a periodic cash flow from a property, or making a profit from resale it<sup>29</sup>. The investment is heavily affected by inflation and interest rate in the market, since the investor cannot manipulate enough cash to invest<sup>30</sup>. In macroeconomics level, high number of foreign investment projects into real estate market (buildings, malls, offices, and apartments) will provide the future supplies, which drive the market equilibrium.

**Tourism:** Tourism is one of the demand factors that influences the real estate market for space. The price of renting in the market usually fluctuates frequently during a year. More demand for short-term accommodation (daily, weekly) lead to increasing in space pricing as the vacancy rate declines (hotels, serviced apartments). In cities which attract high number of visitors for tourist and business, the real estate price will be much higher than other place and attract more investments for space supply for expected revenue.

### 3.6 Property market in Vietnam:

Vietnam is the easternmost country on the Indochina Peninsula in Southeast Asia. It is bordered by China to the north, Laos and Cambodia to the southwest and the East Sea (South China Sea). The population in 2012 is 90,388 millions, the GDP (PPP<sup>31</sup>)

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<sup>27</sup> Making Money In Residential Real Estate. <http://www.investopedia.com/articles/mortgages-real-estate/09/residential-real-estate-invest.asp#axzz1pKv16MdH>.

<sup>28</sup> David, C. Ling & Wayne, R. Archer. Real Estate Principle: A Value Approach. 3rd ed. McGraw-Hill/Irwin (Mcgraw-Hill Companies, Inc. ), 2010. ISBN: 978-0-07-337732-2. page 96,97

<sup>29</sup> Denise, L. Evans & O. William Evans. The Complete Real Estate Encyclopedia: From AAA Tenant to Zoning Variance and Everything in Between. ISBN: 978-0-07-147638-6. page 224

<sup>30</sup> Foreign Investment in Vietnam's real estate market Page 13

<sup>31</sup> \*Purchasing-power-parity.

321 billions USD, and GDP per capita 3557 USD (PPP)<sup>32</sup>. The Vietnamese economy is mainly based on agriculture, in term of labor force, agriculture has the biggest number 56,8%, followed by industry 37%, services 6,2% (2006)<sup>33</sup>. Vietnam became a 150<sup>th</sup> member of WTO in January 2007; an opportunity for a large number of foreign companies to enter the market. The living standard of people has been improved with rapid increase in consumption<sup>34</sup>. In 2008, Vietnam attracted over 80 billion USD from registered foreign direct investment, 25% of it was poured into the real estate market<sup>35</sup>.

The income structure of Vietnamese people is divided into three types low income families, middle income families and high income families. Low-income families are those who earn less than 3USD per day (90 USD per month). High-income families have the income exceeds 20USD per day (600USD per month). And middle income rank between them, from 3USD to 20USD per day<sup>36</sup>. Vietnamese people tend to choose the permanent resident. The procurement of a house is traditionally one of three most important events in their lives, therefore they always give their utmost effort in order to buy or build it to satisfy their demand. But in fact, one third of state employees in Hanoi do not have their own house. The other 30% are provided with houses and flats and 90% of which were built before 1990s. However the price of real estate in Vietnam is ranked among the highest in the world. In the big cities like Hanoi and Ho Chi Minh City (HCMC), it is estimated that one normal people has to spend about 30-40 years saving money to buy a middle price apartment. And this unreasonable price put them into the list of 100 most expensive cities in the world in 2006<sup>37</sup>. The gap between price of real estate and incomes has placed Vietnamese real estate market in frozen state<sup>38</sup> three times from 2000 to 2008. They are 2001-2002, 2004-2006 and in first half of 2008, the main reason was the price was pushed into unbelievable value and discouraged the purchasing power.

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<sup>32</sup> Economy watch. <http://www.economywatch.com/economic-statistics/Vietnam/>

<sup>33</sup> The Economy of Vietnam.. <http://www.spainexchange.com/guide/VN-economy.htm>

<sup>34</sup> Truong Thai Son, The effect of WTO membership on Vietnam's real estate market and the role of valuation. Hoang Quan Valuation company, 2009. page 1

<sup>35</sup> VinaCapital report, Foreign investment in Vietnam's real estate market: Prospects for 2012 and beyond. November 2011.

<sup>36</sup> Nguyen Minh Quang, Sustainability meets affordability to ensure accessibility to new urban housing project in Hanoi (Vietnam), received on 20-09-2010. page 4.

<sup>37</sup> Vietnam's real estate market remains unstable: Why? <http://english.vov.vn/Home/Vietnams-real-estate-market-remains-unstable-Why/20112/124021.vov>

<sup>38</sup> Frozen market is a significant declining in numbers of market transactions.

Most of the transactions in Vietnamese property market are processed in two largest cities, HCMC and Hanoi. High rate of urbanization, higher income, higher immigration lead to higher housing demand. The property market in these cities is divided into two segments, Residential for Sale and Serviced Apartment for rent. In the eyes of Vietnamese people the market for sale is more important. The first question they will ask about the house is “how much does it cost?”. This question psychologically describes their big demand for possessing a house. In the residential for sale segment, there are three types of condominiums, High-End, Mid-End and Affordable, depends on the price of USD per sq meter. Mid-End and affordable tend to focus on investors (speculators) and end-users. The speculators in real estate market are the short-term investors, who would buy the house before complete with the lower price and make a profit by selling the property with higher market price<sup>39</sup>. In this market, they are the main reason made the price bubble<sup>40</sup>. High-End condominiums are usually purchased by the investors (developers) and become the buy-to-let apartments. This type of apartments is the main supply to the Serviced Apartment by the private developers. On the other hand, the serviced apartment segment has its own customers. This market tends to provide a short-term accommodation for the foreign businessmen, who have very high income, in the city. There are two sources of supply, international operators and private developers (self managed). As mentioned the private developers are the investors, they are very flexible in the market, quick supply, variety of locations, changing in rent period, lower offering price. And the international operators are the big domestic and foreign investors, who provide the large number of supply in certain period. They have trusted brands in good and service, better advertisement, however offer higher renting price<sup>41</sup>.

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<sup>39</sup> Definition of speculator. <http://www.investopedia.com/terms/s/speculator.asp#axzz1pKvl6MdH>

<sup>40</sup> Housing speculation rampant in Vietnam. <http://www.lookatvietnam.com/2011/07/housing-speculation-rampant-in-vietnam-official.html>.

<sup>41</sup> Truong Thai Son, The effect of WTO membership on Vietnam’s real estate market and the role of valuation. Hoang Quan Valuation company, 2009, page 3

## **4. Analysis of Real Estate Market in Vietnam:**

### **4.1 Analysis of Ho Chi Minh City Market:**

#### **4.1.1 Introduction of HCMC:**

HCMC is the largest city in Vietnam with the area of 2,095 square kilometers. This metropolitan is divided into 19 inner districts and 5 suburban districts with the population of more than 9 million. The density on average is about 3500/square kilometer. HCMC plays a main role in economic, financial, commercial and services hub of the country. In 2005 the city accounted for 20.2% GDP, 27% industrial outputs and 34.9% FDI<sup>42</sup> projects in Vietnam. The investment is trended to high-tech, services and real estate projects. In 2007, the import-export turnover through HCMC ports accounted for \$36 billion, equivalent to 40% of the national total, of which, export revenue reached \$18,3 billion ( 40% of Vietnam's total export revenues). And the city contribution to the annual revenues in the national budget increased by 30%, that is 20.5% of total revenues. In 2009, the GDP per capita reached to \$2,800, compared to the country's average level of \$1,042<sup>43</sup>.

Back in 2005, developers rushed to get as many condominium units onto the red hot HCMC market as possible. They are fuelled by support from local bank and it proved a big boost to the local property market. Most of them are the speculators. In 2007 the estimated capital injection in Vietnamese property market reached \$5 billion, mainly from foreign direct investment. Property in HCMC in some districts was equally buoyant with average price more than tripling compare to the period from 2006 to 2007. However in 2008 the market was slowdown because of unsustainable growth. Higher construction costs due to global oil price hikes and resultant construction material costs, coupled with the governments tight monetary policies aimed at curbing inflation hit hard and transactions plummeted. As the price was inflated by the speculators, the property market was over supplied and become struggled.

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<sup>42</sup> Foreign Direct Investment

<sup>43</sup> Ho Chi Minh City: Vietnam's Economic Heart. <http://direxmd.hubpages.com/hub/Ho-Chi-Minh-City-Vietnams-Economic-Heart>

Quarter	GDP growth rate (%)	Monthly average income (thous.VND)	Inflation (%)	Real estate price (\$/sq meter)		
				High-end	Mid-end	Affordable
Q1/08	11.5%	2658.0	19.42%	2800	1023	720
Q2/08	9.6%	2658.0	25.00%	2300	1100	730
Q3/08	10.1%	2658.0	23.65%	2250	1050	725
Q4/08	11.2%	2658.0	16.51%	2050	1030	715
Q1/09	4.0%	2774.5	11.81%	1750	990	720
Q2/09	4.8%	2774.5	4.70%	1875	980	718
Q3/09	8.5%	2774.5	3.56%	1890	975	710
Q4/09	7.0%	2774.5	7.34%	1896	970	706
Q1/10	5.8%	2974.3	10.41%	1897	998	720
Q2/10	6.4%	2974.3	9.72%	1896	998	723
Q3/10	7.2%	2974.3	9.39%	1898	992	726
Q4/10	7.3%	2974.3	9.29%	1885	984	727
Q1/11	10.3%	3321.7	10.76%	1851	965	727
Q2/11	9.9%	3321.7	16.54%	1848	954	726
Q3/11	10.0%	3321.7	18.87%	1831	949	725
Q4/11	10.3%	3321.7	15.86%	1803	910	722

**Table 1- Own computation: collected data of HCMC Market- source: CBRE/Vietnam & General Statistic Office of Vietnam**



#### 4.1.2 Inflation of HCMC:

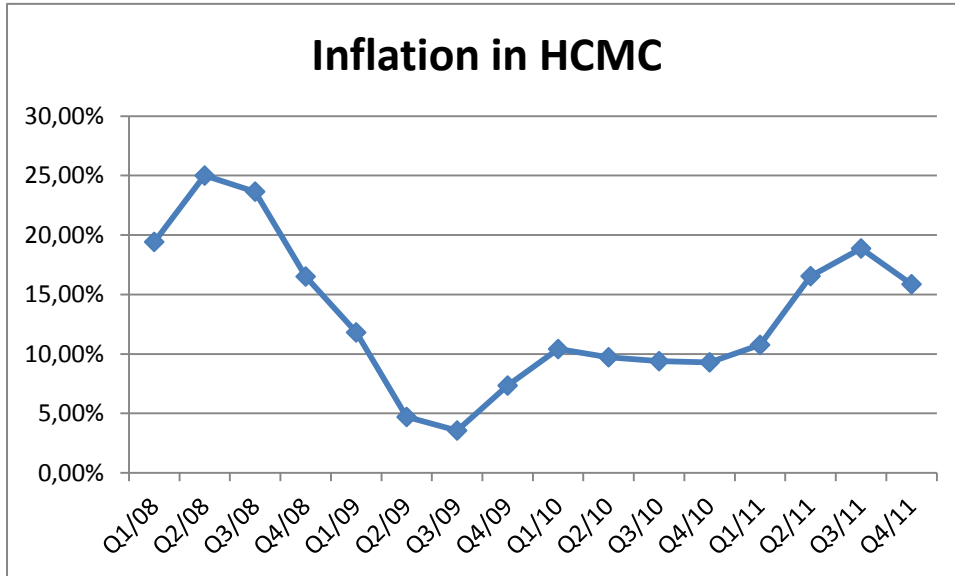


Figure 3- Inflation in HCMC - sources General Statistic office of Vietnam

The graph in figure 2 shows that the global economic crisis also had a very big impact on Vietnamese economics. On macro economics level, inflation rate reached its peak in quarter 2 2008 at 25% (even 65% for food and grain), which forced the consumers to contract their spending budget. In the first quarter of 2008, to control the overheated economics with excess liquidity, the government imposed strict fiscal and monetary policy. They are 10% cut in administrative expenditure across all ministries, curtailing monetary and credit expansion to 30% in 2008 ( 54% in 2007), restore high export growth by measure, curtailing import by higher import taxes in 23% ( 37% in 2007)<sup>44</sup>,... The result pointed out in declining of CPI growth in 4<sup>th</sup> quarter of 2008. The CPI growth began to increase sharply again in the 2<sup>nd</sup> half of 2010 to 2011. The reasons are the increasing in gasoline price related to other goods (food, clothing, services,...) and people tend to invest their money on more reliable sources (gold, foreign currencies like USD, EU ). In HCM city the gold exchange is more than 46million VND a tael ( 1.2 ounce ) while the USD exchange is 21,000 VND per 1 USD ( increased 1,5% compared to last month) made the inflation rate pass 18% in Sept 2011.

<sup>44</sup> VinaCapital Funds Quarterly report 31 March 2008, page 7

### 4.1.3 Monthly Average Income per capita in HCMC:

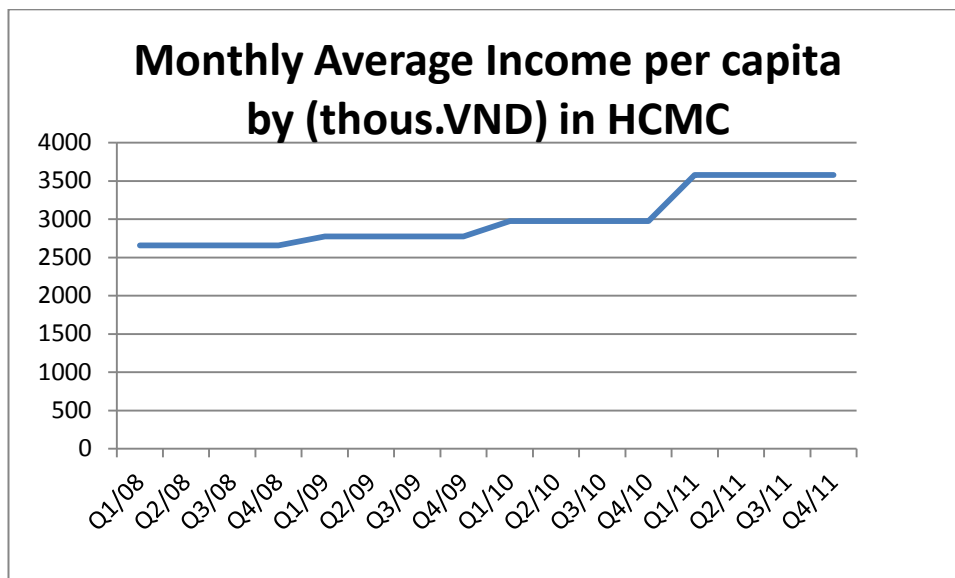


Figure 4- Monthly average income per person in HCMC - sources: General Statistic office of Vietnam

The Monthly Average Income per capita in HCMC is about two times higher than average income in Vietnam. While in 2009 the average income person in the state was only 1.3 million VND (65-70 USD) a month, the income in the city reached nearly 2.7 million VND. The basic wage rate was raised in the last quarter of previous as follow 1 million VND (2008), 1.1 million VND (2009), 1.2 million(2010), 1.350(2011) in the zone I (belongs to the state sector in the urban area). In some foreign news paper 2012, the top four highest average income groups in the state are Oil and Gas Group(16.2 mil VND), Beer, alcohol and beverage(9.2 mil VND), Electricity Group(8.3 mil VND), Coal and Mineral industry Group(7.7 mil VND)<sup>45</sup>.

<sup>45</sup> income gap gets wider at State groups and corporations.

<http://english.thesaigontimes.vn/Home/society/nation/21290/>

#### 4.1.4 GDP growth rate in HCMC:

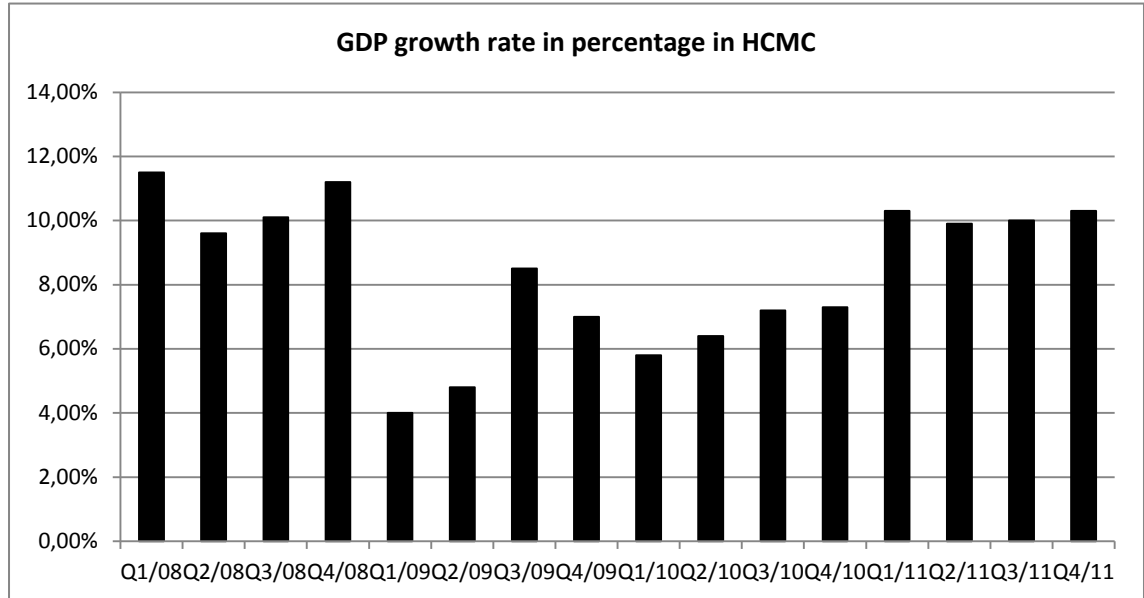


Figure 5- GDP growth rate- source: CBRE| Vietnam

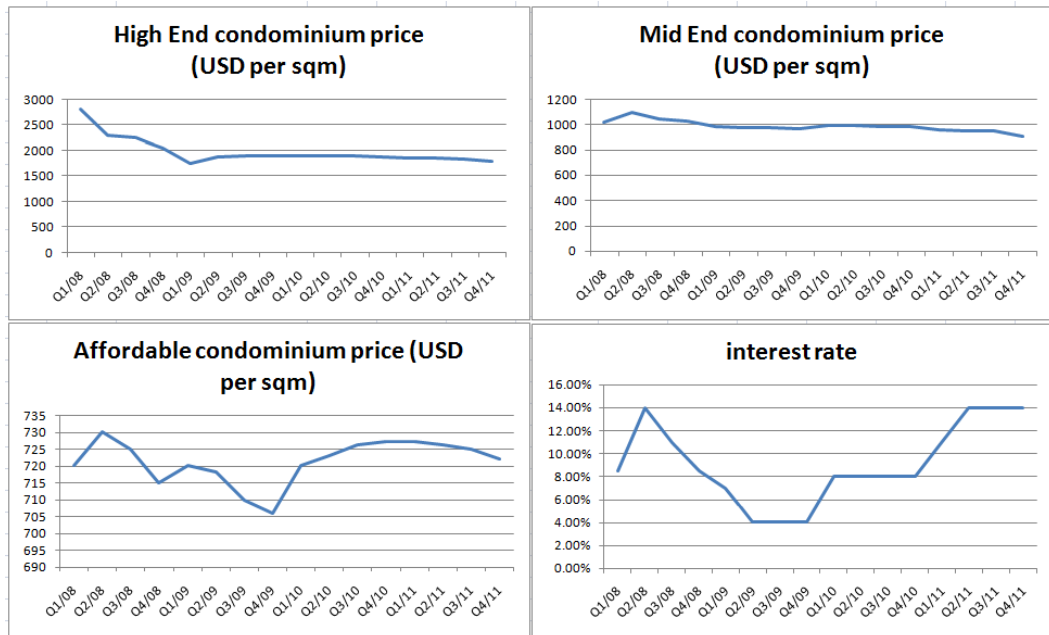
GDP growth rate of HCMC also changed significantly. In 2008, the GDP growth rate in HCMC was increased by 10% in average by boosting in export, and high investment from FDI. But in 2009 to 2010, the growth rate decline to 6% due to lack of investment and HCMC suffered by slow economic growth with Vietnam (4%) and higher in 2010 of 7%. However in 2011, the city GDP rose again, as the market of gold and foreign currencies. Higher demand for them lead to higher GDP growth, however this also lead to higher inflation. As mentioned above, the inflation in Q3 of 2011 was at 18%. Despite that fact that economic growth in HCMC was high in 2011, the residential market was still quite. The government decided to devaluate the value VND to improve export, and high interest rate (17% and 20% while borrowing on credit card) discouraged the people purchasing power as well as speculators in the property market.

#### 4.1.5 HCMC Residential for Sale Market and Regression:

These are the results from Gretl, where Y is the price of condominiums, X<sub>1</sub> is GDP growth rate, X<sub>2</sub> is average income per month, X<sub>3</sub> is inflation.

	High End		Mid End		Affordable	
	Coefficient	p-value	Coefficient	p-value	Coefficient	p-value
X <sub>1</sub>	65.98	<b>0.024</b>	-1.102	0.747	-1.138	0.170
X <sub>2</sub>	-0.480	<b>0.002</b>	-0.085	<b>0.00023</b>	0.009	<b>0.044</b>
X <sub>3</sub>	3.706	0.65	3.372	<b>0.00820</b>	0.680	<b>0.020</b>
Const	2819.84	<b>0.00001</b>	1238.67	<b>0.00001</b>	700.166	<b>0.00001</b>

**Table 2-Own computation: Result from Gretl for coefficient and p-value in HCMC market.**



**Figure 6- Price of High End, Mid End, Affordable and Interest rate in HCMC- source: CBRE| Vietnam and General Statistic office of Vietnam**

We can create the function of High End, Mid End and Affordable condominium price as:

$$\text{High End } Y = 65.98 * X_1 - 0.48 * X_2 + 3.706 * X_3 + 2819.84 \quad (1)$$

$$\text{Mid End} \quad Y = -1.102 * X_1 - 0.085 * X_2 + 3.372 * X_3 + 1238.67 \quad (2)$$

$$\text{Affordable} \quad Y = -1.138 * X_1 + 0.009 * X_2 + 0.680 * X_3 + 700.17 \quad (3)$$

According to the p-value, in the function 1 for High End condominium, the GDP growth rate and monthly average income are statistically significant to the price of property. The GDP have a positive effect to the price while the incomes per person have a negative effect. However in the function 2 for Mid End condominium, the income and inflation indicators are statistically significant to the price. The average income still has negative effect and inflation has the positive effect. The same result in the function 3, but in this case, the coefficient of income is so small and hardly affects price.

From the three functions, it is proved that the GDP growth rate had very big impact to the High End condominium, the higher economics growth rate, the higher demand for the High End properties resulted to higher price in the market and vice versa. While in case of Mid End and Affordable, GDP growth rate did not have big influents to the market, with the economics growth was slow down, and inflation increasing, people tend to invest their money into cheaper market (affordable, gold and foreign currency exchange market). From Q4 2010, the inflation began to increase sharply, the customers lost trust in VND currency. Plus very high interest rate in 2011 (base interest rate =14%) discouraged the customers to spend their cash in the High End and even Mid End property market, causing the decline in purchasing power, which also had a big impact in supply side ( only 286 units of Mid End condominium appear in market in Q2 2011). In Q3 and Q4 2011, more than 2000 of total new units were supplied, with low demand, the price keep decreasing for Mid End, and High End property. However, in the Affordable market (i.e suburban area, surrounding area), the price was still slightly increasing despite the facts of inflation and high interest rate. By their own saving, customers and speculators still can afford to purchase properties either to live or to invest.

#### 4.1.6 HCMC Serviced Apartment:

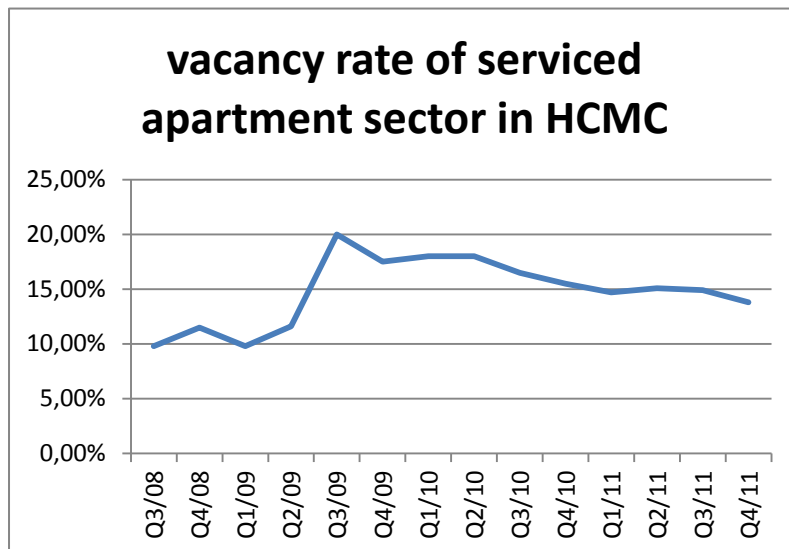


Figure 7-vacancy rate of serviced apartment in HCMC- sources: CBRE| Vietnam

The Serviced Apartments in HCMC are divided into three types according to renting price per month, grade A over 30 USD/sqm, grade B around 26 USD/sqm and grade C around 20 USD/sqm. The targets are the expatriates from foreign country (Western, Japan, India, Hong Kong, Singapore and Malaysia). Also being suffered from financial crisis, the market demand began to decrease in beginning of 2009, caused the general vacancy rate reached at 20%. Short on demand forced some landlords even offer one week or daily renting to boost occupancy and revenue. In 2010, there was a shift in demand as the expatriates came back and a small demand from Vietnamese customers. The developers started to focus on smaller apartment with fewer bedrooms to offer better renting price. The demand kept growing up to the first quarter of 2011 with more supply in grade B and C (979 units grade A, 1621 units grade B, 881 units grade C). In last 6 months 2011, more foreign customers from East Asia area (Hong Kong and Singapore) increased more demand in the market. However compared to the Residential for Sale market, this segment is still too small and very expensive, which cannot be a reliable substitute accommodation for the local people in the city.

## **4.2 Analysis of Hanoi Market:**

### **4.2.1 Introduction of Hanoi:**

Hanoi is the capital of Vietnam, the second largest city in the country. From 01/08/2008 Hanoi expanded boundaries by merging with entire neighbor provinces, increased its size to 3,324 square km (3.6 times larger) with population of 6 million and density of 1900/sq km. The main economic sectors of HN are industry, services, agriculture, forestry and fishery. The GDP per capita in 2008 is 1500 USD (2.4 times higher than GDP per capita in Vietnam) and the import-export turnover is 35% of total GDP. In the same year, the city attracted in total of 6.8 million USD from FDI focused on industry, communication and transportation, real estate and agriculture.

Similar to HCMC, HN has a rapidly developing real estate market. Since 2006, the city focused to develop the new urban area in the outskirts of the old city. The purpose is to satisfy the overcrowded population demand and create a modern and healthy environment. In 2007 with the tremendous cash inflow of investment, the GDP growth rate exceeded 10% each quarter. Numbers of new urban area projects were implemented. The investors queued up to buy the condominium units upfront, drove the price double in 12 months. In the end of 2007, Hanoi witnessed the real estate fever with the price of High End units reached 1600\$ per sq meter, and still increasing to 2008. Having the same situation in Vietnam, having the same situations like HCMC, Hanoi economics suffered high inflation rate, and being affected by global crisis. However, with the new expansion in area, the Residential Market for Sale and for Rent was also different. Higher urbanization affected the demand for living. The enterprises started to make more projects and focused to new increased population. More infrastructures, public facilities were developed to provide new services and improve the new urban area outside of central.

Quarter	GDP growth rate (%)	Monthly average income (thous.VND)	Inflation (%)	Real estate price (\$/sq meter)		
				High-end	Mid-End	Affordable
Q1/08	11.3%	2196	15%	1800	1100	725
Q2/08	11.4%	2196	18.5%	1750	1078	710
Q3/08	11.5%	2196	21.5%	1650	1065	720
Q4/08	11.4%	2196	24%	1650	1050	710
Q1/09	3.2%	2412	15%	1675	998	700
Q2/09	5.7%	2412	12.5%	1600	1030	750
Q3/09	5.8%	2412	10%	1790	1100	800
Q4/09	6.67%	2412	8.22%	1810	1300	900
Q1/10	8.7%	2755	9.58%	1873	1292	879
Q2/10	10.1%	2755	9.44%	1936	1331	956
Q3/10	10.3%	2755	9.05%	1924	1349	977
Q4/10	11.5%	2755	11.5%	1978	1455	1090
Q1/11	9.2%	3120	13.56%	2015	1574	1067
Q2/11	9.3%	3120	15.5%	1995	1440	1040
Q3/11	9.4%	3120	21.7%	1940	1390	1030
Q4/11	10.1%	3120	17.89%	1860	1340	980

***Table 3-Own computation: collected data of Hanoi Market- source: CBRE/Vietnam & General Statistic Office of Vietnam***



#### 4.2.2 Inflation in Hanoi:

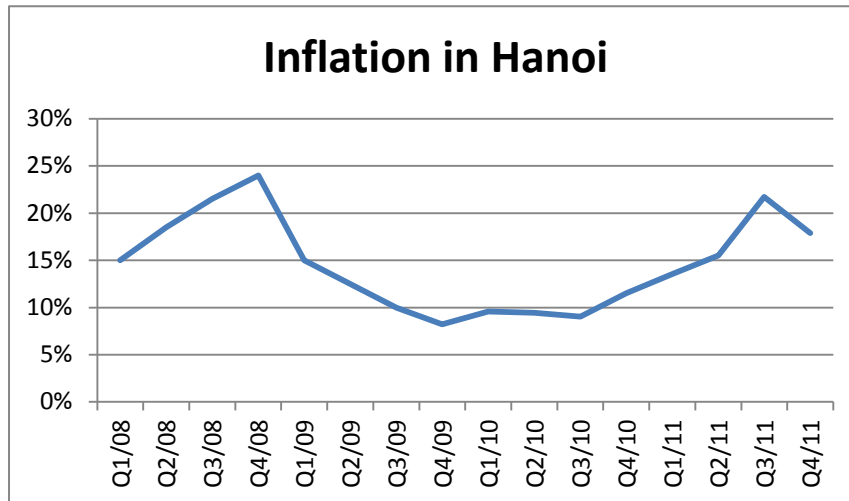


Figure 8-Inflation in Hanoi- source: General Statistic Office of Vietnam

Suffered from global crisis along with Vietnam, in 2008 Hanoi inflation rate peaked at 24% and declined to 11% in 2009, 9% in 2010. In general Hanoi inflation was higher compared to Vietnam and HCMC. Fast expansion in 2<sup>nd</sup> half of 2008 caused more demand on goods and services, while import was very low after the economic crisis. In 2011, increasing in gasoline price also blew the inflation rate in general mainly on food and clothing. Facing the hyperinflation like in HCMC several changes in regulation were implemented like raising the interest rate (14%), tightening the expenditure, spending and focused on macro-economic and ensure the social security.

#### 4.2.3 Monthly Average Income per capita in Hanoi:

Monthly income in Hanoi is 1.2 times lower compared to HCMC<sup>46</sup>, about 140-150 USD in average. In 2010, the average annual income reached 37 million VND (approximately 2000 USD). The income level increased about 13% each year. In 2011, with the inflation was higher than 15%, the Hanoians also invested into the foreign currency and gold market, which drive the inflation even higher and peaked at 21%.

<sup>46</sup> Survey: HCM's poverty rate higher than Hanoi's despite higher income.  
<http://en.baomoi.com/Info/Survey-HCMs-poverty-rate-higher-than-Hanois-despite-higher-income/3/93809.epi>

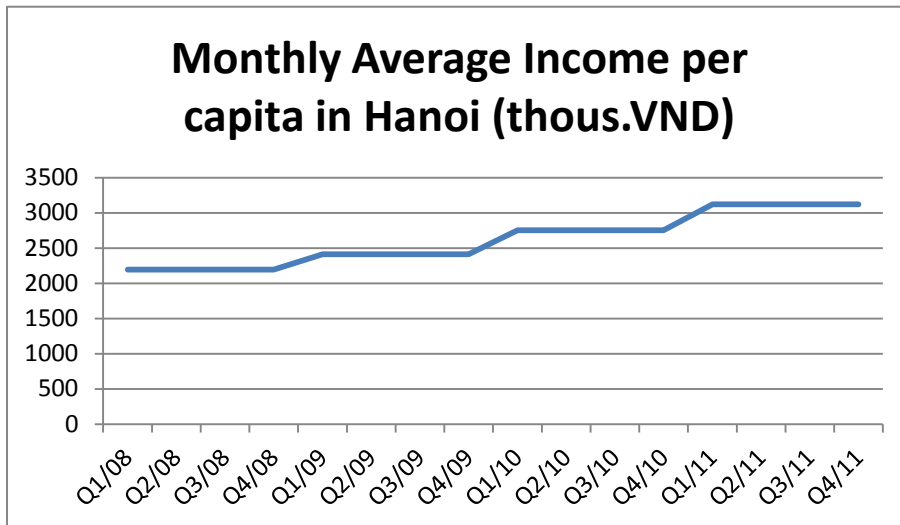


Figure 9-Monthly average income per capita- sources: General Statistic Office of Vietnam

#### 4.2.4 GDP growth rate in Hanoi:

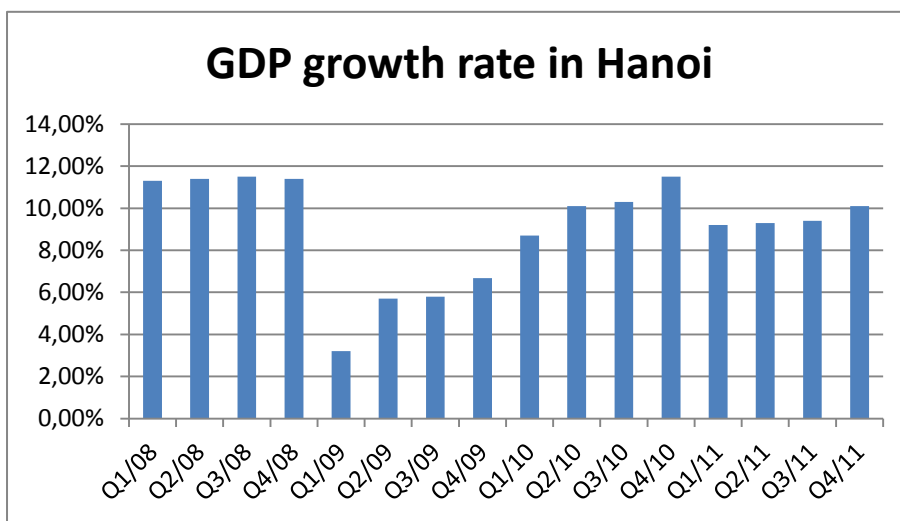


Figure 10- GDP growth rate in Hanoi- sources: General Statistic Office of Vietnam

In 2008, Hanoi GDP growth in average reached 11.4% thanks to rapidly high cash flow from foreign investment (USD 5 billions), then declined to 6% in 2009. The 1000<sup>th</sup> year anniversary of Thang Long<sup>47</sup> (old Hanoi name) in October 2010 attracted domestic and foreign tourists, which raise the GDP growth exceed 10% from Q3 and

<sup>47</sup> 1000 Ly dynasty dragons casted for the millennium celebration of the capital city. <http://hanoitimes.com.vn/newsdetail.asp?NewsId=17104&CatId=79>

reached 11.8% in the last quarter. In 2012 Hanoi ranks 20<sup>th</sup> position of world economic strength and stays in 104<sup>th</sup> position in overall score<sup>48</sup>.

#### 4.2.5 Hanoi Residential for sale market and regression:

##### Affordable condominiums:

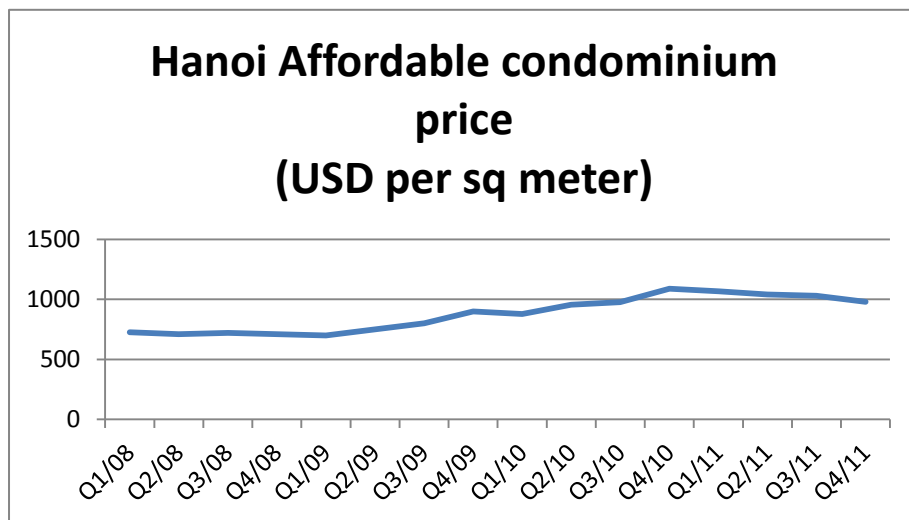


Figure 11- Hanoi affordable condominium market price- source: CBRE| Vietnam

In 2008, the price of Affordable condominium was slightly decreasing from 725USD to 710USD, due to high inflation rate, and then began to increase from 2009. Till Q1 2010, there was a very high demand on condominiums lower than 1000USD per sq m, 812 units were sold<sup>49</sup>. The demand kept growing strong to the end of 2010, as the price raised above 1000USD per sq m. The sale rate was 100% and the affordable market became profitable investment<sup>50</sup>. The price in 2011 declined slightly but still remained above 1000USD per sq meter. Despite the hyperinflation rate and overheated gold exchange market, the demand for Affordable still remained high mostly from end-users.

##### Mid End condominiums:

<sup>48</sup> Hanoi Ranks 20th Position Of World's Economic Strength. <http://businesstimes.com.vn/hanoi-ranks-20th-position-of-worlds-economic-strength/>

<sup>49</sup> CBRE| Vietnam Hanoi Q1 2010

<sup>50</sup> CBRE| Vietnam Hanoi Q4 2010

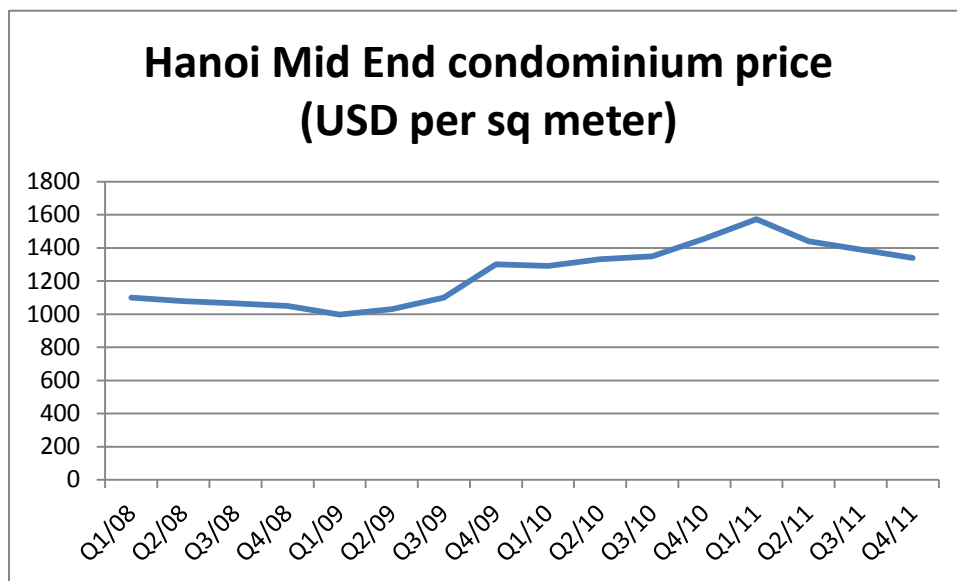


Figure 12- Hanoi Mid End condominium market price- source: CBRE| Vietnam

Mid End condominium segment dominated the residential for sale market in term of total supply in the end of 2009, there was 37,297 units (61% of total units), in 2010 increased to 47,864 units (62% of total units), 64130 units (61% of total units) in 2011<sup>51</sup>. This submarket is the most attractive to various types of customers, end-users, investors and speculators. Like Affordable segment, the price was slightly decreasing from 2008 to first half of 2009 then increased rapidly to the end of 2009 (from 1600 to 1800 USD per sq meter). In 2011, the submarket was over supplied. High inflation and high interest rate made the investors and speculators stop purchasing. Lower in demand resulted the decline in price of the assets.

### High End condominiums:

There is only about 6% of Hanoi population that capable of purchase the High-End condominium. The demand from end-users was very low, and mostly from speculators and investors.

<sup>51</sup> CBRE| Vietnam Hanoi Q4 2011

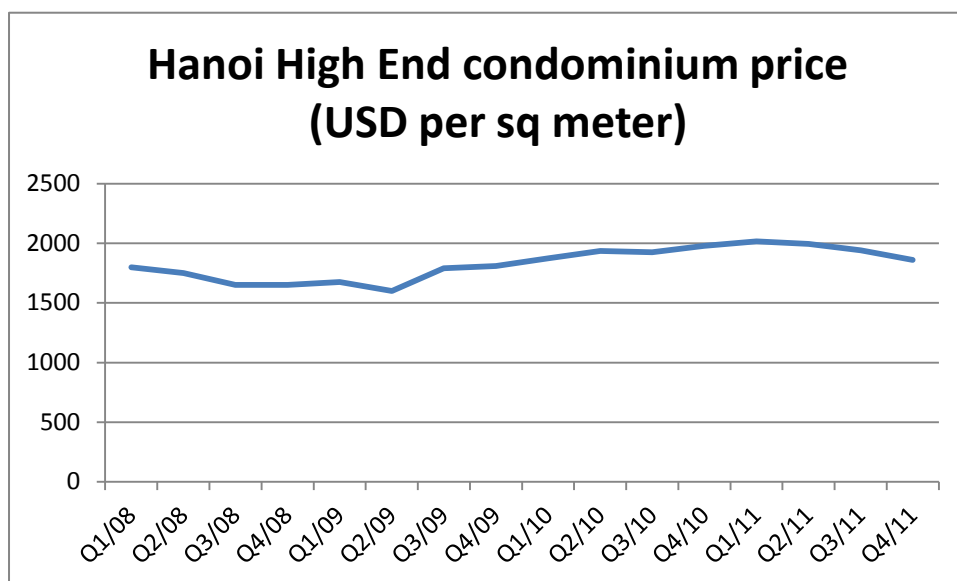


Figure 13- Hanoi High End condominium market price- source: CBRE| Vietnam

The total supply of this segment was one sixth of total condominium every year. In the market, the investors tended to buy this house and develop it into buy-to-let<sup>52</sup>, which provided supply into the serviced apartment market. In this period, like other two segments, the High End condominium price in Hanoi also declined in the 6 first quarters (lowest at 1600 USD per sq meter) then increased constantly to 1<sup>st</sup> half of 2011 (peaked at 2015 USD per sq meter).

### Regression:

	High End		Mid End		Affordable	
	Coefficient	p-value	Coefficient	p-value	Coefficient	p-value
GDP	22.0507	<b>1.78e-06</b>	26.0398	<b>0.0055</b>	16.1743	<b>0.0161</b>
Income	0.273996	<b>0.0046</b>	0.403323	<b>3.20e-06</b>	0.338489	<b>9.87e-07</b>
inflation	-10.8640	<b>2.19e-05</b>	-11.5249	<b>0.0120</b>	-8.55365	<b>0.0126</b>
Const	1067.35	<b>0.0054</b>	117.118	<b>0.4521</b>	-32.5960	<b>0.7779</b>

Table 4-Own computation: Result from Gretl for coefficient and p-value in Hanoi market.

<sup>52</sup> It is the type of property when a buyer can rent out their home when they are not using it.

Functions of condominiums price (Y) depends on GDP growth rate (X<sub>1</sub>), monthly average income (X<sub>2</sub>), inflation (X<sub>3</sub>):

$$\text{High End} \quad Y = 22.05 * X_1 + 0.27 * X_2 - 10.84 * X_3 + 1067.35 \quad (4)$$

$$\text{Mid End} \quad Y = 26.04 * X_1 + 0.40 * X_2 - 11.52 * X_3 + 117.118 \quad (5)$$

$$\text{Affordable} \quad Y = 16.17 * X_1 + 0.34 * X_2 - 8.55 * X_3 - 32.60 \quad (6)$$

In functions (4) (5) (6) the factors of GDP growth rate, monthly average income and inflation are statistically significant to the price of condominiums High End, Mid End and Affordable in Hanoi. The GDP growth rate and monthly average income per person have a positive relation with the price in all three functions. As the GDP growth and income increasing resulting to higher market demand and push the price higher while limit in supply. On the other hand, the inflation has a negative relation with the price. Higher inflation will discourage the customer purchasing power, which leads to decline in demand for housing.

#### 4.2.6 Hanoi Serviced Apartments:

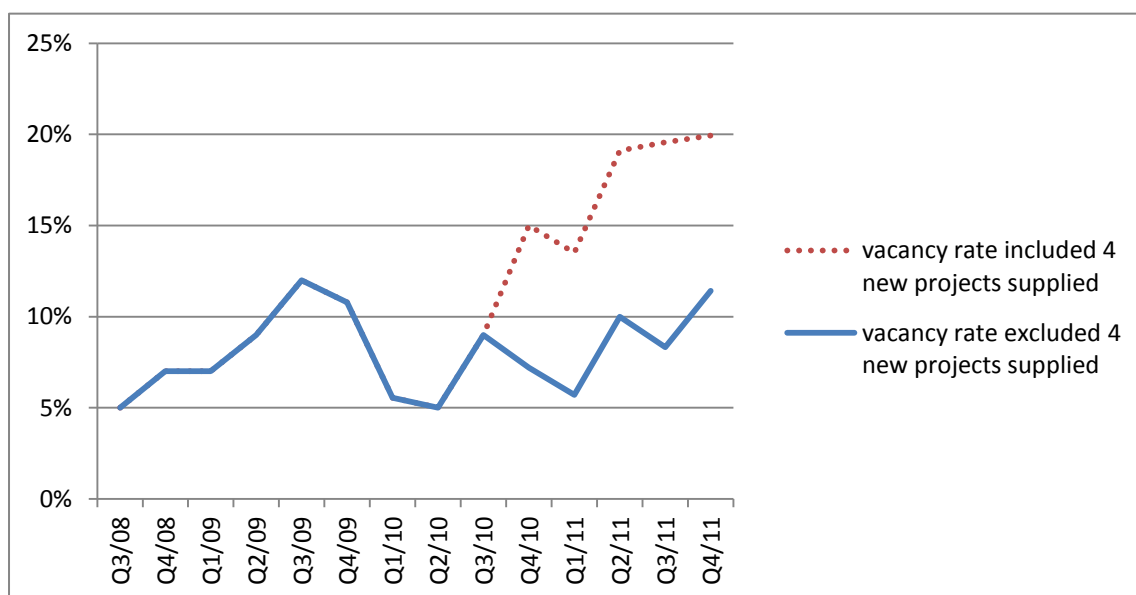


Figure 14- Hanoi vacancy rate in serviced apartment- source: CBRE| Vietnam

The Serviced Apartment market in Hanoi was formed by two types of suppliers, the international operations and self managed. The targets mostly are extraordinary customers with very high income, like the Japanese, Westerns, and Koreans, who has businesses in Hanoi. The self managed apartments usually dominated the market with total of 1205 units with price around 30 USD per sq meter per month compared to 40 USD per sq meter per month apartments from the international operation with 685 units in 2008. From 2008 to the end of 1<sup>st</sup> half 2010, no new supply entered the market. The demand declined in 2009 because of economic crisis, some foreign business left the city. In 2010, demand increased as the foreign businesses were back to Hanoi around the Tet holiday<sup>53</sup>. In Q4 2010, 231 new units were provided to the market from self managed sectors. In 1<sup>st</sup> half of 2011, the international operators supplied 201 new units and raised the vacancy rate of total units to nearly 20% (red line). However in Hanoi, this market stock is still very low compare to residential for sale. The total units in quarter 4 2011 is slightly above 2300 units, and cannot be a decision making for a middle income Hanoians to find a substitute accommodation.

### **4.3 Discussion:**

- The Hanoi Residential for Sale in general is influenced by three economic indicators. GDP growth rate and average income per month have the positive effects to market demand, while inflation has negative influent.

- In HCMC, the GDP growth rate only affects the High End (luxury) segment, and do not have significant relationship with Mid End and Affordable segments. However the inflation rate has a positive relation with these two segments.

With the same approach, the result of two markets analyzing are different from each other. The explanation relates to the consumer behaviors in two cities. The people in HCMC tend to be more rational and have their own decision making. The people in Hanoi are affected by their relative, neighbor, and they easily change their opinion. High inflation will make the price of real estate declines in Hanoi, but more demand in HCMC as people with their own saving will invest more in real estate to preserve their assets from their decision.

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<sup>53</sup> New lunar year, according to Chinese calendar, is usually in February each year.

- The Serviced Apartment for rent market in two cities do not target to local consumers, but for foreign businessmen. The investors in this sector are the main consumers in High End property for sale. This sector is very small compared to residential for sale however is also promising. Since the foreign businesses are returning to the market as number of FDI projects are increasing. More demand from these consumers will result in more demand in High End condominium.



## **5. Conclusion:**

In the thesis, the performance of residential real estate market in Vietnam is analyzed within two biggest cities market Hanoi and HCMC. This paper may not provide the precise situation due to lack of scarce data about other economic indicators like investment, import, export, and migration. However, it attempts to inform the readers about how the chosen factors affected the market demand and supply by creating the relationship function between the market price and these factors. The results pointed out that in Hanoi, capital of Vietnam, the housing price of all three segments High End, Mid End and affordable is influenced by all three indicators, GDP growth rate, monthly average income, and inflation. While in HCMC, these factors have different impacts on each segment of the housing market for sale. The reason may come from the qualitative approach to explain the consumer behaviors in each city, which cannot be provided in the thesis. Another market of resident real estate in Vietnam is Serviced Apartment for rent. And this sector does not aim to provide the services for Vietnamese consumers for a moment. But with a high demand for housing of more than 80% low income people in Vietnam, the solution for this struggling problem will be answered in the near future.

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