

SUSTAINABLE CONSTRUCTION POLICY AND MARKET IN VIETNAM

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1) Executive Summary

In 2015, the construction sector grew by 10.82% compared to last year, this is the highest rate since 2010, while the average growth of GDP is 6.68%.

- Cycle of Vietnam's construction industry has been strongly affected by the cycle of economic growth usually lasts from 3 to 10 years.
- In the period 2000-2009, the growth rate of the construction industry reached 9.6% per year and gained 5.1% per year the period of 2010-2014
- Private enterprises are always more than 80% of the production structure of the construction industry in the period of 2011-2015
- The Housing Law (amendment) 2014, the Real Estate Law (amendment) 2014 and supported stimulus policies, the situation of the property market is warming up that led to the rise of the segment of civil building.
- Expectations of the signed agreements and upcoming agreement of FTAs will boost FDI in Vietnam and promote the development of the industrial construction
- From now to 2020, Vietnam needs to attract about VND 202,000 billion/year for the development of transport infrastructure and approximately VND 125,000 billion / year for electricity infrastructure projects.
- The legal framework for PPPs increasingly improved, creating conditions for attracting private investment in the field of public investment.

2) Main Issues with Construction Industry and Market

Period 1986-1990: The government started implementing the guidelines and the policy of "innovation", construction industry has made important changes. From the planning design, housing design to switch to the new mechanism is urban construction planning. Besides, the initial implementation of procurement modality has actively promoted enterprises to rearrange labor force, increase investment in technical infrastructure, construction machinery to improve high quality and efficient projects.

Period 1991-2000: During this period, the property market has gone through the first round of the housing fever in 1993-1994, and this was a remarkable period of growth of the construction industry with an average growth rate of 10.5% per year. Besides, this is a period of changes of substance in the development of the construction industry. Many policy mechanism is formed to make up fairly uniform legal framework. The company continued to invest strongly in depth to technological innovation, production capacity and competitiveness. The speed of executive work of large projects in infrastructure, industry, civil is quicker 2-3 times than previous period.

Period 2001- present: the national economy in this period has started further integration into the regional – international economy. And Vietnam has becomes WTO membership since 2006. The real estate fever in 2000-2001 and 2007-2008 has also created a strong impact on the growth of the construction industry.

Construction Law, Housing Law and Business Law of Real Estate, Urban Planning Act were enacted to create a legal framework for the improvement of the management of planning, urban development of municipality, housing and estate market.

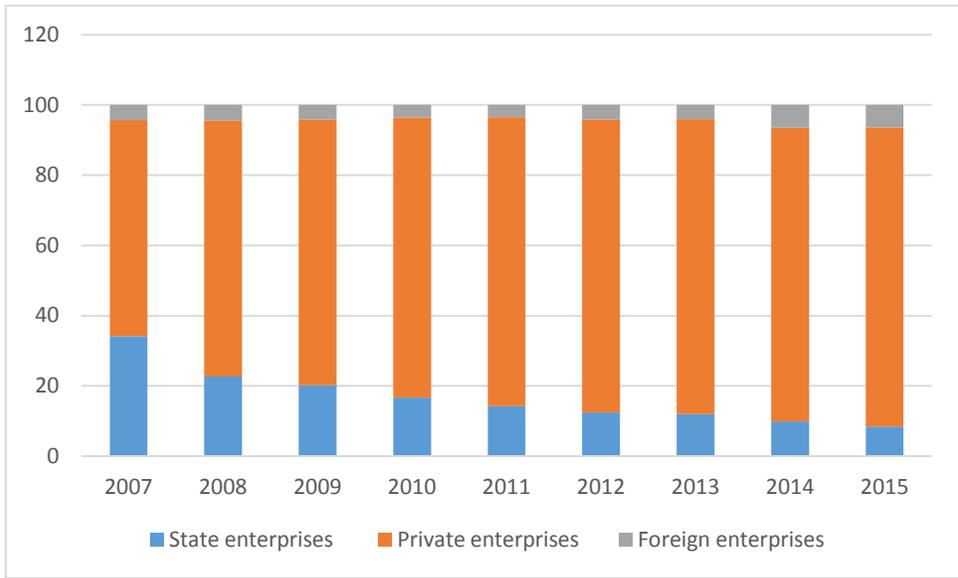
The quality and qualification of construction has also been significantly improved. So far, the Vietnam construction enterprises have mastered designed technology and construction of high-rise buildings, large span buildings, underground works, and complex geological works. They are capable of competing with the foreign enterprises.

In the period 2011-2015, the private enterprise groups has always accounted for over 80% of the production structure of the construction industry, contributing an important role to promote the growth of the industry. Private sources not only contribute to the growth of the civil construction sector, but also engaged in infrastructure development through contract BT, BOT, BOO and PPP. However, the legal framework for public-private partnerships (PPP) are limited, so we cannot promote capital investment in the infrastructure sector.

Table 1: Share of economic components in construction industry

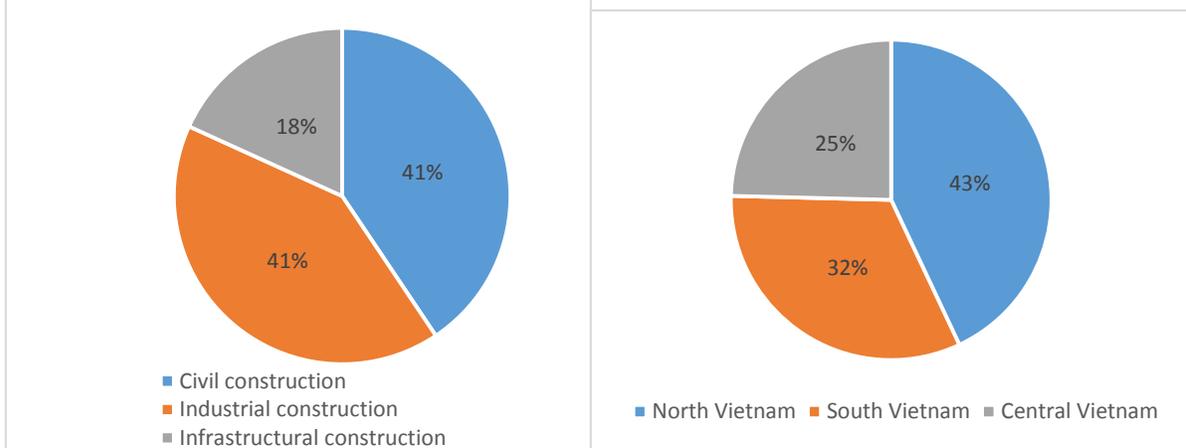
Year	State enterprises (%)	Private enterprises (%)	Foreign enterprises (%)
2007	34.2	61.5	4.3
2008	22.7	72.9	4.4
2009	20.2	75.7	4.1
2010	16.7	79.7	3.6
2011	14.2	82.3	3.5
2012	12.4	83.5	4.1
2013	12.0	84.0	4.0
2014	9.9	83.6	6.5
2015	8.4	85.2	6.4

Chart 1: Share of economic component in construction industry



Civil Works and Infrastructure Works are always high share in the structure of construction industry value. In particular, the infrastructure sector accounted for 41.2% of its value, followed by civil construction accounted for 40.6% and the remaining 18.3% of industrial construction. In terms of geographical region, Hanoi capital city and Ho Chi Minh City are two attractive centers of investment capital in the country. Now, the North was leading the country on spending for construction (43%), followed by a 32.4% of South and the Central was 24,6%.

Chart 2: The Structure of Construction Industry Value



3) Efforts Made According to the Conditions Surrounding Construction Industry

This issue will be analyzed by the value chain of the construction industry that is made up of three main factors: market inputs, the process of construction, the construction market.

3.1 Market of Inputs: Building materials (steel, cement, brick, stone...), workers and construction machinery

The cost of construction project includes about 60 -70% of cost of building materials in which steel and cement accounted 60 – 70%; 10 – 20% of worker cost and 10 -20% of construction machinery cost.

Market of construction materials

Vietnam steel industry is still growing at a rate of 2 digits, reaching an average of 15% / year over the period 2011-2015. Total steel output produced by domestic enterprises in 2015 is near 15 million tons. The strength of the steel industry in Vietnam is still construction steel products, with 40% of reinforcement bar in total steel production industry. *The weakness of Vietnam's steel industry is most enterprises with small-scale production, production technology was only the world average, and most of them only participate at the stage is near the end of the value chain; therefore, low added value, lead to revenue and profit is not high.*

The situation of production and consumption of cement in 2014, 2015 is stability. In 2015, the total output of cement and clinker consumption reached about 72.71 million tons, domestic consumption was 56.5 million tons, increased by 11.1% compared to 2014.

Program development of unburned building materials up to 2020 under Decision No. 567/QĐ-TTg dated 28/04/2010 of the Prime Minister and Directive No. 10/CT-TTg dated 16/04/2012 of Prime Minister on the increased use of non-baked materials, has 50 provinces eliminating manual brick kilns, furnaces using fossil fuels, 25 provinces issued Directive to increase production and use of unburned materials. The implementation of the project "Strengthening the production and use of adobe bricks in Vietnam", to cut the annual rate of increase in greenhouse gas emissions by decreasing the use of fossil fuels and soil to make brick, through the intensification of production, sale and use of adobe bricks in Vietnam.

Workers

The labor structure of the construction industry tends to increase during 2005-2014, from 5.4% in 2005 to 6.3% in 2014. Currently, the number of workers in the construction industry reached 3.3 million workers, 4th ranking in the country. According to the Vietnam Association of Contractors (VACC), about 80% of construction workers are now doing seasonal work, have not been trained, lack of expertise and do not meet the requirements of professionalism on site. Compared with other countries in the region, Vietnam's labor productivity is only half the average of the Southeast Asian countries. And comparison with other sectors, the labor productivity of the construction industry ranked only 16th, so the income of workers in the construction industry was also lower than many other economic sectors, and other countries in the region.

From 2011 to 2014, workers in construction industry were unpaid wages accounted for a high proportion. As of 31 December 2014, the total number of construction companies owed wages of workers to reach 85 units, account for 17.2% of all enterprises, with nearly VND 395.3 billion¹.

¹Doanh nghiệp ngành xây dựng nợ lương người lao động hàng trăm tỷ đồng

<http://laodong.com.vn/cong-doan/doanh-nghiep-nganh-xay-dung-no-luong-nguoi-lao-dong-hang-tram-ty-dong-288517.bld>

Construction industry is leading the field of occupational accidents causing deaths. In 2015, there were more than 35.2% of all fatal accidents in which 37.9% of total deaths in construction sector. Besides, labor accidents and number of deaths due to occupational accidents and the number of fires has increased.²

Construction machinery

Every year, Vietnam imported 15,000 construction machines of which 95% are older machines with average import turnover US\$ 300-400 million. The price of older machine is only 25% of new machines, and suitable to Vietnam construction situation, so the old models are pretty much used by small and medium building contractors. However, the use of the old machine also has disadvantages, such as complicated procedures, the frequent failures, and performance is not equal to the new device. The old machinery can pollute the environment.

3.2 Evaluating Process of construction

General construction process will include four main phases: (1) Design, (2) Procurement, (3) foundation construction, (4) raw building, (5) finishing.

Architectural Design

Due to building qualifications is growing, which leads to increase requirements on building design. Therefore, the application of technology is increasingly enhanced.

The design is only about 5-10% of the cost of the construction package, but it affects more than 70% of the quality and efficiency of work. Besides, the design changes during construction is one of the main causes leading to delays and cost increases. Therefore, efforts in design will mitigate risk and improve the efficiency of work.

Bidding

Nowadays, there are two bidding mode (1) EPC (Engineering – Procurement - Construction) or DB (Design - Build), (2) Design – Bid – Build.

EPC is a form to be not applied so much yet in Vietnam, because of restrictions on the ability of domestic contractors.

Bid Forms of Design - Bid - Build is applied very popular in Vietnam so far. However, this method revealed many shortcomings in big projects to require higher synchronization.

The main form of bidding in Vietnam include: (1) open tendering, (2) restricted bidding, and (3) appointment of contractors.

In terms of the taken time and the nature of the bidding package will have two main types of contracts used in the construction: (1) fixed price contract, (2) contract price adjustment.

The only low bidding price interest has led to construction companies to bid low, and then because of the low price, they neglect works or hire sub-contract to weak capacity to implement. Also, it appears the contractors find ways to adjust bids, making progress in a lot of traffic projects slowed down and investment costs also increased 2-3 times.

Building Foundations: new technologies have been applied in the construction of the foundation.

²Lĩnh vực xây dựng chiếm 35,2 % vụ tai nạn lao động chết người

<http://dantri.com.vn/viec-lam/linh-vuc-xay-dung-chiem-352-vu-tai-nan-lao-dong-chet-nguoi-2016031123135069.htm>

Construction stage and foundation treatment has a decisive role in ensuring the quality of works, especially the high-rise buildings. *The current contractors are always towards new technologies to reduce the cost and execution time. The new methods are being applied very effectively, such as top-based methodology, technology of vacuum consolidation, technology of beams sand pile, top-down execution technology. Many new buildings have adopted these advanced approaches.*

Raw building

For civil construction, common housing framework system includes five main components: (1) the pillar (for transmitting power to the ground), (2) beams (used to connect and transmit power down the head pillar), (3) the floor (or sheets are poured onto the beam system, where lift objects in the house), (4) walls (including surrounding walls and partition walls), and (5) the stairs (the connection between the floors).

The technology and construction methods are now focusing on 2 main parts: floor and wall to minimize weight and materials needed for the project.

Some new methods for flooring execution applications in the world such as Waffel Flooring Unit System, or Bubble Deck Slab has been applied in Vietnam.

Since 2011, the government has issued a mandatory regulations of high-rise buildings (from 9 storeys or more) to use 30% of unburned materials for wall construction. There are 2 kinds of unburned materials that may be mentioned now as adobe brick and lightweight concrete: unbaked bricks (autoclaved aerated concrete - AAC, Technology of lightweight concrete (foam concrete). However, this non-traditional bricks accepted by market is very slow due to many reasons such as skills of bricklayers with new materials, the compatibility of the design for these materials.

For the construction of industry and infrastructure, that has some new methods used quite popular now intended to reduce the volume and time of construction such as prefabricated steel houses and precast concrete.

Finishing: Finishing is the last stage of works created aesthetic quality as well as safety facilities of construction that requires more professional skills to the needs of social development.

Interior design

In the past the construction industry has not focused on this issue, today's interior design is finding creative design solutions for interior space.

4. **Construction market:** including the three main markets of civil construction, industrial construction, and infrastructural construction.

Civil construction market

Civil construction market affected and influenced heavily by housing and real estate markets. Of these 5 main factors affecting the market include: (1) demographics (age structure, income, population growth, and urbanization rate), (2) interest rates, (3) health economy (GDP growth, unemployment, inflation and consumer's belief), (4) policy support from the government, and (5) FDI inflows.

Table 2: The national urban development stage of 2012 – 2020

	2013	2015	2020
Ratio of urbanization (%)	33,5	38	45
Average Housing Floor Area (m²/person)	23,1	26	29
Permanent house ratio (%)	60	65	75

Source: UDA, MOC

Interest rates for loans and savings fell 8% and 6% that is the lowest in recent years. Besides, the home loan will be reduced interest rates which stimulates the recovery of the property market.

Gross domestic product (GDP) in 2015 rose 6.68% estimates compared to 2014, with strong growth from industry and construction sector. According to the evaluation of General Statistics Office, in 2016 Vietnam's economy likely grew between 6% - 6.2%/ year.

Besides the economic situation is improving and with low interest rates, many of the rules and policies which are beneficial to property market has also been enacted in recent years. Property Business ranked 2nd among the sectors which attract foreign direct investment (FDI) in Vietnam nearly US\$2.4 billion, accounting for 10.5%, followed by manufacturing and distribution of electricity, gas, hot water, steam and air conditioning to reach \$ 2.8 billion, accounting for 12.4%.

Industrial Construction Market

Industry construction depends on investment demand and expand production of domestic and foreign enterprises. Therefore, the demand in the construction industry will depend upon the health of the economy and FDI into Vietnam.

FDI in the processing industry, large manufacturing stimulate the demand of construction of plants. Investment inflows into the field of processing and manufacturing which is always high proportion, averaging around 70% in the FDI structure with the number of new projects. The demand built factories rising sharply, particularly in the sectors benefiting from the free trade agreements, such as textiles, fisheries...at the beginning of 2016, several major projects have been granted investment certificates as the project's Garment Factory of Maple Co., Ltd. (Singapore) with a total investment estimated US\$ 110 million, project of Aureumaex Precision Plastics plant of US\$ 21 million ...In addition, the plan of investment projects of Amata (Thailand) in Quang Ninh and Dong Nai, with scale up to billions of dollars, opening a plant of Hyosung, Korea with US\$ 500 million in Vietnam or the project raised 500 million investment in Vietnam, Jabil Circuit (United States) ...

Infrastructural Construction Market

In the period to 2020, the capital amount needed to attract investment in infrastructure in Vietnam is huge, about VND 202,000 billion per year for transport infrastructure and approximately VND 125,000 billion per year for electricity infrastructure projects. To attract sufficient funds, the government is attempting to improve the legal framework for PPPs and investment policy of ODA.

In February 2015, the Government issued Decree No. 15/2015 / ND on investment in public - private partnership (PPP), to create a clear, uniform legal framework to promote private sector to invest in infrastructure projects and public services in Vietnam.

SWOT ANALYSIS OF CONSTRUCTION INDUSTRY

<p style="text-align: center;">Strengths</p> <p>Policy system supported construction industry, real estate, initially had a positive impact on construction industry such as Construction Law, Housing Law (revised), Real Estate Business Law (as amended) and the related Decrees opened up many opportunities for the development of the construction industry, especially in the field of infrastructure; With the aim of promoting economic growth, government funds are strongly willing to spend for key infrastructure projects; Large amount of labor, cheap, skill; The ability to absorb new construction technology from the developed countries.</p>	<p style="text-align: center;">Weaknesses</p> <p>Construction capacity of enterprises in the sector is not uniform; State enterprises have many advantages to participate in bidding for infrastructure projects with investment capital of the State that will reduce the effectiveness of bidding and can cause a great influence on later for construction works because these incompetent contractors undertake execution; A large amount of workers are not trained, mainly due to migration from rural areas; Cumbersome administrative procedures made difficult for the construction work and construction, created not less barriers to investors; The small-scale enterprises with poor bidding capacity and outdated technology use accounts for a large proportion in the construction industry; Weak management capability of building and highly specialized human resources do not meet all the demand; Construction quality has been uneven, revealing many weaknesses; Status of capital increase and prolong time of execution continues.</p>
<p style="text-align: center;">Opportunities</p> <p>The trend of urbanization is increasing along with the demand for construction of houses, buildings, urban infrastructure; The severe power shortage in the dry season opens great demand for the development and expansion of electricity generation;</p>	<p style="text-align: center;">Threats</p> <p>The monopoly of the government in important areas such as the energy sector does not create transparent and certain risk for private investors and foreign countries; Power shortages and weak infrastructure has negatively affected the development</p>

<p>Real estate market in the country continues showing signs of recovery Construction material prices still remain low ground; Although loan interest tends to increase again but low; Vietnam participates in free trade agreements to open opportunities for moving factories from neighboring countries to Vietnam, especially from China, rise of FDI into Vietnam; The legal framework for PPPs increasingly improved, created conditions to attract private investment in the infrastructure sector.</p>	<p>capacity of the processing industry in Vietnam and FDI inflows; Low labor productivity increased investment costs of FDI. Heavily dependent on raw materials prices; Qualification of consultancy, supervision and project management is still poor; The large contractors from abroad entries in Vietnam to increase competitive pressures for domestic companies; Concerned about reducing supply on the real estate market housing, the negative impact to the field of civil engineering; The global economic slowdown is affecting investment demand and the economy.</p>
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4) Future Development for Sustainable Construction Policy and Market

In terms of the demand for socioeconomic development in the next time and national policies, civil construction and industrial construction, infrastructural construction are positive prospects in the coming years.

Civil construction: Housing Law (revised 2014), Property Business Law (amended in 2014) allows organizations and foreign individuals to buy houses in Vietnam that will be an important driving force in the market of Real Estate in Vietnam.

By 2020, Vietnam will have about 4.2 million workers with housing demand equivalent to about 33.6 million m². In which, Vietnam is estimated requirement about 430,000 apartments for low-income people, 17.8 million m² respectively with about VND 100,000-120,000 billion.

Industrial Construction: The capital amount of investment in manufacturing industry are the highest proportion in the structure of FDI (40-50%), equivalent to the average amount disbursed US \$ 4-5 billion per year. In 2015, Vietnam has negotiated and joined the free trade agreements, such as EVFTA (Vietnam - EU), VKFTA (Vietnam - Korea), TPP Regional Comprehensive Economic Partnership (RCEP). This has promoted increasingly the capital amount of FDI into Vietnam. Therefore, the prospects of the industrial construction was assessed positively in 2016 and the coming years.

Construction of infrastructure: According to General Statistics Office of Viet Nam, Vietnam has about 40% of the road transport system with very low quality. Therefore, the estimated capital amount required to upgrade the road network to reach USD 48-60 billion up to 2020, equivalent to an annual investment needs at about VND 202,000 billion per year. In addition, the Government also plans to build 26 airports (10 international airports 16 domestic airports) to 2020. In which, the most prominent project is the Long Thanh

International Airport at Dong Nai province with a total investment of \$ 10 billion approximately.

Currently, Vietnam is relatively serious shortage of power. Therefore, the Planning Electricity 7, the government has planned to develop another 75,000 MW power generation capacity, more than double the total installed capacity currently. Total investment for this plan in the 2011-2020 period is estimated at about 48.8 billion dollars, equivalent to the investment needs of VND 125,000 billion per year.

In the period 2016-2020, investment demand for road transport is about VND 202.000 billion per year and the electricity sector is VND 125,000 billion per year. Therefore, the huge investment is pressure in the near future. So, if efforts improve the legal framework for PPP to take effect, the attraction to private investment will intensify, contribute to the growth of the construction industry.

5) Conclusion

Since the innovative country, the construction sector of Vietnam has significant change, human resources of the construction industry is abundant, cheap, and there are certain skills. Businesses have rapid technological innovation. Investment funds for projects of the country continue to be on promoting infrastructure works, electrical works, Vietnam joined the free trade agreements to also attract FDI. Promulgating a decree on PPP has encouraged private capital to investment. Since the enactment of the bidding law has prompted companies in the industry to perfect themselves in order to survive and develop. State enterprises have many advantages to participate in bidding for infrastructure projects with investment capital of the State that will reduce the effectiveness of bidding and can cause a great influence on later for construction works because these incompetent contractors undertake execution;

Projects must comply with the assessment of environmental impact is reflected in the construction law, environmental law, planning law and Decree 18/2015 / ND-CP of protection, environmental assessment etc. Since 2011, the government has issued a mandatory regulations of high-rise buildings (from 9 storeys or more) to use 30% of unburned materials for wall construction. There are 2 kinds of unburned materials that may be mentioned now as adobe brick and lightweight concrete: unbaked bricks (autoclaved aerated concrete - AAC, Technology of lightweight concrete (foam concrete). Program development of unburned building materials up to 2020 under Decision No. 567 / QD-TTg dated 28/04/2010 of the Prime Minister and Directive No. 10 / CT-TTg dated 16/04/2012 of Prime Minister on the increased use of non-baked materials, has 50 provinces eliminating manual brick kilns, furnaces using fossil fuels, 25 provinces issued Directive to increase production and use of unburned materials.

Compared with other countries in the region, Vietnam's labor productivity is only half the average of the Southeast Asian countries. And comparison with other sectors, the labor productivity of the construction industry ranked only 16th, so the income of workers in the construction industry was also lower than many other economic sectors, and other countries

in the region. The construction industry is leading occupational accidents and the state of unpaid wages. The project of the construction industry in recent years is also quite complex on compensating clearance, causing prolonged litigation. Although, the construction sector has contributed greatly to the process of industrialization and modernization of the country, accelerating the process of rapid urbanization.

VIETNAM COUNTRY REPORT

1) Executive Summary

Vietnam is at a major cross-road in its history as it transitions from a planned to a more market-based economy, and from a rural to an urbanizing society. Since the early 1990s to now, Vietnam has always actively seeking integration to "external resources" for development. Vietnam has become a member country of ASEAN since 1995, ASEM since 1996, APEC since 1998, WTO since 2006 and TPP since 2015³.

2006-2010, although economic size in 2010 increased 2 times in comparison with 2006 but the growth rate was much lower than the previous period.

From 2006 to 2015, Vietnam's GDP has grown by more than 4 times. In 2006, the size of GDP is less than VND 1 million billion, up to 2015, the size of the economy has risen to nearly VND 4.2 million billion.

From 2011 until now, due to the impact of the crisis and the global economic recession, with the imbalances of internal economy in the years, the economic growth of our country is even lower than the period 2006-2010.

Since 2008, Vietnam officially became the national average income per capita GDP reached \$ 1,145.

FDI flow into Vietnam in 2015, including registered and disbursed capital, has increased by about 4 times after 2006.

Import-export activities of Vietnam in 10 years from 2006 to 2015 was continuous growth. In 2006 the total import and export turnover of Vietnam has reached US\$ 70 billion, then in 2015 this figure was approximately US\$ 330 billion.⁴

2) Macro Economic Review and Outlook

2.1 Overview of National Economy

Economic growth maintained at reasonable level, and gradually recovered from 2013 with higher year after year growth rate. Growth rate of GDP in 2011 reached 6.24%, went down by 5.25% in 2012, but went up to 5.42% in 2013, 5.98% in 2014 and preliminary figure for 2015 showed a rise by 6.68%. On average, for 5 years 2011 – 2015, GDP increased by 5.91%; of which agriculture, forestry and fishing reached 3.12% per year, industry and construction reached 7.22% per year in which construction reached 5.40%, service reached 6.68%. The average economic growth rate in 5 years 2011 -2015 was lower than those of the previous 5-year periods, but still ranked in the group of economies with high growth rate in the region and the world.

With higher economic growth rate than that of population, GDP per capita at current price increased from 1273 USD/person in 2010 to 2109 USD/person in 2015.

³ Trương Khắc Trà, Điểm mặt những tổ chức kinh tế 'khủng' Việt Nam đã tham gia, Kinh tế - Thị trường, Đăng ngày Thứ sáu, 16 Tháng 10 2015 09:01 website: <http://reds.vn/index.php/tri-thuc/kinh-te-hoc/9747-diem-mat-nhung-to-chuc-kinh-te-khung-viet-nam-da-tham-gia>

⁴ Duy Cường – Thái Hà (2016), Kinh tế Việt Nam 10 năm dưới thời Thủ tướng Nguyễn Tấn Dũng, website: <http://vneconomy.vn/thoi-su/kinh-te-viet-nam-10-nam-duoi-thoi-thu-tuong-nguyen-tan-dung-20160329012359222.htm>

The size of the economy expressed by GDP was expanding. In 2015 GDP at current prices reached 4192.9 trillion VND (equivalent to 193.4 billion USD), more than 1.94 times in comparison with that in 2010. If calculating by constant price, GDP in 2015 was 1.3 times as much as in 2010.

The economic structure shifted based on the trends that decreasing in the agriculture, forestry and fishing and increasing the industrial and service sectors. Share of the agriculture, forestry and fishing decreased from 18.38% in 2010 to 17% in 2015; share of industry and construction increased from 32.13% to 33.25%; share of the service increased from 36.94% to 39.73%. After 5 years, share of agriculture, forestry and fishing decreased 1.38 percentage points; share of the industry and construction increased 1.12 percentage points; and share of the service increased 2.79 percentage points.

At the end of year 2010, inflation with 2 digits returned and last 13 months to the end of October 2011, which lead to CPI increase to 11.75% in 2010 and 18.13% in 2011. Government, all levels and line ministries implemented drastically and across resolutions to curbed and controlled inflation. CPI was decreased from 2 digits in 2011 (18.13%) to 1 digit (6.81% in 2012; 6.04% in 2013; 1.84% in 2014 and 0.60% in 2015). Inflation decreased from 13.62% in 2011 to 8.19% in 2012; 4.77% in 2013; 3.31% in 2014 and 2.05% in 2015. High inflation curb in the last years was one of important factors contributing to macroeconomics stability in Vietnam.

The national average population was 91.7 million person in 2015, an increase of 5.48% over 2010 (annual average increase of 1.07% per year); of which urban population increased 17.4% (annual average increase of 3.26% per year), rural population increased 0.25%. The national average life expectancy at birth went up from 73 years in 2011 to 73.3 years 2015.

The labor force at 15 years of age and above in 2015 increased by 7.1% compared to that in 2010; the employed population at 15 years of age and above increased by 7.7% and there was strong shift of the employed from agricultural sector to the industrial and service sectors. The proportion of the agricultural employment decreased from 49.5% in 2010 to 44.0% in 2015, at the same time the repaired growth rate of industry and construction increased from 21.0% to 22.8%. Unemployment rate in 2015 reduced 1.68 percentage points over 2010; unemployment rate of labor force at working age reduced 0.55 percentage points over 2010. Percentage of trained employed workers at 15 years of age and above went up from 15.4% in 2011 to 19.9% in 2015.

2. 2. Main Economic Indicator

Table 2.1 Main Economic Indicators

Unit: bill. dong

	2010	2011	2012	2013	2014	2015
GDP and Components						
GDP at real prices(thousand bill. dong)	2157.8	2292.5	2412.8	2543.6	2695.7	2875.9
GDP at current market prices (thousand	2157.8	2779.9	3245.4	3584.3	3937.9	4192.9

bill.dongs)						
Real GDP growth (%)	6.78	6.24	5.25	5.42	5.98	6.68
Agriculture, Forestry, and Fishery	2.78	4.23	2.92	2.63	3.44	2.41
Mining	-3.69	2.90	5.14	-0.23	2.26	6.50
Manufacturing	8.38	14.08	9.05	7.22	7.41	10.60
Services	8.69	7.47	6.71	6.72	6.16	6.33
Construction	10.06	-0.26	3.66	5.84	6.93	10.82
Demographic Indicators						
Population (thousand persons)	86,947.4	87,860.4	88,809.3	89,9759.5	90728.9	91713.3
Population growth rate (%)	1.07	1.05	1.08	1.07	1.08	1.08
Total labor force (thousand persons)	50,392.9	51,398.4	52,348.0	53,245.6	53,748.0	53,984.2
Labor force growth rate (%)	2.68	2.0	1.85	1.72	0.94	0.44
Unemployment rate	4.3	3.6	3.2	3.6	3.4	3.3
CPI growth rate (%)	9.19	8.58	9.21	6.60	4.09	0.63
Inflation rate (%)	7.78	13.62	8.19	4.77	3.31	2.05
Financial Indicators						
Interbank interest rate (%)	14,5	13,5	10,6	8,23	6.50	6.50
Short term interest rate (%)	13	12	9	9.5	8	8.39
Long term interest rate (%)	17,5	18	14	13	12	11
Exchange rate against US\$	19,495	21,034	20,840	21,095	21,388	22,485

Source: Statistical yearbook of Vietnam - General Statistical Office

3) Overview of the Construction Industry

3.1. Construction Investment

Investment in construction industry at constant prices (2010) in 2011 was 36,502 billion VND, decreased 2.30%; in 2012 that got 37629 billion VND, grew 3.09%; that of 2013 was

47875 billion VND and increased 27.23%; investment in 2014 was 75748 and got highest increase of 58.22%; that of 2015 was estimated to reach 86524 billion VND, an increase of 14.23%.

Duration of 2010 – 2015 non-state investment in construction tends to increase in investment structure. Specially, share of non-state investment occupied 68.22% in 2014 and 74.07% in 2015.

Table 2.2 : Construction investment

Unit: Bill. Dongs

Year	2010	2011	2012	2013	2014	2015 (est.)
Total investment at constant 2010 prices	37362	36502	37629	47875	75748	86524
Index (previous year = 100)%	127.53	97.70	103.09	127.23	158.22	114.23
Total investment at current prices	37362	43914	47273	59975	95216	113478
State investment at constant 2010 prices	16257 (43.56%)	15166 (41.55%)	18838 (50.06%)	28642 (59.83%)	24074 (31.78%)	22433 (25.93%)
Index (previous year = 100)%	109.42	93.29	124.21	152.04	84.05	93.18
State investment at current prices	16257	18273	23659	36151	31155	29144
Non-state investment at constant 2010 prices	21105 (56.44%)	21336 (58.45%)	18791 (49.94%)	19233 (40.17%)	51674 (68.22%)	64091 (74.07%)
Index (previous year = 100)%	146.17	101.10	88.07	102.25	268.67	124.03
Non-state investment at current prices	21105	25641	23614	23824	64061	84334

Source: Statistical yearbook of Vietnam - General Statistical Office

Foreign Direct Investment (FDI) in Vietnam has had progress. According to Statistical Yearbook of Vietnam, Vietnam had total 19899 FDI projects from 1988- 31/12/2015 with total registered capital of 281,665.9 billion USD in which, the registered capital in construction had 1264 FDI

projects and accounted 10893.8 million USD and occupied 3.87%. The registered capital in Water supply, sewerage, waste management and remediation activities had 43 FDI projects and accounted 1352.7 million USD with modest share of 0.48%. Meanwhile, the proportion of investment in real estate is high 18.07% in the amount of US \$ 50896.4 million in 500 projects. *So FDI projects related to environmental remediation has still been relatively small proportion of projects in other sectors in the economy.*

The table 2.3 let us to know more about the proportion of FDI in the construction and real estate:

Table 2.3: FDI projects licensed – accumulation of projects as of 2015

Unit: Mill. USD

No SI	Sector	Project	Registered Capital	Share (%)
1	Agriculture, forestry and fishing	521	3654.9	1.30%
2	Mining and quarrying	97	4448.3	1.58%
3	Manufacturing	10764	162772.7	57.79%
4	Electricity, gas, steam and air conditioning supply	109	12567.5	4.46%
5	Water supply, sewerage, waste management and remediation activities	43	1352.7	0.48%
6	Construction	1264	10893.8	3.87%
7	Wholesale and retail trade; repair of moto vehicles and motorcycles	1735	4602.2	1.63%
8	Transportation and storage	505	3829.3	1.36%
9	Accommodation and food service activities	445	11950.3	4.24%
10	Information and communication	1263	4423.7	1.57%
11	Financial, banking and insurance activities	82	1333.5	0.47%
12	Real estate activities	500	50896.4	18.07%

13	Professional, scientific and technical activities	1926	2103	0.75%
14	Education and training	240	710.3	0.25%
15	Human health and social work activities	111	1763.3	0.63%
16	Arts, entertainment and recreation	143	3622	1.29%
17	Other service activities	151	742	0.26%
		19899	281665.9	100.00%

Source: Statistical yearbook of Vietnam - General Statistical Office

2. Construction Companies

In general, the enterprises of the construction industry has increased annually from 2010 to 2014. Number of acting enterprises in construction industry was 42901 as of 31 December 2010, in 2011: 44183, in 2012: 48790, in 2013: 52147 and reached 55198 in 2014. According to field activities, most all enterprises increased annually, except the civil engineering activity number of enterprises in 2011 was 13 503 less than in 2010 with the number of 14608.

Table 2.4: Construction companies in Vietnam as of annual 31 December

Unit: Enterprise

Year	2010	2011	2012	2013	2014
Construction buildings	20810	21531	24687	26638	27373
Civil engineering	14608	13503	14050	14726	16158
Specialized construction activities	7483	9149	10053	10783	11667
Total	42901	44183	48790	52147	55198

Source: Statistical yearbook of Vietnam - General Statistical Office

In 2014, total enterprises were 55198, in which enterprises with less than 5 persons was 17310, firms with 5-9 people was 11943, enterprises with 10-49 persons was 18 996, enterprises with number of persons between 50 - 199 was 5537, enterprises with persons from 200-299 was 631, enterprises with number from 300-499 persons was 424, enterprises with 500-999 persons was 253, enterprises with 1000-4999 persons was 101 and firms with 5000 or more was 3. Such proportion of small and medium enterprises in the construction industry is major proportion.

3. Employees and Construction Labor

Vietnam manpower construction industry today is the fifth large number of labor structure. Share of labor was 6.3 percent in 2010, 6.4 percent in 2011 and 2012; 6.3 percent in 2013

and 2014; 6.5% in 2015 (preliminary). Labor of construction industry increased every year. Growth rate of employed population in construction industry in 2010 got highest figure 19.8 percent, in 2014 growth rate of employed population in construction industry had lowest figure 0.1%. Table 2.5 shows clearly data as follows.

Table 2.5: Manpower in construction industry 2010 – 2015

Unit: thousand persons

Year	2010	2011	2012	2013	2014	2015 (prel.)
Employed population at 15 years of age and above as of annual 1 st July in construction industry	3108.0	3221.1	3271.5	3308.7	3313.4	3431.8
Structure of employed population at 15 years of age and above as of annual 1 st July in construction industry	6.3%	6.4%	6.4%	6.3%	6.3%	6.5%
Growth rate of employed population in construction industry	19.8%	3.6%	1.6%	1.1%	0.1%	3.6%

Source: Statistical yearbook of Vietnam - General Statistical Office

4. Productivity

Labor productivity in the construction sector is increasing every year. This is due to technical improvements of construction companies. It does show that the contribution of each employee's construction industry has raised annually. The table 2.6 shows results.

Table 2.6. Productivity of construction industry

Unit: Mill.dongs/persons

Year	2010	2011	2012	2013	2014	2015 (Prel.)
Productivity	42.7	48.3	53.4	55.6	60.7	66.5

Source: Statistical yearbook of Vietnam - General Statistical Office

5. Construction Cost

- Average Construction Material Prices

The same as general consumer price, the housing and construction materials of prices has decreased year by year from 2010 to 2015. Housing and construction materials CPI increased highly in 2010 and 2011: 14.68 percent and 19.66 percent respectively and decreased lowest in 2015: 1.62%. Unlike the housing and building materials price index rose for the first 3 years of gold, fell three years later. The level reduction is 2014: 11:49%, 2nd year reduction is 2013: 11.26% and continued decreasing 4.73% in 2015. US dollar price index was not dropped 6 year, but increase was slight in 2012, 2013 and 2014 with 0.18%, 0.66% and 0.56% respectively.

Table 2.7: CPI Performance, 2010-2015

(% increase compared to previous year)

Year	2010	2011	2012	2013	2014	2015
General consumer	109.19	118.58	109.21	106.60	104.09	100.63

price index						
Housing and construction materials	114.68	119.66	110.64	104.72	103.74	98.38
Gold price index	136.72	139.00	107.83	88.74	88.51	95.27
USD price index	107.63	108.47	100.18	100.66	100.56	103.16

Source: Statistical yearbook of Vietnam - General Statistical Office

-Construction Industry Salaries and Wages

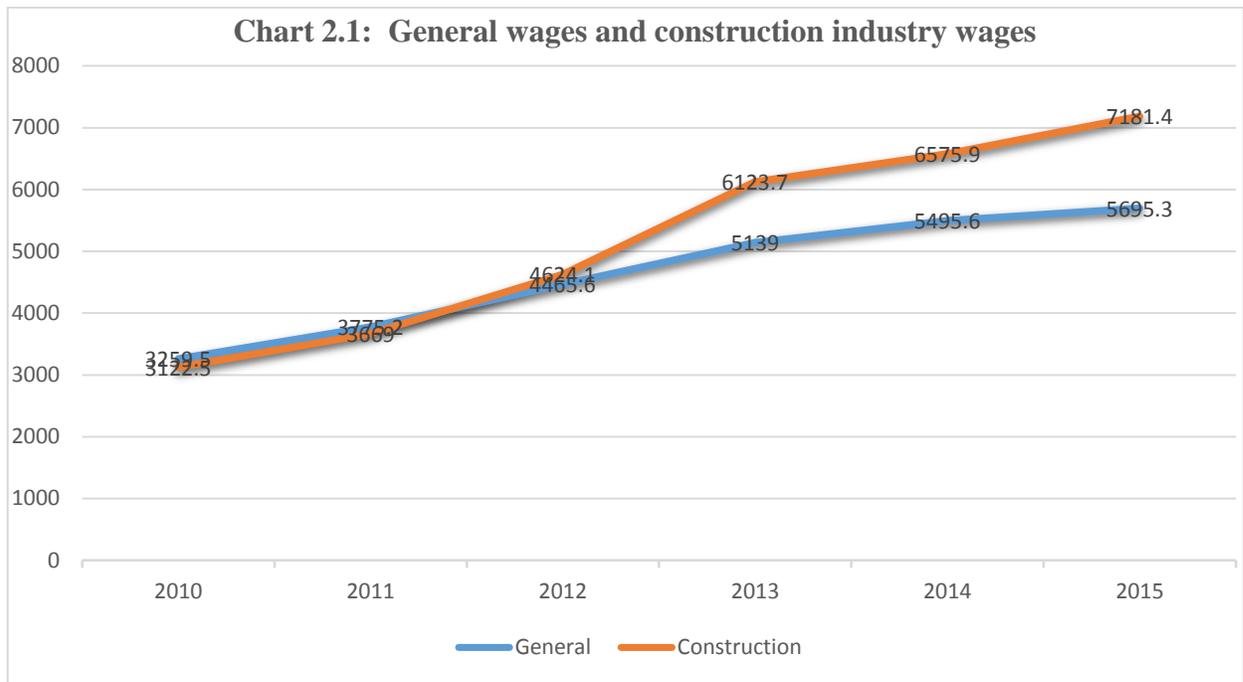
Table 2.8 shows general wages average in society and construction industry wages average. In 2010, construction industry wages is less than general society wages 137,000 dong, but after 2011, construction industry wages took over general society wages 158,500 dong. Later years' study, gap between construction industry wages and general society wages is large namely 2014: 1,080,300 dong, 2015: 1,486,100 dong. Chart 2.1 illustrates improvement of construction industry wages in comparison to general society wages as bellows.

Table 2.8: Construction Industry Salaries and Wages

Unit: Thousand dong

Year	2010	2011	2012	2013	2014	2015 (prel.)
General (a)	3259.5	3775.2	4465.6	5139.0	5495.6	5695.3
Construction (b)	3122.5	3669.0	4624.1	6123.7	6575.9	7181.4
Gap (a) – (b)	137.0	106.0	-158.5	-984.7	-1080.3	- 1.486.1

Source: Statistical yearbook of Vietnam - General Statistical Office



6. Import and Export of Construction Services

- Annual Import/Export of Construction Services

In the construction sector, wood and wood products is one of 10 groups of valued largest exports in recent years. In addition, the pottery and glassware are also bring greater export value of Vietnam. Overall value of exports of these commodities are annual growth. Table 2.9 displays figures from 2010 to 2015.

Table 2.9: Some main goods for exportation and importation

Unit: Mill. USD

Year	2010	2011	2012	2013	2014	2015 (prel.)
Exportation						
Pottery and glassware	317.1	359.2	440.5	472.3	514.3	477.3
Wood and wooden products	3444.5	3960.5	4665.5	5591.8	6145.3	6891.6
Importation						
Machinery, apparatus and parts for construction	868.8	639.1	433.0	483.3	602.7	N/A
Machinery, apparatus	211.7	161.2	108.4	150.7	111.4	N/A

and parts for cement construction						
Iron, steel	6164.6	6442.3	6019.9	6701.2	7732.1	7477.5
Of which: blank	1115.6	627.1	325.2	234.9	342.1	623.5
Aluminum	930.5	1055.3	1105.7	1209.1	1402.8	N/A
Glass	81.6	99.1	200.0	164.3	148.90	N/A
Clinkers	86.5	45.1	23.8	7.9	9.4	N/A

Source: Statistical yearbook of Vietnam - General Statistical Office

Top 5 Countries for Construction Import/Export: in the top 5 countries of import and export with Vietnam which is the United States, China, the EU, Korea and Japan.

Looking back Vietnam's economy after 30 years of renovation, Vietnam was out of the socio-economic crisis, the situation underdevelopment, become developing countries with average incomes, are pushing industrialization, modernization and international integration. But, in the last 10 years, Macroeconomic Vietnam was instability, the economic growth rate of decline, slow recovery. Quality, efficiency, productivity and social competitiveness of the economy is still low and unsustainable development.

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Lĩnh vực xây dựng chiếm 35,2 % vụ tai nạn lao động chết người (Construction sector accounted for 35.2% of death labour accidents)
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VIETNAM COUNTRY REPORT

Dr. Pham Van Bo

Vice President,

Academy of Managers for Construction and Cities

Email: phamvanbo@hotmail.com

1. Executive Summary

- Vietnam - member ASEAN since 1995, ASEM since 1996, APEC since 1998, WTO since 2006 and TPP since 2015;
- 2006-2010: economic size in 2010 increased 2 times in comparison with 2006;
- 2006 to 2015, Vietnam's GDP has grown by more than 4 times;
- FDI flow into Vietnam in 2015, including registered and disbursed capital, has increased by about 4 times after 2006;
- In 2006: total import and export turnover of Vietnam has reached US\$ 70 billion, in 2015 this figure was approximately US\$ 330 billion.

2. Macro Economic Review and Outlook

- Overview of National Economy
 - 2011 – 2015: GDP growth rate 5.91% on average
 - GDP per capita at 1273 USD/person in 2010 to 2109 USD/person in 2015
 - Inflation: 13.62% in 2011 to 8.19% in 2012; 4.77% in 2013; 3.31% in 2014 and 2.05% in 2015
 - Population: 91.7 million in 2015, annual average increase of 1.07% per year
 - Unemployment rate in 2015 reduced 1.68 percentage points over 2010
 - Percentage of trained employed workers at 15 years of age and above went up from 15.4% in 2011 to 19.9% in 2015.

Table 1: Structure of economy

Sector	2010	2015
Agriculture, forestry and fishery	18.38%	17%
Industry and construction	32.13%	33.25%
Services	36.94%	39.73%
Products taxes less subsidies on production	12.55%	10.02%.

3. Overview of the Construction Industry

Table 2.2 Construction investment

Unit: Bill. Dongs

Year	2010	2011	2012	2013	2014	2015 (est.)
Total investment at constant 2010 prices	37362	36502	37629	47875	75748	86524
Index (previous year = 100)%	127.53	97.70	103.09	127.23	158.22	114.23
Total investment at current prices	37362	43914	47273	59975	95216	113478
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Index (previous year = 100)%	146.17	101.10	88.07	102.25	268.67	124.03
Non-state investment at current prices	21105	25641	23614	23824	64061	84334

FDI projects licensed – accumulation of projects as of 2015

- FDI projects from 1988- 31/12/2015: 19899, total registered capital of 281,665.9 billion USD
- Registered capital in construction: 1264 FDI projects, accounted 10893.8 million USD and occupied 3.87%
- Water supply, sewerage, waste management and remediation activities: 43 FDI projects, accounted 1352.7 million USD with share of 0.48%
- Real estate: 500 projects - US \$ 50896.4 million – share of 18.07%;
- *FDI projects related to environmental remediation has still been relatively small proportion of projects in other sectors in the economy*

Construction Companies

Table 2.4: Construction companies in Vietnam as of annual 31 December

Unit: Enterprise

Year	2010	2011	2012	2013	2014
Construction buildings	20810	21531	24687	26638	27373
Civil engineering	14608	13503	14050	14726	16158
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Employees and Construction Labor

Table 2.5: Manpower in construction industry 2010 – 2015

Unit: thousand persons

Year	2010	2011	2012	2013	2014	2015 (prel.)
Employed population at 15 years of age and above as of annual 1st July in construction industry	3108.0	3221.1	3271.5	3308.7	3313.4	3431.8
Structure of employed population at 15 years of age and above as of annual 1st July in construction industry	6.3%	6.4%	6.4%	6.3%	6.3%	6.5%
Growth rate of employed population in construction industry	19.8%	3.6%	1.6%	1.1%	0.1%	3.6%

Productivity

Table 2.6. Productivity of construction industry

Unit: Mill.dongs/persons

Year	2010	2011	2012	2013	2014	2015 (Prel.)
Productivity	42.7	48.3	53.4	55.6	60.7	66.5

Construction Cost

Table 2.7: CPI Performance, 2010-2015

(% increase compared to previous year)

Year	2010	2011	2012	2013	2014	2015
General consumer price index	109.19	118.58	109.21	106.60	104.09	100.63
Housing and construction materials	114.68	119.66	110.64	104.72	103.74	98.38
Gold price index	136.72	139.00	107.83	88.74	88.51	95.27
USD price index	107.63	108.47	100.18	100.66	100.56	103.16

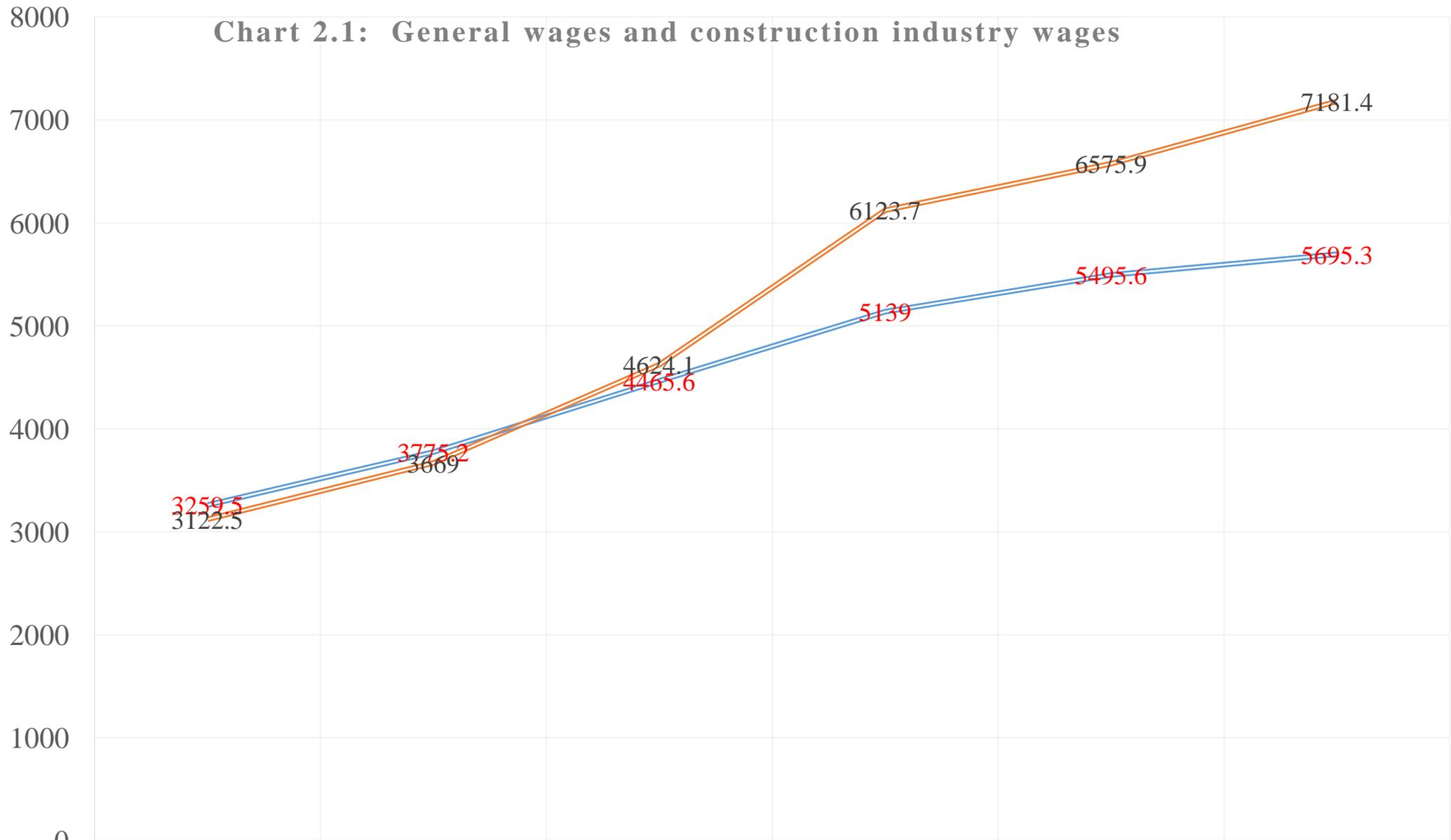
Construction Cost

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Gap (a) – (b)	137.0	106.0	-158.5	-984.7	-1080.3	- 1.486.1

Chart 2.1: General wages and construction industry wages



General

3259.5

3775.2

4465.6

5139

5495.6

5695.3

Construction

3122.5

3669

4624.1

6123.7

6575.9

7181.4

Import and Export of Construction Services

Table 2.9: Some main goods for exportation and importation

Unit: Mill. USD

Year	2010	2011	2012	2013	2014	2015 (prel.)
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Machinery, apparatus and parts for cement construction	211.7	161.2	108.4	150.7	111.4	N/A
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Of which: blank	1115.6	627.1	325.2	234.9	342.1	623.5
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Clinkers	86.5	45.1	23.8	7.9	9.4	N/A

- Top 5 Countries for Construction Import/Export:
 - United States,
 - China,
 - the EU,
 - Korea and
 - Japan.

Conclusion

- After 30 years of renovation: Vietnam becomes developing countries with average incomes, pushing industrialization, modernization and international integration
- Last 10 years: Macroeconomic Vietnam was instability, the economic growth rate of decline, slow recovery

SUSTAINABLE CONSTRUCTION POLICY AND MARKET IN VIETNAM

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1. Executive Summary

- The growth rate of the construction industry 2000-2009: 9.6% per year and 2010-2014: 5.1%
- 2011-2015: Private enterprises are always more than 80% of the production structure of the construction industry
- The Housing Law & the Real Estate Law (amendment) 2014 rise the segment of civil building
- The agreement of FTAs will boost FDI in Vietnam and promote the development of the industrial construction
- The legal framework for PPPs increasingly improved, creating conditions for attracting private investment
- From now to 2020, the development of transport infrastructure needs: VND 202,000 billion/year & approximately VND 125,000 billion / year for electricity infrastructure projects

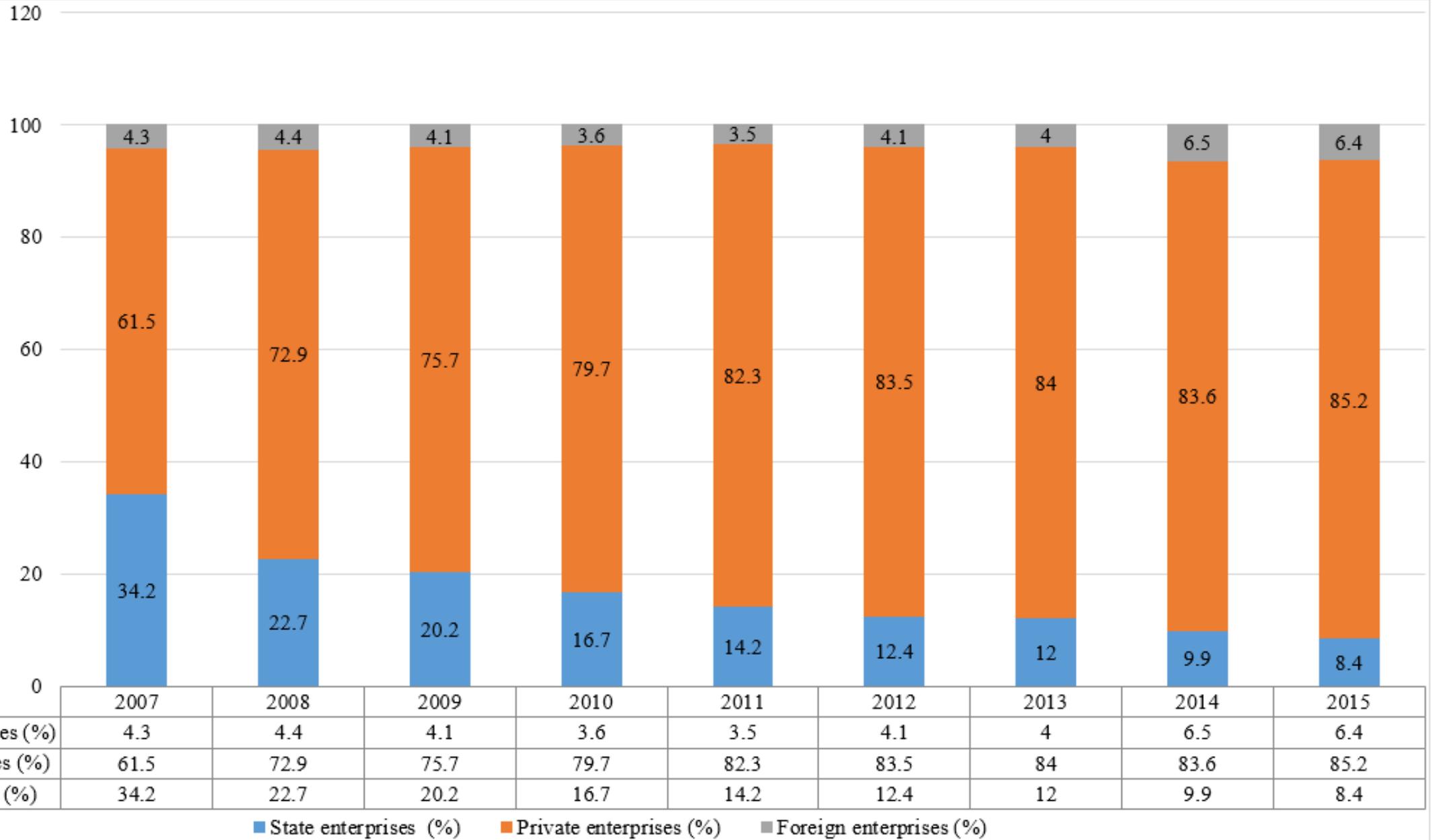
2. Main Issues with Construction Industry and Market

- 1986-1990: policy of "innovation" made construction industry have important changes
- 1991-2000:
 - Property market fever in 1993-1994; Construction industry with an average growth rate of 10.5% per year
 - Many policy mechanism made fairly uniform legal framework
 - Companies continued to invest strongly in depth to technological innovation, production capacity and competitiveness
 - The speed of executive work of large projects in infrastructure, industry, civil is quicker 2-3 times than previous period.

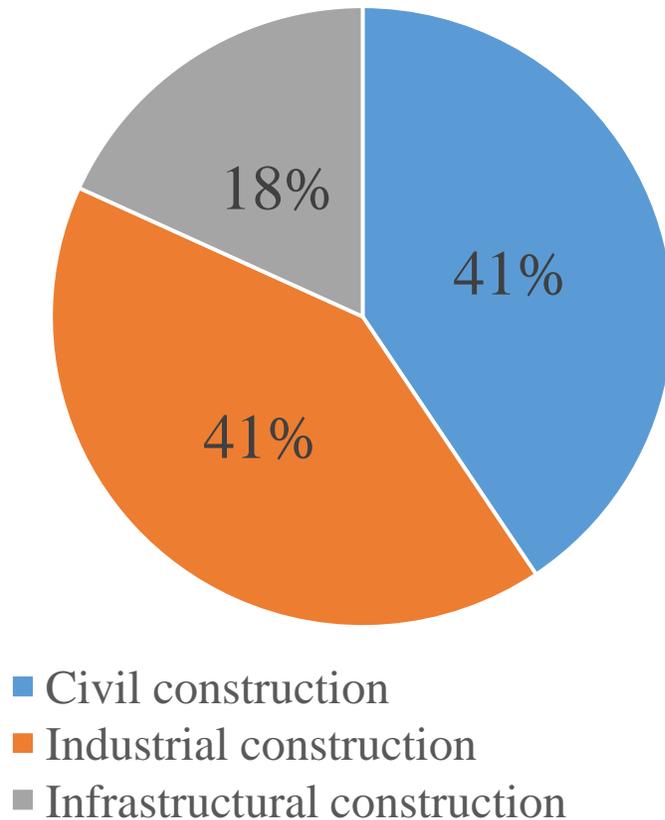
Period 2001- present

- further integration into the regional – international economy, Vietnam has becomes WTO membership since 2006
- Real estate fever in 2000-2001 and 2007-2008 has strongly impacted on the growth of the construction industry
- Construction Law, Housing Law and Business Law of Real Estate, Urban Planning Act enacted - improvement of the management of planning, urban development of municipality, housing and estate market
- Vietnam construction enterprises have mastered designed technology and construction of high-rise buildings, large span buildings, underground works, and complex geological works; competing with the foreign enterprises

Share of economic component in construction industry

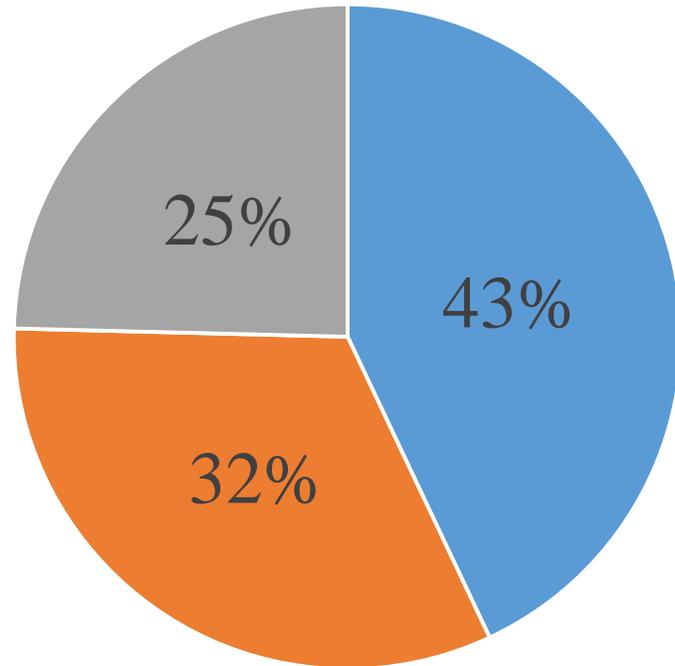


Structure of Construction Industry Value by sector



- Civil Works and Infrastructure Works are always high share in the structure of construction industry value

Structure of Construction Industry Value by region



■ North Vietnam ■ South Vietnam
■ Central Vietnam

- the North was leading the country on spending for construction (43%), followed by a 32.4% of South and the Central was 24,6%.
- Hanoi capital city and Ho Chi Minh City are two attractive centers of investment capital in the country

3. Efforts Made According to the Conditions Surrounding Construction Industry

- **Market of Inputs:** Building materials (steel, cement, brick, stone...), workers and construction machinery
- **Process of construction:** (1) Design, (2) Procurement, (3) foundation construction, (4) raw building, (5) finishing
- **Construction market:** Civil construction market; Industrial Construction Market; Infrastructural Construction Market

3.1 Market of Inputs

- The cost of construction project includes
 - 60 -70% of cost of building materials in which steel and cement accounted 60 – 70%;
 - 10 – 20% of worker cost
 - 10 -20% of construction machinery cost.
- **Construction materials**
 - Vietnam steel industry is still growing at a rate of 2 digits, reaching an average of 15% / year over the period 2011-2015
 - most steel enterprises with small-scale production, production technology was only the world average, at the stage of near end of the value chain; low added value, not high profit
 - production and consumption of cement in 2014, 2015 is stability

Market of Inputs (cont.)

- Program development of unburned building materials up to 2020 under Decision No. 567/ QD-TTg dated 28/04/2010 of the Prime Minister and Directive No. 10/CT-TTg dated 16/04/2012 of Prime Minister on the increased use of non-baked materials, has 50 provinces eliminating manual brick kilns, furnaces using fossil fuels, 25 provinces issued Directive to increase production and use of unburned materials. The implementation of the project "Strengthening the production and use of adobe bricks in Vietnam", to cut the annual rate of increase in greenhouse gas emissions by decreasing the use of fossil fuels and soil to make brick, through the intensification of production, sale and use of adobe bricks in Vietnam.

Market of Inputs (cont.)

- **Workers**

- Construction industry reached 3.3 million workers, 4th ranking in the country
- 80% of construction workers are now doing seasonal work
- Vietnam's labor productivity is only half the average of the Southeast Asian countries
- 2011 to 2014, workers in construction industry were unpaid wages accounted for a high proportion
- Construction industry is leading the field of occupational accidents causing deaths

Market of Inputs (cont.)

- **Construction machinery**

- Every year, Vietnam imported 15,000 construction machines of which 95% are older machines with average import turnover US\$ 300-400 million
- The price of older machine is only 25% of new machines, and suitable to Vietnam construction situation, so the old models are pretty much used by small and medium building contractors
- the use of the old machine also has disadvantages, such as complicated procedures, the frequent failures, and performance is not equal to the new device and pollute the environment.

3.2 Process of construction

- **Architectural Design**

- Grown building qualifications required enhanced building design with application of technology
- The design is only about 5-10% of the cost of the construction package, but it affects more than 70% of the quality and efficiency of work.
- The design changes during construction is one of the main causes leading to delays and cost increases.

- **Bidding**

- EPC is not applied so much yet in Vietnam
- Design - Bid - Build is applied very popular in Vietnam
- *The only low bidding price interest has led to construction companies to bid low, and then because of the low price, they neglect works or hire sub-contract to weak capacity to implement. Also, it appears the contractors find ways to adjust bids, making progress in a lot of traffic projects slowed down and investment costs also increased 2-3 times.*

Process of construction (cont.)

- **Building Foundations:** new technologies have been applied in the construction of the foundation
- **Raw building**
 - Since 2011, the government has issued a mandatory regulations of high-rise buildings (from 9 storeys or more) to use 30% of unburned materials for wall construction
 - the construction of industry and infrastructure use some new methods intended to reduce the volume and time
- **Finishing & Interior design:** today's interior design is finding creative design solutions for interior space.

3.3 Construction market

- **Civil construction market**

- Civil construction market affected and influenced heavily by housing and real estate markets;

- Of these 5 main factors affecting the market include:

- (1) demographics (age structure, income, population growth, and urbanization rate),

- (2) interest rates: loans and savings fell 8% and 6%

- (3) health economy (GDP growth: 6.68% in 2015 and 6.2% in 2016, unemployment, inflation and consumer's belief),

- (4) policy support from the government

- (5) FDI inflows: nearly US\$2.4 billion in property.

Table 2: The national urban development stage of 2012 – 2020

	2013	2015	2020
Ratio of urbanization (%)	33,5	38	45
Average Housing Floor Area (m²/person)	23,1	26	29
Permanent house ratio (%)	60	65	75

Construction market (cont.)

- **Industrial Construction Market**

- 70% in the FDI structure with the number of new projects in construction of plants
- 2016, several major projects: Garment Factory of Maple Co., Ltd. (Singapore): US\$ 110 million, project of Aureumaex Precision Plastics plant of US\$ 21 million ...In addition, the plan of investment projects of Amata (Thailand) in Quang Ninh and Dong Nai, with scale up to billions of dollars, opening a plant of Hyosung, Korea with US\$ 500 million in Vietnam or the project raised 500 million investment in Vietnam, Jabil Circuit (United States) ...

Construction market (cont.)

- **Infrastructural Construction Market**

- Up to 2020, capital demand of investment about VND 202,000 billion for transport infrastructure and VND 125,000 billion for electricity infrastructure projects per year;
- The Government issued Decree No. 15/2015 / NĐ on investment in public - private partnership (PPP), to create a clear, uniform legal framework to promote private sector to invest in infrastructure projects.

4. Future Development for Sustainable Construction Policy and Market

- **Civil construction:**

- New policies and new legal support driving force in the market of Real Estate
- By 2020: 4.2 million workers need 33.6 million m².

- **Industrial Construction:**

- Proportion capital for manufacturing industry proportion in structure of FDI (40-50%), equivalent to the average amount disbursed US \$ 4-5 billion per year;
- In 2015, Vietnam has negotiated and joined the free trade agreements to promote FDI into Vietnam;
- The prospects of the industrial construction was assessed positively in 2016 and the coming years.

Future Development for Sustainable Construction Policy and Market (cont.)

- **Construction of infrastructure:**

- 40% of the road transport system with very low quality require to upgrade the road network to reach USD 48-60 billion up to 2020 equivalent to an annual investment needs at about VND 202,000 billion per year
- Plans to build 26 airports (10 international airports 16 domestic airports) to 2020 and Long Thanh International Airport with a total investment of \$ 10 billion approximately
- Planning Electricity 7, develop another 75,000 MW power generation capacity, total investment for this plan in the 2011-2020 period is estimated about 48.8 billion dollars, equivalent to the investment needs of VND 125,000 billion per year
- In the period 2016-2020, investment demand for road transport is about VND 202.000 billion per year and the electricity sector is VND 125,000 billion per year.
- if efforts improve the legal framework for PPP to take effect, the attraction to private investment will intensify, contribute to the growth of the construction industry; the huge investment is pressure in the near future

5) Recommendation

- Projects must comply with the assessment of environmental impact is reflected in the construction law, environmental law, planning law and Decree 18/2015 / ND-CP of protection, environmental assessment etc
- Standardized workforce of construction industry through training, improved wages regime, ensuring safe conditions for workers
- The government has to issue policies to promote sectors private sector development.