

Vietnam Annual Economic Report 2016

FORGING NEW FOUNDATIONS FOR ECONOMIC GROWTH

Ha Noi, May 10, 2016

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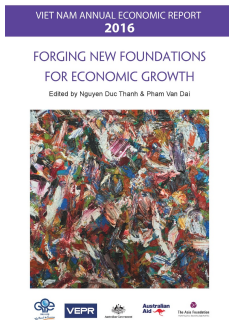
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VEPR The Context of VAER 2016

- The most important FTAs for Viet Nam have been formed in 2015, which raised the question of whether Viet Nam was ready and well prepared on the economic foundations for this new wave of integration.
- The world economic fluctuations showed that political volatilities and the global economic restructuring process might pose huge pressures on global trade and aggregate demand. This might create unexpected impacts, negatively influencing Vietnam's trade and production, state budget as well as macroeconomic balances.
- The new government has declared strong messages on institutional reforms to integrate and improve the quality of growth and competitiveness; however, there are still many barriers for real implementations of these promises.



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Chapter 1: Overview of the World Economy in 2015

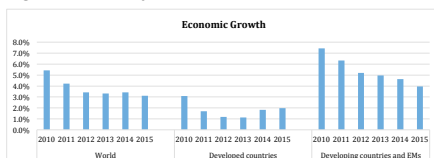
Pham Van Dai, Nguyen Thanh Tung,
and Nguyen Khac Giang

VEPR Contents

- The world economy stumbled
- The US kicked off the normalization process
- EU and Japan slightly recovered
- A slowing China
- Tottering developing countries and EMs
- Crude oil and commodity prices tumbled
- New generation FTAs

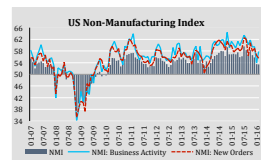
VEPR Global economic growth

- The lowest growth rate since 2010: 3.1% in 2015
- Slowing developing countries and EMs in the fifth consecutive year
- A slight recovery in developed countries

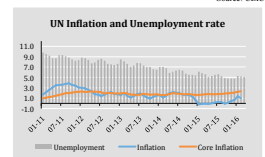


VEPR Positive trends in the USA economy

- Economic growth gradually gets on the right path, reaching 2.5% in 2015.
 - Continuous expansion in the service sector (Non-manufacturing PMI)
 - The unemployment rate at 5%, the long-term equilibrium level
 - Core inflation surpassed 2%
- FED raised FFR in Dec 2015.



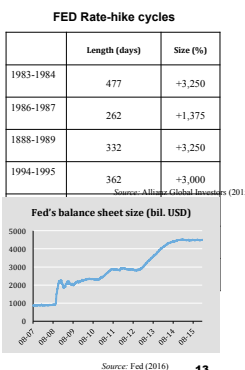
Source: CEIC (2016)



Source: CEIC (2016) 12

VEPR Positive trends in the USA economy

- Interest hike roadmap: reducing 2016's FFR hike target from 1.375 pp to 0.875 pp
- The current scale of Fed's balance sheet at 4.5 trillion USD → it is anticipated to take 6 years to bring these figure to the pre-crisis levels.



VEPR The US President Election

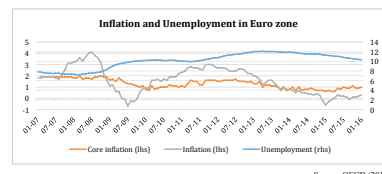
- Donald Trump (Republican Party) and Hilary Clinton (Democratic Party) have similarities in economic policies:
 - Conservative trade policies.
 - Support easy money policy and a low interest rate

VEPR European

- Weak recovery led by aggregate demand. Economic growth reached 1.9% (EA 28) and 1.5% (Euro zone)
- Private final consumption rose by 2.1%, roughly equal to the pre-crisis figure, mainly due to a slump in equal and commodity prices.
- Trade surplus was expanded by dint of a weak Euro: surplus of 477.7 billion USD in 2015.
- Major economies: Spain (3.2%); Netherlands (1.9%); Sweden (4.1%); Germany (1.7%)

VEPR Europe

- Inflation is around 0% (core inflation at 1%), far from the 2% target → deflation risk.
- The unemployment rate is improved but unequal among member countries (Germany, UK, Austria: ~5%; Spain, Greece: >20%).



VEPR The Brexit Scenario

- Impacts on trade and investment: 63% of export goods directly to the Europe or under FTAs signed as European members.
- Total welfare of the UK may decrease by -2.33% GDP or increase 1.55% GDP in the corner scenarios.
- Impacts on EU: Weakening business and investment environment.

Impact of various Brexit scenarios on UK GDP (2030)

%GDP	Worst scenario	UK-EU FTA 1	UK-EU FTA 2	Best scenario
Initial cost	-2.76	-1.03	-1.03	-1.03
EI budget saving	0.53	0.22	0.22	0.53
Free unilateral trade	-	-	0.75	0.75
Derogation	-	-	-	1.3
Total effects	-2.23	-0.81	0.64	1.55

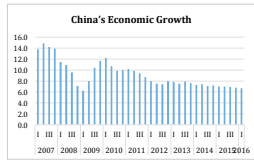
Source: Deloitte Research (2016)

VEPR Japanese economy

- Unsteady recovery: GDP growth rate at 0.5% in 2015
- Low inflation, liable to encounter deflation
- QQE were maintained: negative interest rates, JPY 80,000 billion stimulus package
- *This is an unsteady and short-term recovery*

VEPR China's Economy

- Declining economic growth, the lowest rate of 25 years (6.9% in 2015)
- PMI remained stable, high performing PMI service -> changes in economic growth strategy.
- The economy demonstrated some positive signs.



Source: CEIC (2016)



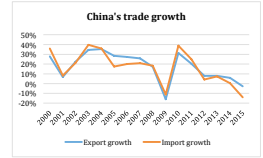
Source: AASStock (2016)

VEPR China's Economy

- Highest ever trade surplus : 600 billion USD in 2015
- Mostly contributed by slumping import demand (down 14.2% compared to 2014).
- Export growth declined as low demand in developing countries



Source: authors' calculation from CEIC (2016)



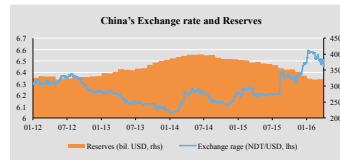
Source: authors' calculation from CEIC (2016)

VEPR China's Economy

- Doubts on the soundness of Chinese Economy:
 - The stock market: broke down in the middle of 2015
 - The possibility of a debt crisis? Booming credit demand, mainly from the private sector -> not really a big threat
 - The possibility of an asset bubble? The asset bubble was on the supply side -> not intimidating

VEPR China's Economy

- Foreign currency reserves has constantly decreased since the middle of 2014. The overall decrease was USD 512.7 billion in 2015
- 11/8: big CNY devaluation as a change in the foreign exchange management mechanism toward more flexible -> shocks in the world financial market.



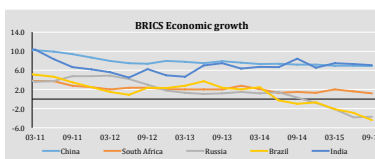
Source: FRED (2016), CEIC (2016)

Depreciation of regional currencies against USD from the 10th of August

	18/8	10/9	30/9
Korea	+1,87	+2,68	+1,90
Indonesia	+2,01	+5,79	+8,16
Malaysia	+4,83	+10,69	+13,23
Japan	+0,02	-3,34	-3,56
Philippines	+1,20	+2,39	2,2
...			

VEPR BRICS Economy

- Unstable politics in Brazil and sloping oil prices induced negative economic growth in both Brazil and Russia in 2015
- South Africa also experienced a declining economic growth rate, only 1.3% in 2015
- India remained the economic growth rate above 7% -> the highest rate among developing countries and EMS.



Source: OECD (2016), CEIC (2016)

VEPR ASEAN-5

- Thailand: Unstable politics, low economic growth rate at 2.8% compared to the 3.7% target set in early 2016.
- Malaysia and Indonesia: declination in exports, especially commodities -> declination in economic growth.
- The Philippines and Viet Nam: maintained/enhanced growth momentum from 2014

VEPR Hot money flow reverses?

- The highest hot money outflow since 1980: 735 billion USD in 2015
- Mainly in EMs in the Asia (including China)

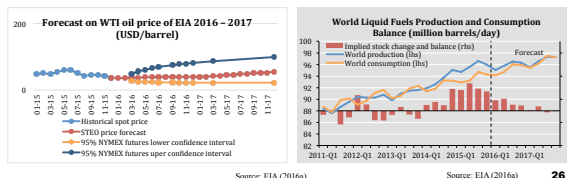
	Total			Emerging Asia		
	2013	2014	2015	2013	2014	2015
Non-resident capital inflows						
- Private	1282	1045	231	670	615	-24
- Official	32	42	63	8	6	6
Resident capital outflows						
- Private	-985	-1039	-824	-506	-604	-548

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VEPR Commodity prices

- Crude oil price slumped due to the supply-demand imbalance. The balance is expected by the end of 2017 (According to EIA).



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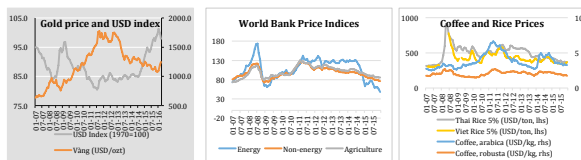
Source: EIA (2016a)

Source: EIA (2016a)

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VEPR Commodity prices

- The USD appreciation caused a downward trend in the gold price in 2015.
- Both non-energy and energy price indices fell dramatically



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Source: World Bank (2016b)

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VEPR Global trade

- Import demands sank in China and other EMs
- Trade volume grew by 2.6%
- New-generation FTAs:
 - TPP: 12 countries; 38%GDP, 25.5% global trade
 - RCEP: ongoing negotiation: 16 countries; 3.5 billion people; 30% GDP; 26% global trade
 - Some FTAs signed by Viet Nam: EVFTA; AEC;...

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VEPR World Economic Outlook 2016

	WEO* (4/2016)		GEP** (1/2016)		WESP*** (2016)	
	2016p	2017p	2016p	2017p	2016p	2017p
World	3.2 (-0.2)	3.5 (-0.1)	2.9 (-0.4)	3.1 (-0.1)	2.9 (-0.4)	3.2 (-0.2)
Advanced Economies	1.9 (-0.2)	2.0 (-0.1)	2.1 (-0.2)	2.1 (-0.1)	2.2 (-0.3)	2.3 (0.0)
United States	2.4 (-0.2)	2.5 (-0.1)	2.7 (-0.1)	2.4 (0.0)	2.6 (-0.4)	2.8 (-0.1)
Japan	0.5 (0.0)	-0.1 (-0.4)	1.3 (-0.4)	0.9 (-0.3)	1.3 (-0.7)	0.6 (+0.3)
United Kingdom	1.9 (-0.3)	2.2 (0.0)	2.4 (-0.2)	2.2 (0.0)		
Euro Area	1.5 (-0.2)	1.7 (0.0)	1.7 (-0.1)	1.7 (+0.1)	1.9 (0.0)	2.0 (0.0)
Emerging Market and Developing Economies	4.1 (-0.2)	4.6 (-0.1)	4.8 (+0.6)	5.3 (-0.2)	4.3 (-0.6)	4.8 (+0.5)
Brazil	-3.8 (-0.3)	0.0 (0.0)	-2.5 (-3.6)	-1.4 (-0.6)		
Russia	-1.8 (-0.8)	0.8 (-0.2)	-0.7 (-1.4)	1.3 (-1.2)	0.0 (-0.8)	1.2 (-0.1)

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VEPR World Economic Outlook 2016

- Impacts on Viet Nam:
 - Declined exports due to weakening trading partners.
 - Inflation rises
 - Trade and investment boom by TPP
 - Global money market (FFR, the value of CNY,...) might impact on domestic financial and money markets

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Chapter 2: Overview of Vietnam's Economy in 2015

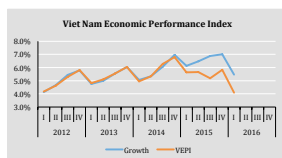
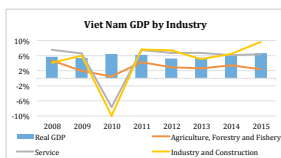
Pham Van Dai, Nguyen Duc Thanh,
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- Aggregate demand
- Macroeconomic balances
- Capital market and money market
- Property markets

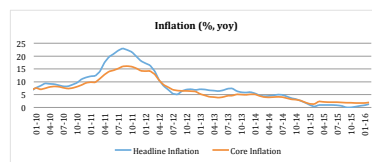
VEPR Economic growth

- Impressive economic growth rate of 6.68%, largely thanks to construction and industrial sectors (9.64%)
- Growth of the agricultural sector declined, the service sector's stayed still
- Viet Nam Economic Performance Index (VEPI) was low due to declined trade; disappointed PMI and rail transportation volume.



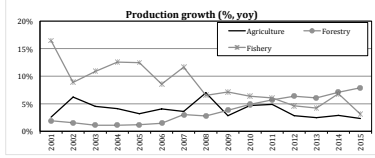
VEPR Inflation

- The lowest inflation rate in recent years: 0.63% in average. Core inflation: at 2.05%
- Low inflation results mainly from tumbling energy and food prices, which accounts for 17% of the CPI basket.
- The plan to raise healthcare and education service prices was delayed until 2016



VEPR Aggregate supply

- Lowest growth in agriculture and fishery sector in the past 20 years (respectively 2.3% and 3.1%)
- Crop productivity slumped as bad weather
- Forestry sector constantly cherished. Forest plantation area significant increases.



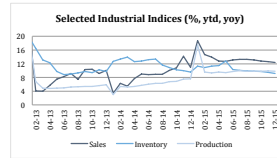
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Source: GSO (2016)

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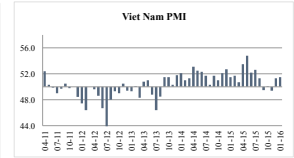
VEPR Aggregate supply

- 2015's industrial production index rose by 9.8% (2013: 5.9%; 2014: 7.6%); processing-manufacturing, electricity and gas sectors showed significant improvement.
- PMI remained higher than 50 points with exceptions of Sep and Nov



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Source: GSO(2016)

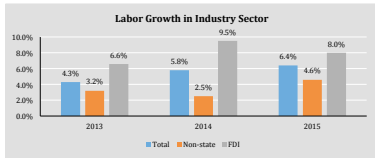


Source: HSBC, Nikkei (2016)

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VEPR Aggregate supply

- Lodging, food and travelling services were improved: rose by 5.2% (compared to a drop of 17.4% in 2014)
- the number of visitors rose.
- The factor market: a low unemployment rate, especially in the non-state sector.



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Source: GSO(2016)

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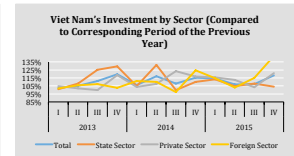
VEPR Aggregate demand

- Consumption improved in terms of nominal volume while the real value slipped due to the price factor.
- Investment surged in the last half of 2015, especially in the FDI sector



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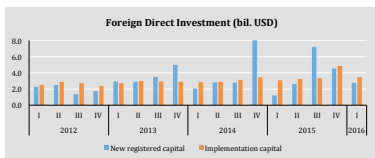
Source: GSO (2016)



Source: GSO (2016)

VEPR Aggregate demand

- Foreign direct investment expanded rapidly
- New registered capital reached 15.6 billion USD
- Implementation capital reached 14.5 billion USD, up by 17.4%



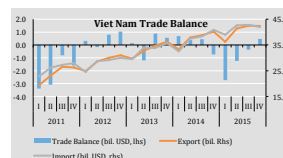
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Source: CEIC (2016)

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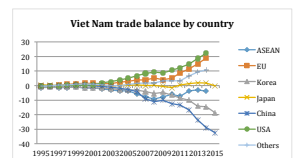
VEPR Aggregate demand

- Trade deficit tended to come back
- A slowing export growth rate of 8.1% (2013: 15.4%; 2014: 13.6%)
- Imports from Korea prevailed



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Source: GSO (2016), CEIC (2016)

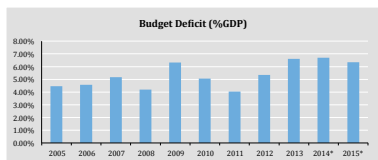


Source: GSO (2016), CEIC (2016)

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VEPR Macroeconomic Balances

- Huge budget deficit of 6.34% in 2015
 - Budget revenues: slipping sources from crude oil, FDI enterprises, tariffs.
 - Exploiting short-term sources: housing, taxation, fees.
 - Budget expenditure accelerated by 19.1%
 - Current expenditure and paying debt surpassed the total revenues → a part of government borrowings for spending.



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Source: MOF, GSO (2014, 2015: estimation)

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VEPR Macroeconomic Balances

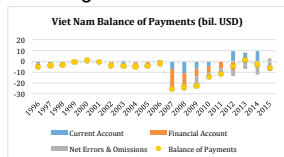
- Impact of crude oil prices on budget:
 - Revenues from crude oil export includes: (i) export tariff; (ii) royalties; (iii) corporation income tax from crude oil extracting firms.
 - Revenues from VAT rose.
- Oil price drops by 1 USD, budget revenues losses by VND 2,100 billion on average (calculated by VEPR).

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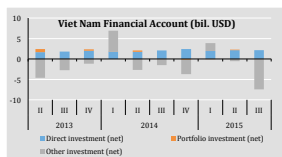
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VEPR Macroeconomic Balances

- Balance of payments turned to a deficit.
- Current account surplus slipped to 1.08 billion (compared to 8-10 billion in the period 2012-2014)
- Financial account balance diminished, especially in "Other investments", while "Net Errors & Omission" was large.



Source: CEIC (2016), SBV (2016)



Source: CEIC (2016), SBV (2016)

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VEPR "Liquidity trap of foreign currency" hypothesis

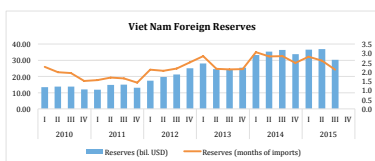
- In Q3/2015, USD interest rate was low;
- In middle of August, 2015, CNY unexpectedly depreciated → Concerns about VND depreciation (the VND/USD hike)
- → Commercial banks were unlikely to lend in foreign currency due to enterprises' concerns: VND depreciation + USD lending rate > VND lending rate
- → Even though the USD interest rates were very low or 0%, VND depreciation would be larger than VND lending rate → People would buy USD or enterprises would borrow in VND but not in USD → Commercial banks cannot lend in USD even when there were a decrease in USD interest rates → "A LIQUIDITY TRAP OF FOREIGN CURRENCY"
- → Commercial banks can not lend in USD → They deposited the money in foreign banks while waiting for depreciation
- → There was an unusually large deposit outflow in Q3/2015, which was lower in Q4/2015 when the expectation of VND depreciation was lower.

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VEPR Macroeconomic Balances

- Balance of payments:
 - Foreign currency reserves decreased, especially in Q3/2015 with a cut of 6.7 billion USD
 - Reserves of imports by months declined to 2.1 months, less than the recommended level of 3-4 months



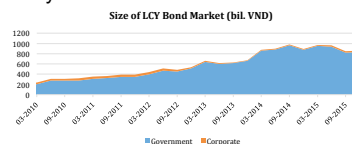
Source: CEIC (2016)

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VEPR Capital market and money market

- Bond market faced many difficulties in 2015
- Bonds issued: 249.7 billion USD, up by 5.3%
- The volume of 2015-matured bonds were larger => outstanding volume decreased by 5%
- Government bonds were issued mainly in less than 5-year maturity



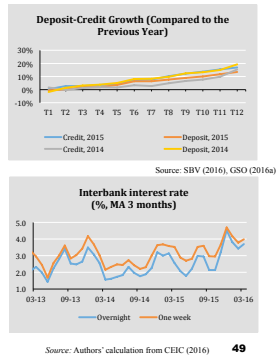
Source: ADB (2016)

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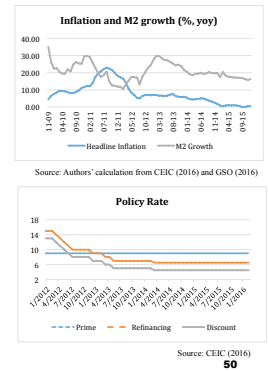
VEPR Capital market and money market

- A high credit growth rate of 17.3%
- Slower deposit growth causing a capital supply-demand gap
- Pushed up the interest rate in both 1st and 2nd markets.



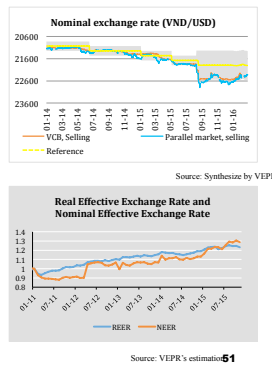
VEPR Capital and money markets

- M2 grew 16.23% in 2015
- However, high growth rates in previous years could put pressure on 2016's inflation
- Stable policy rates
- OMO



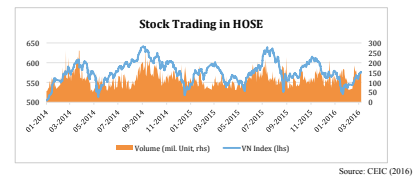
VEPR Capital and money markets

- Forex market: considerable fluctuations in the first three quarters;
- The exchange rate was adjusted twice from the beginning of the year + VND's depreciation after Chinese Yuan's depreciation;
- NEER and REER increased dramatically over 5 years;
- A new exchange rate regime.



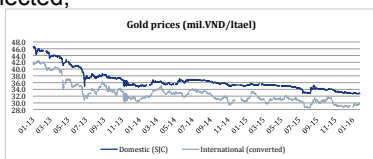
VEPR Property markets

- VNI index largely fluctuated. VN Index at the open of the year was 544.5 points and at the close of the year was 579.0 points
- Decree No. 60/2015/ND-CP helps expand "room" for foreign investors



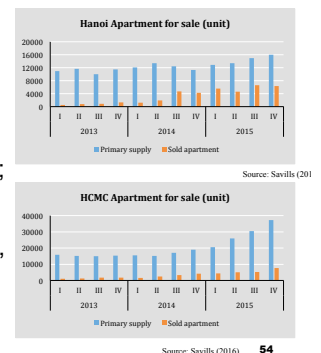
VEPR Property markets

- Gold price declined in the third consecutive year, a decrease of 6.4% compared to 2015;
- Domestic prices and world prices were not highly connected;



VEPR Property markets

- Real estate market flourished in 2015;
- The supply and demand increased in both two main markets;
- The credit growth rose considerably by 25.7%, accounting for 10.3% of total credit outstanding;



VEPR Policy implications

- Enforcing fiscal discipline to reduce budget deficit. It is especially important to have radical solutions to cut government's current expenditure
- Comprehensively and effectively marketizing and easing control on the prices of public services
- Closely supervising the pace and quality of credit expansion, and avoiding a prolonged loosening monetary policy, from which an asset bubble could be formed.
- It is necessary to keep a close watch on the development of the real estate market and prevent a new property bubble
- The ceiling on deposit interests should be eliminated or just applied for very short maturity interest (e.g. less than 1 month) so capital supply-demand balance can be flexibly adjusted by market forces.

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Chapter 3: Demand for new foundations for economic growth: Remarks from midterm economic forecast (2016-2020)

*Nguyen Duc Thanh, Pham Van Dai,
and Nguyen Quang Thai*

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 - Growth accounting methodology
 - Forecast scenarios
4. Midterm economic growth forecast
 - Labor force growth
 - TFP growth
 - Capital growth
 - Economic growth in different scenarios
5. Discussion on selected projected socio-economic indicators in midterm
6. Conclusion and policy implications

VEPR Abstract

- Vietnam failed to meet 10 out of 26 socio-economic targets set by the National Assembly (2011):
 - ❖ The majority of these targets related to productivity of the whole economy.
- Vietnamese Communist Party (2016) sets the new ambitious targets:
 - ❖ GDP growth target on period average is set at 6.5%-7% per year;
 - ❖ By 2020, GDP per capita is projected to 3.200 – 3500 USD.
- The research employs growth accounting method to forecast Vietnamese economic growth:
 - ❖ Vietnamese economic growth is decomposed and forecast based on sources of output growth: labor growth, capital growth and TFP growth;
 - ❖ We also construct various scenarios for TFP, external government debt and global economy.
- Selected socio-economic targets set by Vietnamese Communist Party (2016) are assessed based on economic growth forecast.

VEPR Selected economic indicators, 1996-2015

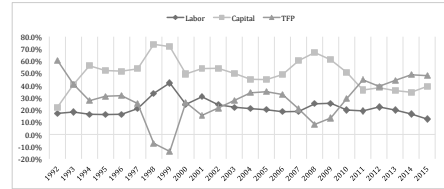
	1996-2000	2001-2005	2006-2010	2011-2015
GDP Growth				
Viet Nam GDP growth (%)	6.95	7.33	6.32	5.88
GDP per capita growth (real)	5.35	6.06	5.18	4.78
Average GDP growth of developing countries	4.20	5.70	6.26	4.96
Fiscal policy				
Budget deficit (%GDP)	-	-4.77	-5.07	-5.95
State budget expenditure (%GDP)	24.44	28.08	31.04	27.38
Recurrent expenditure rate (% State budget expenditure)	64.13	57.29	58.66	73.21
General government net debt (% GDP)**	26.80	36.54	48.08	61.22
Monetary policy				
M2 growth	34.48	26.91	30.75	18.84
Outstanding credit growth	27.57	30.65	35.10	14.27
Inflation (average consumer prices)	3.83	4.67	10.98	8.13
Balance of payment				60
Current account balance (% GDP)				

VEPR Vietnamese economic growth during 2011-2015

- Economic growth during a 2011-2015 period was on average 5.9%/year, lower than the figure projected by National Assembly (2011); but relatively higher than the average figure of developing and emerging countries.
- It was the first time that current account balance was in surplus compared to three previous periods, averaging 3.25% of GDP per year.
- Monetary policy was somewhat more stable in comparison with previous periods:
 - Credit growth as well as M2 growth decreased rapidly over 20 years;
 - Average inflation during 2011-2015 fell to 8.12%.
- Fiscal policy showed various drawbacks:
 - State budget deficit on average is expected to increase to 5.95% of GDP
 - The proportion of recurrent expenditure in total expenditure rose by 14.55%.
 - General government net debt to GDP ratio continuously went up from 26.8% in 2000 to 61.22% in 2015.

VEPR Sources of economic growth, 1992-2015 (%)

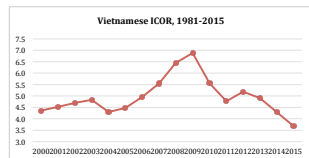
- Contribution of TFP growth in a 2011-2015 period (>40%) was higher than in the previous period:
 - About 15% in a 2005-2009, Vo Tri Thanh and Nguyen Tri Dung (2012);
 - 20.8% in a 2005-2010 period based on the authors' calculation.
- Contributions of TFP slightly decreased in 2015, a sign of the decline in the coming time.



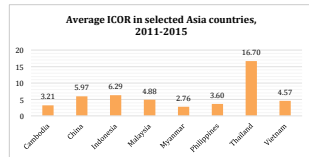
Source: The authors' calculation from WB (2016) and GSO (2016)

VEPR Several positive signs for investment efficiency

- Vietnamese ICOR remarkably declined during 2011-2015.
- Compared to other neighbor countries, Vietnamese ICOR was approximately equal to Malaysian figure, just higher than figures in Myanmar, Cambodia and the Philippines.



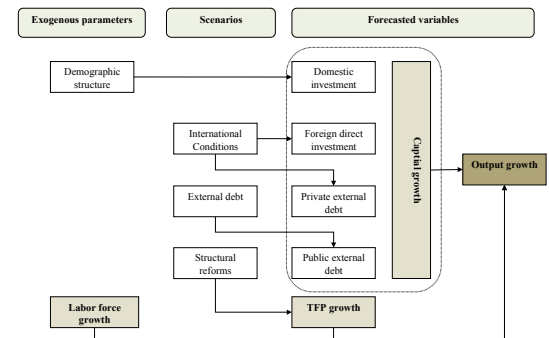
Source: Authors' calculation from IMF (2016)



Source: Authors' calculation from IMF (2016)

VEPR Growth accounting methodology

Diagram on economic growth forecast based on growth accounting method



Source: Authors' summary

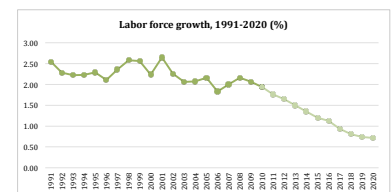
VEPR Forecast scenarios

- Forecast on labor force usually has a high level of precision.
- Forecast on TFP: **3 scenarios**:
 - Baseline scenario: using ARIMA model for data on TFP growth in the 1992-2015 period to construct the scenario with no TFP improvement;
 - Second scenario with slight TFP improvement: TFP growth would be 15% higher than the baseline scenario;
 - Third scenario with significant TFP improvement: TFP growth would be 30% higher than the baseline scenario.
- Forecast on capital: using perpetual inventory method (PIM):
 - International scenario: 3 scenarios (normal/favorable/unfavorable)** on FDI inflow and long-term private external debt;
 - Public debt scenario: 3 scenarios (decreasing/unchanged/increasing)** on long-term public external debt to GDP ratio.

VEPR Midterm economic growth forecast

Forecast on Vietnamese labor force growth:

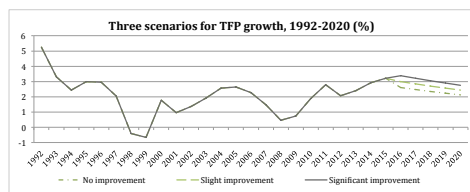
- ILO (2014): on average 0.88% per year during 2016-2020;
- That figure is expected to be lower than previous periods (1.1% per year in 1995-2010).



Source: ILO (2014)

VEPR TFP growth

- **Baseline scenario:** increasing to 2.35% per year on average, lower than in a 2011-2015 period, 2.54 per year;
- **Slight improvement:** 2.7% per year;
- **Significant improvement:** 3.06% per year.

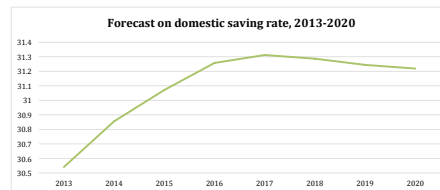


Source: Authors' calculation

VEPR Capital growth

Domestic saving rate:

- Forecast model: excluding variables of changes in GDP per capital out of the model (no significance at 10 percent level);
- The formula to forecast domestic saving rate:
Domestic saving rate (%GDP) = 91.879580 – 1.528004*dependency ratio;
- The rate is expected to reach a peak in 2017, averaging 31.26% of GDP during 2016-2020, higher than a average 2011-2015 figure, 30.43% of GDP.



Source: authors' calculation

VEPR Forecast on FDI inflows

ARIMA(2,0,0) model for FDI forecast

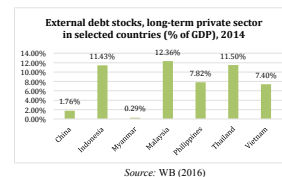
	Coefficients	Standard Error	T-Ratio	P-value
AR1	0.9660	0.2074	4.6580	0.0002
AR2	-0.3055	0.2085	-1.4650	0.1585
CONST	-472062826.2	113560480.6	-0.415693	0.68206
TREND	304745184.6	8063070.984	3.90383	0.00088

- **Baseline scenario:** data based on ARIMA (2,0,0) forecast model;
- **Favorable international condition:** 40% higher than the baseline scenario;
- **Unfavorable international condition:** 20% lower than the baseline scenario.

VEPR Long-term external debt stocks

Private debt stocks:

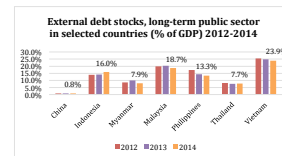
- To increase in the nominal figure (on average 28.2% per year), but to be relatively low in the debt to GDP ratio compared to neighboring countries;
- The real debt stocks growth is expected to increase by 10%-30%/year in different scenarios.



Source: WB (2016)

Public debt stocks:

- High in comparison with the region;
- To rely on government's strategy and the ability to control the debt;
- **3 scenarios on public debt** (decreasing/unchanged/increasing): equivalent to that by 2020 the ratio of external debt stocks in long-term public sector to GDP is predicted to:
 - ♦ Decrease to 20%;
 - ♦ Remain unchanged;
 - ♦ Increase to 30%.



Source: WB (2016)

VEPR GDP growth forecast on average during 2016-2020 (%)

	Unfavorable international conditions	Normal international conditions	Favorable international conditions
Decreasing public debt			
Slight TFP improvement		5.51	5.89
Significant TFP improvement		5.92	6.30
No TFP improvement	5.09		5.48
Unchanged public debt			
Slight TFP improvement		5.60	5.97
Significant TFP improvement		6.01	6.38
No TFP improvement	5.19		5.56
Increasing public debt			

VEPR Economic growth in each year in normal international conditions (%)

- Economic growth:
 - ♦ TFP improvement scenario: 0.6-0.8 point per cent higher than the no improvement scenario;
 - ♦ Increasing the public external debt stocks to GDP ratio: just 0.1-0.2 point per cent higher than the scenario of the unchanged rate;
- Increasing the public external debt stocks to GDP ratio can make mid-term risks for the economy which have not mentioned in this chapter.

	2016	2017	2018	2019	2020
Decreasing public debt					
Slight TFP improvement	6.21	6.00	5.85	5.75	5.64
Significant TFP improvement	6.58	6.41	6.26	6.17	6.07
No TFP improvement	5.85	5.60	5.43	5.32	5.20
Unchanged public debt					
Slight TFP improvement	6.28	6.07	5.91	5.80	5.82
Significant TFP improvement	6.65	6.47	6.32	6.23	6.29

VEPR Discussion on selected mid-term socio-economic indicators

Vietnamese economic growth in the 2016-2020 period

- Vietnamese Communist Party (2016) set the target of economic growth on average at 6.5-7% per year a 2016-2020 period.**
 - An ambitious objective: hardly feasible in Vietnamese infrastructural conditions and institutional environment, along with the decrease in global aggregate demand;
 - Positive factors: economic integration;
 - Fundamental and significant reforms on bureaucratic system, economic structure... should be implemented immediately to be able to achieve the target of 6.5% per year;
 - It is hardly possible to achieve the objective of 7% per year for Vietnamese economic growth in a 2016-2020 period

VEPR Income per capita

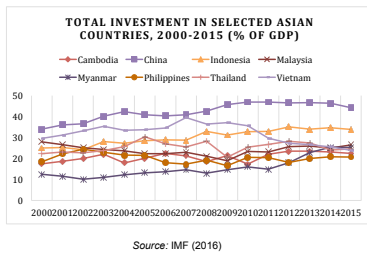
- Objective: 3,200-3,500 USD by 2020.
- Nominal GDP per capita depends on the US inflation.
- Based on authors' calculation, this figure is expected to be around 2,756 to 3,219 USD, with high possibility of 2980 USD by 2020 → hardly achieve the approved objective.
- Real GDP per capita (at 2010 USD value or 2015 USD value) should be calculated.

GDP per capita in different scenarios, 2016-2020

	Real GDP Growth year average	The US inflation, year average	Population growth, year average	Nominal GDP per capita in 2020
Favorable scenario	6,5%	3%	0,8%	3,219
Baseline scenario	6,0%	2%	0,9%*	2,980
Unfavorable scenario	5,5%	1%	1,0%	2,756

VEPR Total investment

- Objective: 32 - 34% of GDP on average in the period;
- To be confused during the process transforming from extensive to intensive growth
- The total investment to GDP ratio in Viet Nam decreased, equal to the figures in Malaysia and Thailand;
- 25-30% of GDP is a more suitable objective;
- Investment efficiency should be a priority.

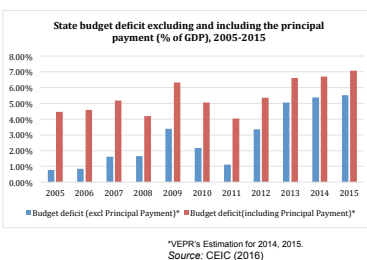


VEPR The proportion of industrial and services output in GDP

- Objective: above 85% of GDP by 2020;
- By 2015: this figure had been 81.1% of GDP, increasing by 1.16 pp in a whole period of 2011-2015 → structural shift is not an easy task
- Breakthroughs in reforms, creating favorable business environment, promoting urbanization and structural changes are needed;
- Strengthening the linkage between services sector and the other sectors (agriculture and industry).

VEPR State budget deficit

- Objective: less than 4% of GDP;
- This objective can be achieved if applying the new method approved in the Law on State budget in 2015, which follows international norms.
- State budget deficit excluding principal payment on average in the 2011-2015 period was 4.08% of GDP per year.
- During 2013-2015: State budget deficit excluding principal payment is estimated to always exceed 5% of GDP.
- Tightening the fiscal discipline is needed to achieve that objective.



VEPR Conclusion and policy implications

- Vietnamese average economic growth will exceed 6.5% only if incentives for growth are significantly improved
 - Labor force growth is declining, difficult to reverse the trend;
 - Thus, economic prospects rely largely on capital growth; the quality of human resources and technology.
- Economic growth since Doi Moi reform (market-oriented reforms): extensive, depending on capital growth → not a suitable solution due to diminishing marginal return
- During a 2016-2020 period, capital growth still play an important role:
 - New generation FTAs: TPP, EVFTA... help Viet Nam to attract foreign investment;
 - Improving the business environment, removing barriers are needed to attract and take advantages of this capital;
 - Domestic investment: limited public investment and the domestic saving rate which was already quite high compared to income per capita.
- FDI inflows also create favorable conditions for enhancing domestic technology and human resources:
 - To promote sound business environment quality, encourage domestic enterprises to develop and expand and coordinate with FDI firms.

VEPR Conclusion and policy implications (Cont.)

- Fundamental reforms in state-owned enterprises, mainly focusing on equitization, should also be accelerated urgently in order to enhance total factor productivity:
 - ◆ Viet Nam has currently spent uncontrolledly on inefficient operation of public administration sector: the extremely high rate of recurrent expenditure in total budget expenditure;
 - ◆ Administrative reforms should be aimed towards streamlining the bureaucratic system → increasing the public savings rate and resources allocated to the private sector
- Relationship between improving the quality of the labor force and transformation of economic growth model:
 - ◆ There are a huge redundancy of higher education graduates who do not fit in market demand
 - ◆ Government subsidies widens the gap between supply and demand
 - ◆ The education system should carry out market-oriented reforms towards meeting the demand of the labor market;
 - ◆ Training cost should be calculated comprehensively in accordance with the market mechanism to avoid wasting resources;
 - ◆ Government subsidies in the higher education system should be drastically cut down, which allows the market to decide the size and the cost of the higher education service

VEPR

VEPR

Chapter 4: Shifting from quantity to quality growth: Roles of new policy procedures and organizations

Kenichi Ohno

VEPR Contents

1. Introduction
2. The new context of development
3. The catching-up challenge for Viet Nam: The glass ceiling in East Asia
4. Reforms in policy making procedure and organization
5. How to break a solidified system
 - ◆ Leadership
 - ◆ A technocrat team and a national council
 - ◆ Foreign partnership
6. Concluding remarks and policy implications

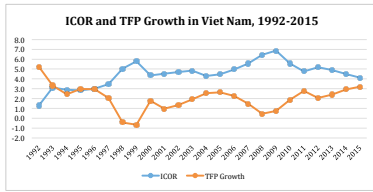
VEPR Introduction

- Vietnam is one of the early achievers of the Millennium Development Goals;
- The share of manufacturing in GDP rose from 12% in 1990 to 76% in 2014;
- Much of this apparent structural shift was attributable more to the large inflow of FDI than the dynamism of domestic enterprises;
- Institutional reforms have progressed at a slower speed than expected;
- Equitization (privatization) of small SOEs has largely been accomplished, but that of the remaining large SOEs is behind schedule;
- Exemplary achievements were generated by a growth model based on low labor cost and intensive capital investment rather than on productivity and competitiveness
- New Policy Procedures and Organizations:
 - ◆ Adopting international rules and standards
 - ◆ Coping with the problems that might arise;
 - ◆ It was essentially reactive adaptation to the new reality rather than proactive creation of new value and industries

VEPR The new context of development

- Deeper Integration:
 - ◆ Protection of weak domestic industries behind high walls of tariffs and non-tariff barriers was no longer allowed;
 - ◆ Policies to enhance competitiveness were called for.
- It will be some years before Vietnam's developmental trap becomes a reality, as encountered in Malaysia; however, local officials and researchers are already fully aware of this risk;
- Data of ICOR and TFP shows a clear sign of investment-driven growth with low efficiency in capital use;
- The wage increase which is faster than the increase in labor productivity
- Issues with greater trade and financial integration: global boom-bust cycles, inequality, and macroeconomic instabilities.

Investment-driven growth without productivity increase

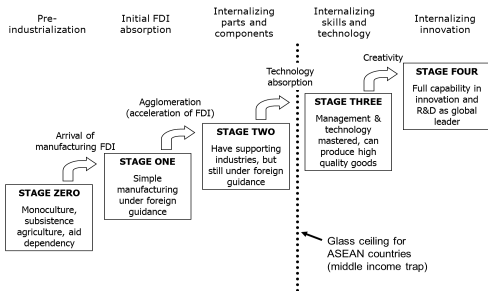


Source: Author's calculation

The catching up challenge for Viet Nam: The glass ceiling in East Asia

- Within this dynamic East Asian context, Vietnam must successfully conduct three crucial policies to sustain growth:
 - (i) Generation of internal value;
 - (ii) Coping with new social problems caused by rapid growth; and
 - (iii) Effective macroeconomic management under financial integration
- Starting from a very low level, Vietnam is currently in the first stage of industrialization trying to reach the second stage
- Tran Van Tho emphasizes five necessary ingredients of New Doi Moi,
 - i. Restraint on state-owned enterprises and promotion of private enterprises;
 - ii. Efficient use of investment funds;
 - iii. Strengthening of industrial competitiveness;
 - iv. Improving education;
 - v. Democratization and establishment of the rule of law.

Stages of Catching-up Industrialization



Reforms in policy making procedure and organization

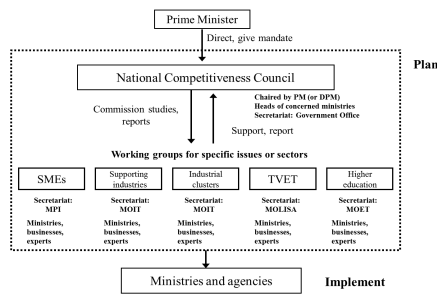
- The two serious procedural problems:
 - ❖ The lack of involvement of the business community;
 - ❖ The lack of inter-ministerial coordination in designing and executing industrial strategies and action plans;
- It is difficult to ensure involvement of non-government stakeholders and inter-ministerial coordination:
 - ❖ The most serious issues in this regard are the *lack of clear directives from the top* and the *distorted incentive mechanism among government officials that causes brain drain*.
 - ❖ The decline of quality and morale of government officials, which prompts an exodus of talented people to other sectors
 - ❖ Cumulative problems of overstaffing, low salary, prevalence of second and third jobs, formalism, rigidity, nepotism, corruption, relation-based promotion
 - ❖ Highly qualified and motivated people are becoming difficult to recruit or retain
 - ❖ No bureaucracy can transform itself radically without an order from a strong leader.

The lack of involvement of the business community

- The policy making process in Vietnam is largely closed within government with little substantive involvement of other stakeholders
 - ❖ If an enterprise wants to raise its voice, it must invent its own way since the current procedure does not allow meaningful involvement of the business community

The lack of inter-ministerial coordination

- The lack of mechanism to force different ministries to work together
- When a serious problem is identified:
 - ❖ Each ministry proposes solutions from its perspective, which are collected into general policy recommendations without execution details;
 - ❖ It is said that there are more than 1,000 research institutes attached to various ministries and levels of the government in Vietnam producing mediocre reports and proposals.
- Solutions:
 - ❖ To have a strong top leader with a good economic mindset (Thailand under Thaksin Shinawatra, 2001-06; Ethiopia under Meles Zenawi, 1991);
 - ❖ To establish a powerful technocrat team directly serving the top leader and making key decisions while ministries become executing agents of plans emanating from this team (South Korea's Economic Planning Board, 1961-1994).



Note: This is a preliminary idea for initiating discussion; listed issues and ministries are suggestions only.

- Comparative institutional analysis suggest the following occasions and agents of change:
 - ❖ Collective mutation
 - ❖ Foreign influence
 - ✓ They bring and sometimes even force new elements, which causes friction, resistance, and inconsistency with the indigenous system
 - ✓ Foreign firms and investors as well as international migration may also produce foreign pressures on a society
 - ❖ Policy

Three players making institutional reforms possible in the Vietnamese context are:

- Leaders
 - ❖ High-quality leadership is the most vital ingredient of national development
 - ❖ Two aspects of national leadership worthy of attention: the quality of the leader or the leading group and the dynamics of coalition formation among contesting leaders and leading groups
- A technocrat team and a national council
 - ❖ In high performing economies of East Asia, a technocrat team is directly under the top leader;
 - ❖ Vietnam also had the Prime Minister's Research Commission (PMRC) in the past, but it was an advisory group rather than a central policy making body;
 - ❖ Vietnam needs such a team at least for the next few decades to climb to higher income and cope with growth-generated problems and instabilities along the way
 - ❖ Vietnam could also adopt the national council model, which is a standard mechanism in many developed and developing countries: coordinating ministries for tackling issues on any industrial policies, such as the fostering of SMEs and supporting industries
- Foreign partnership

- Targeting a small number of priority issues:
 - ❖ key policy entry points be limited in number;
 - ❖ Consideration: Industrial human resource, SME promotion, supporting industries, and industrial clusters;
 - ❖ International cooperation is likely to be forthcoming for these purposes.
- The roles of the Ministry of Industry and Trade (MOIT) and the Ministry of Planning and Investment (MPI) in SME promotion and supporting industry promotion:
 - ❖ The two promotions have significant overlaps although the two are not exactly the same;
 - ❖ MPI should continue to be the lead ministry for SME promotion and MOIT should be the lead ministry for supporting industry promotion for the moment;
 - ❖ In the long run, the two functions should be merged under the same ministry. MOIT is perhaps the more suitable ministry for this purpose.
- Establishment of an inter-ministerial coordination mechanism
 - ❖ Many of the industrial strategies, including supporting industries, SME promotion, and industrial cluster development, are multi-sectoral issues;
 - ❖ One option is establishment of a national council headed by the prime minister (or the deputy prime minister in charge of industry) which supervises and coordinates several key industrial strategies.

**Chapter 5:
China's One Belt
One Road initiative and its
multidimensional impacts on Viet Nam**

*Pham Sy Thanh, Truong Minh Huy Vu,
and Nguyen Thi Thanh Tu*

- The overview of One Belt One Road (OBOR)
- Objectives of OBOR
- Promotion Policies
- Implementation mechanism
- Financial mechanism
- Impacts on Viet Nam
- Policy implications

- One Belt One Road initiative consists of 2 two main elements:
- (i) Silk Road Economic Belt (on-shore Silk Road) is a land route divided into 3 branches:
 - China - Central Asia - Russia - Europe (Baltic);
 - China - Central Asia - West Asia - Persian Gulf, the Mediterranean;
 - China - Southeast Asia - South Asia - The Indian Ocean.
- (ii) 21st Century Maritime Silk Road- is a sea route that runs west from China's east coast to Europe through the South China Sea and the Indian Ocean, and east into the South Pacific .

Economic Objectives	Diplomatic Objectives	Security Objectives
Promote the developments of the unwealthy Western and Southwestern provinces.	Promote cooperation between China and the neighboring countries	Construct overseas military bases and deploy the PLA abroad
Promote outward investment, reduce the pressure from excess foreign exchange reserves.	Implement the second round of China's Open Door Policy	Ensure national energy security
Help Chinese enterprises seeking new investment opportunities in the face of domestic economic context changes	Towards the creation of new international rules and orders more heavily influenced by China	
Solve the excess production capacity problem		100

- Central level
- 8/2015: Document “*Vision and Actions on Jointly Building Silk Road Economic Belt and 21st-Century Maritime Silk Road*”
- 3/2016: Document “*The Thirteenth Five-Year Plan for National Economic and Social Development of the People's Republic of China*”

Local level

- 3/2016, according to the China's National Development and Reform Commission (NDRC), 28 provinces and cities have already released OBOR implementation plans for their regions



Note: Borders and names in the picture do not reflect the views of the authors and organization
Source: The authors synthesized

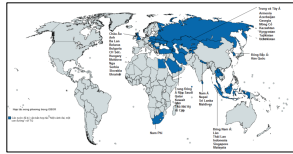
VEPR Implementation mechanisms

Multilateral mechanisms

- Asia Cooperation Dialogue (ACD);
- Association of Southeast Asian Nations and China (ASEAN-China);
- Conference of the Asia-Europe Meeting (ASEM);
- The Conference on Interaction and Confidence-Building Measures in Asia (CICA);
- Greater Mekong Sub-region (GMS);
- Mekong-Poland trade cooperation;
- Greater Tumen Initiative (GTI);
- Shanghai Cooperation Organization (SCO)

Bilateral Mechanisms

The countries have signed OBOR cooperation agreements with China



Note: Borders and names in the picture do not reflect the views of the authors and organization
Source: The authors synthesized

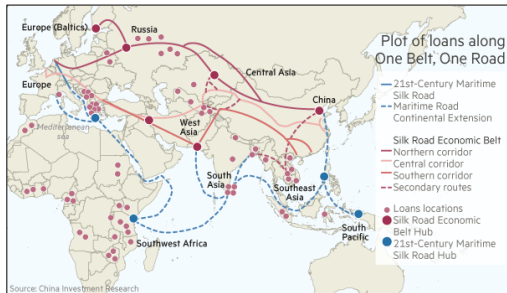
VEPR Financial mechanism

Several China's financial institutions invest in infrastructure

	Loans	US \$ billion
China Export - Import Bank (CEIB)	- Non-commercial disbursements (2014) - Export credit loans	80 29
China Development Bank (CDB)	- International net lending (2014) - International net lending on average 2008 - 2014	22 23
Bank of China (BoC)	OBOR serving annual lending 2015 - 2017	20
Asian Infrastructure Investment Bank (AIIB)	Disbursement according to project after 2020	10 - 14
New Development Bank of BRICS countries (NDB)	Disbursement according to project after 2020	5-7
Silk Road Fund (SF)	Disbursement according to project 2015 - 2020	2

Source: The authors synthesized

VEPR The capital investment of China started to be oriented by OBOR



Source: China Investment Research (2015)

67% of loans of 2 largest investment bank of China (China Development Bank and China Exim Bank) has total amount of 49.4 billion dollars focus on OBOR with the interest rates of 4-4.5% per year

VEPR Impacts on Viet Nam (1)

- Scenario 1: Viet Nam does not join OBOR
- The concept of infrastructure leverage Trap
- When an infrastructure system has been invested and formed, the area with developed infrastructure will have the advantage of connections with other areas. Meanwhile the country or region without satisfactory infrastructure investment will gradually slip away.
- => The infrastructure system acts as a leverage, creating advantages for one country and depleting the advantages of others in long term.
- The appearance of the infrastructure leverage increases the opportunity cost for countries and in the long term can force a country out of the region's development path, if it does not have developed infrastructure systems or cannot connect with the regional infrastructure system.

VEPR Impacts on Viet Nam (1)

- Viet Nam participate in OBOR?
- China infrastructure system creates a North – South connectivity running from Kunming (Yunnan, of China) - Laos - Cambodia - Thailand - Singapore and Kunming - Burma - Thailand - Singapore.
- Viet Nam infrastructure system is planned to focus on the North – South route. The East – West connection is weak; The trans-Asia route linking Phnom Penh (Cambodia) and Tay Ninh (Viet Nam) has limited transport capacity.
- Depletion of the advantages of Viet Nam's hard infrastructure network: road, railway and port system will mainly serve VN domestic demand.

VEPR Impacts on Viet Nam (1)

- Case study
- Singapore - Kunming Railway (SKRL) consists of three main routes from Kunming (China) to Thailand and then to Malaysia and Singapore.
 - Route (1) Kunming – Viet Nam - Cambodia - Thailand is the most complete route. But after China finishing the Kunming - Vientiane high-speed railway project (Route (2) Kunming - Laos - Thailand could open to traffic) and Kunming – Yangon high-speed railway and Yangon – Bangkok high-speed railway projects (Route (3) Kunming - Myanmar - Thailand could open to traffic), Viet Nam will lost the advantage of North - South transit station because of: route (1) is farther and Viet Nam have no high-speed railway.
- Laem Chabang Port (Thailand)
 - Da Nang Port has strategic location in the region. Once SKRL completed, it will link southern Chinese regions and other continent Southeast Asian countries to Thailand => Laem Chabang Port with more modern infrastructure, more convenient inland goods transportation will compete with the port of Da Nang.
- Sihanoukville Port (Campuchia)
 - From China to the Gulf of Thailand is currently going through Cai Mep-Thi Vai Port. China is negotiating to build a direct sea route from China to the Sihanoukville Port and the Gulf of Thailand without passing through CM-TV.

Infrastructure system in Southeast Asia



Note: Borders and names in the picture do not reflect the views of the authors and organization
Source: The authors synthesized

VEPR Impacts on Viet Nam (2)

- Scenario 2, Viet Nam participates in OBOR
- (i) The infrastructure projects undertaken by China are not highly effective

Denied/cancelled Infrastructure investment projects of China

Source: The authors synthesized
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Project/Country	Fields	Investment amount (USD)	Reasons the outlined by host countries
New harbor city Colombo/ Sri Lanka	Infrastructure construction	1.5 billion	Do not meet environmental standards (2015)
Hydropower plants Myitsone/ Myanmar	Energy	3.6 billion	Negative impacts on the environment, society (2011)
Cuprite Letpadung/ Myanmar	Mineral exploitation	1 billion	Negative impacts on the environment, society (labor rights) (2014)
Railway (Van Nam- Rakhine)/ Myanmar	Traffic	20 billion	Negative impacts on the environment, society, national security (2014)
Buy OZ Minerals (M&A)/ Australia	Mineral exploitation	2.26 billion	National security (2009)
Invest to Rio Tinto/ Australia	Mining	19.5 billion	Bad operations management (2009)
Buy Sundance Resources (M&A)/ Australia	Mineral exploitation	1.5 billion	Chinese company mobilize capital slowly (2012)
Invest to Equinox Minerals Ltd/Canada	Mineral exploitation	5.9 billion	Negative impacts on the environment (2011)
High-speed Railway (Mexico City- Queretaro)/Mexico	Traffic	3.5 billion	Chinese company are not transparent in bidding (2014)
Oil fields North Azadegan/Iran	Mining	2.5 billion	Chinese company delays the implementation of the obligations (2014)
Hydroelectric dam Sung Cheay Areng/ Cambodia	Energy	400 million	Negative impacts on the environment, society (2014)

VEPR Impacts on Viet Nam (2)

(ii) The political and social impacts

- Chinese laborers in large-scale projects:
 - Characteristics of Chinese infrastructure investment projects are large-scale and mainly use Chinese labors.
 - The Chinese are relatively concentrated in groups, or forming "Chinatown" which poses many challenges for local authorities to manage.
- Changes in China's foreign policy:
 - China has gradually abandoned the policy of "non-interference" and moved on to intervene in various forms from low to high level to protect its overseas "interests" through the new way - to protect Chinese workers and other citizens and investment assets abroad (Mathieu Duchâtel, Oliver Bräuner and Zhou Hang, 2014). For examples:
 - Chinese non-combatant evacuation operations (Libya, Japan)
 - New concepts such as "creative involvement" and "constructive involvement" have been developing as the 'guiding threads' for China's diplomacy

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VEPR Impacts on Viet Nam (2)

(iii) Infrastructure investment and Viet Nam's Public debt Problems:

- Each year Viet Nam needs around US \$ 10.4 Billion invested in infrastructure
- Join OBOR and receive loans from AIIB can put Viet Nam in a number of challenges:
- Loan interest rates and types of loan issues (Yau,2015):
 - interest rates will range between 5-7% for the loan term of 30 years;
 - Chinese bid company will bring bid profile to borrow from Chinese banks – often are CEIB or CDB
 - Chinese contractors often are the overwhelming number in bid constructions..
- Second, the pressure on Viet Nam's public debt is growing. By the end of 2014, Viet Nam's public debt was estimated around 60.3% of GDP, in 2015 it is forecasted at around 65%. The increase in public debt may raise interest rates, narrow capital flows for private sector, and trigger inflationary pressures. Besides, the annual payment on loans is putting heavy pressure on Viet Nam's budget (VEPR, 2016).

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VEPR Policy Implications: Connect East - West

- Develop the transport corridors to form the basic for development of the economic corridors
- Take advantages of Viet Nam's port system and sea route, as well as water transport routes between ASEAN countries in the Mekong River Basin.
- Enhance East – West connectivity between Viet Nam and ASEAN, prioritize Thailand - Cambodia - Tay Ninh - Saigon - Vung Tau route to promote the advantages of Cai Mep - Thi Vai port.
- Develop Vung Tau - Ho Chi Minh City - Tay Ninh - Phnom Penh transport corridor to take advantages of water transport network between Viet Nam and Cambodia, and promote the absolute advantages of Hiep Phuoc port.
- Prioritize the completion and repair of Ho Chi Minh City – Phnom Penh railway to establish the east – west rail links between Viet Nam and ASEAN.

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VEPR Content

Chapter 6: Mid-term Reform in Utility Services Market: The Case of Municipal Solid Waste Management System

Vu Sy Cuong, Nguyen Quang Thai,
and Pham Tra My

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- Introduction
 - The context and scope of the research
 - Research methodology
- Experiences of municipal solid waste management in selected Asian countries:
 - Singapore
 - China
- Market structure of municipal solid waste management in Viet Nam
 - MSW generators
 - Collection market
 - Transportation market
 - Disposal market
 - Unofficial solid waste recycling market
- Discussion on selected policies related to MSWM market in Viet Nam
- Policy recommendation
 - The tendency of changes in Viet Nam's MSWM market structure
 - Recommendations to enhance the efficiency of MSWM in Viet Nam

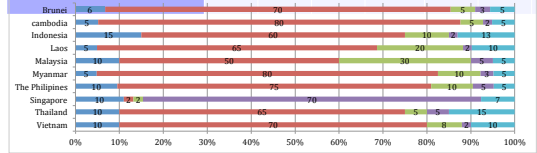
VEPR Introduction

- Context and concerns**
 - Municipal solid waste has increased rapidly (double during 2008-2015); making up a large proportion in total solid waste (50.8% - 2015)
 - Solid waste treatment in Vietnam is backward, not hygienic: 70% of total solid waste treated through open dumps (Nguyen & Schnitzer; 2000E)
 - SOEs and local authorities still play a key role in supervising and directly providing the service (Thanh & Matsui, 2011; Le et al., 2009)
- Scope**
 - Content:** Studying in household and public solid waste management.
 - Space:** Conducting the fieldwork in 5 cities: Hanoi, Ho Chi Minh, Lang Son, Bac Ninh and Da Lat.
- Objectives**
 - To analyze the market structure, the operation mechanism of MSWM market in Viet Nam: cost-benefit of the participants;
 - Existing limitations of municipal solid waste management in Viet Nam
 - Recommendations for improving the efficiency of municipal solid waste management in Viet Nam

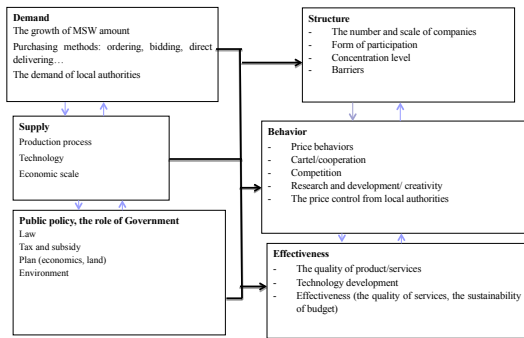
VEPR The volume of MSW increased rapidly, 2007-2025

	2007	2008	2009	2010	2015	2020	2025
Urban population (mil)	23.8	27.7	25.5	26.22	35	44	52
% urban population	28.20	28.99	29.74	30.2	38	45	50
MSW generation per capita (kg/person/day)	~ 0.75	~ 0.85	0.95	1.0	1.2	1.4	1.6

The total MSW in Vietnam has been mainly discharged to open dumps



VEPR Structure-Conduct-Performance Model

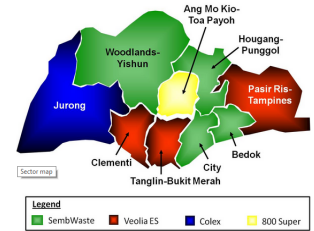


VEPR Market structure of solid waste management in Singapore

Collection-transportation market

- Be highly centralized, oligopolistic: there are 4 private enterprises licensed to collect
- Privatizing since 2011
- People have to pay entire costs of the municipal solid waste management in Singapore;
- Bid for collection fees between collection companies;
- 7-year contract: suitable with the depreciation period of the machine
- The size of collection area is large enough for company to take advantage of the economies of scale (~1000 tons/day)

The Solid waste collection areas of Public Waste Collectors in Singapore



VEPR Market structure of solid waste management in Singapore

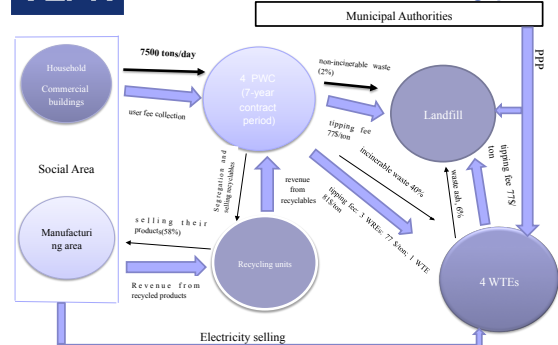
Solid waste treatment market

- High concentration market: 5 solid waste treatment plants, 4 incineration plants, one landfill;
- The capacities of plants are about 800-2200 tons/day: take advantage of economic scale;
- Collection-transportation companies pay tipping fees when discharging waste at waste treatment plants; the State doesn't directly pay the solid waste treatment fee for waste treatment plants.
- The contract period of these waste treatment plants is above 20 years.

Recycling market

Associated with collection-transportation segment: Companies collecting solid waste will have the right to collect recyclables in their collection areas;

VEPR Cash flows in MSWM market in Singapore



VEPR Market structure of solid waste management in China

Collection-transportation market

- The market is highly concentrated by few enterprises in big cities.
- Low user fee, the authority had the strategy in rising the use fee, in which people are responsible for the whole cost of MSWM.

Solid waste treatment market

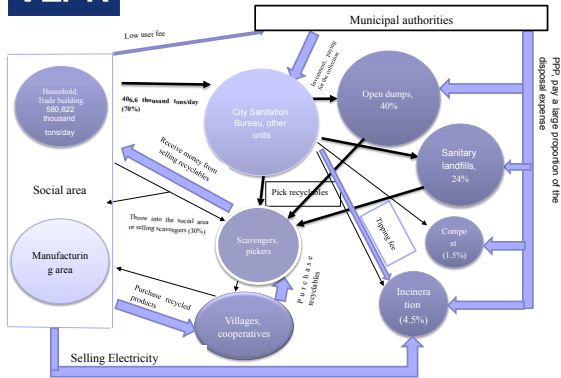
- High concentration: build treatment plants in cities applying modern methods, huge capacity, decrease the number of landfills funded and operated by the State.
- To form the tipping fee in waste treatment areas for collection-transportation companies; decrease gradually the spending from the state budget.
 - In 1999, solid waste treatment plants in Beijing and Shanghai did not have tipping fee for solid waste treatment (Johannessen & Boyer, 1999).
 - In 2012, tipping fees for solid waste treatment in incineration plants in China were about 8 USD/ton (Balkan, 2012)

Unofficial recycling market: High competitiveness

VEPR Expected Sources of Solid Waste Management Funding in China, 2002- 2020 (%)

	2002	2010	2020	Note
Total	100%	100%	100%	
Fee for waste collection	30-40%	70-80%	90-95%	Will depend on successful involvement of enterprises
Households	10-20%	60-70%	80-85%	Collection is difficult and costly and fee levels are set too low. Will change over time.
Institutions	20-25%	10-20%	10-15%	
Municipal Governments	20-25%	5-10%	0%	To increase the user fee to be equal to the cost for solid waste management
District Governments	45-50%	10-20%	5-10%	To decrease gradually the spending from the state budget.
Other				The governments still need to subsidize the poverty households

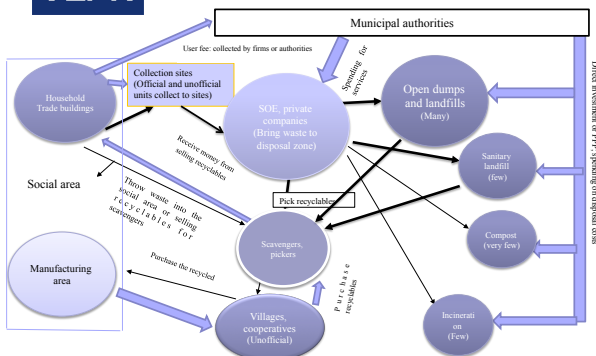
VEPR Cash flows in MSWM market in China



VEPR Experiences for Viet Nam in terms of the market structure

- The market structures of the collection-transportation market and disposal should be concentrated on selected enterprise (encouraging the participation of the private sector), at the aim of taking advantage of the economic scale; the easier observation of technical standards and services quality.
- The role of local authorities: to only supervise and attract investments but not directly provide the service.
- The size and duration agreements in collection and transportation contract: collection areas need to be appropriately divided, large enough to favor the economic scale; the duration of municipal solid waste collection contract need to be long enough (ex. in Singapore: 7 years);
- The role of generators: to be completely responsible for the cost on MSWM they generate
- The solid waste treatment market: to be established with the demand side is waste collection-transportation companies (not local authorities). This means that waste collection-transportation companies have to pay tipping fees when discharging waste to waste disposal plants

VEPR MSWM market structure in Viet Nam



VEPR Household expenditure on collecting solid waste in some cities of Viet Nam, 2012

- User fees stipulated by the People's Committee: too low
- The expenditure for collecting MSW in Viet Nam is still too low, accounting for about only 0.1% of household income; the figure for the world average is about 1% of the household income.
- Households segregate some kinds of waste to sell to pickers

Order	Cities	Thousand VND / household/month	% of household income
1	Hanoi	10.52	0.123%
2	Ho Chi Minh	16.72	0.168%

Source: Calculation of the Research Team from VHLS (2012)

Cost for collecting solid waste in some cities in the world, 2010

Order	Cities	Countries	fee (% of household income)	Monthly fee for each household (USD)
1	Adelaide	Australia	0.21%	8.0
2	Bamako	Mali	2.00%	2.4-4.8
3	Belo Horizonte	Brazil	3.60%	3.9-7.9
5	Canete	Peru	0.90%	3.0-3.9
6	Dhaka	Bangladesh	2.00%	1.0
7	Con Minh	China	1.00%	0.35-1.45
8	Managua	Nicaragua	0.14%	0.5-5.0
9	Moshi	Tanzania	0.30%	1.0
10	Nairobi	Kenya	0.15%	0.15-0.3
11	San Francisco	The US	1.35%	22.0

Source: UN-HABITAT (2010)

VEPR Solid waste collection-transportation market

The group of waste collection

- Operating on a small scale, collecting solid waste in a residential quarter, neighborhood ... to collection points; The number of these units is quite large.
- Collecting user fees, low fees; unable to balance revenue and expenditure, → Increasing the fees that exceed the stipulated fees, the group of collection does not want business registration.

The official enterprise of waste collection

- Collecting in small, fragmented areas, and in the district scale (~200 tons/day)
- State-owned enterprises play a dominant role in this segment:
 - Ho Chi Minh city: 23 SOEs (all of the official enterprises are SOEs)
 - Hanoi: 8/18 companies of collection are state-owned enterprises
 - Da Lat, Bac Ninh: State-owned enterprises implement collection
- Contract duration: annual order, 3-year contract, difficulties in the investment on equipment
- Traditional norm in collection area → the tender can be just de jure.

MSW transportation market: vertical linkage with collection markets

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VEPR Companies participate in collecting and transporting solid waste in Hanoi, 2015

No	The company's name	The company model	The areas for implementation
1	URENCO	State-owned company	4 main district (Hoan Kiem, Ba Dinh, Hai Ba Trung, Dong Da)
2	Thang Long Environment joint-stock Company	Joint-stock company (equitization)	Hoang Mai, Tay Ho, Cau Giay, Long Bien, Thanh Xuan county
3	Tay Do environment joint-stock Company	Joint-stock company (equitization)	
4	Green Environmental joint-stock Company	Joint-stock company	
5	Technology and Environment Ecology Joint-stock Company	Joint-stock company	Ha Dong county
6	Thanh Cong Cooperative	Cooperative	
7	Ha Dong Environment joint-stock Company	Joint-stock company (equitization)	Son Tay town
8	Son Tay Environment and Urban Construction Company	Joint-stock company (equitization)	
9	Xuan Mai Urban Environment Company	State-owned company	Chuong My district
10	Song Hong Investment and Development Clean Vegetables joint-stock Company	of Joint-stock company	Me Linh district
11	Noi Bai Trade joint-stock Company	Joint-stock company	Soc Son district

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VEPR MSW treatment market

- The treatment plants of solid waste are scattered** (Except for Ho Chi Minh City having four concentrated treatment plants)
 - Hanoi has about 17 treatment areas of solid waste with various capacities;
 - Cities in other provinces build a treatment plant by themselves with small solid waste amount from 100-200 ton/day → difficulties in attracting investment in hygienic treatment methods; difficulties in supervising quality.
- Categories by ownership**
 - Urban authorities directly invest, operate or hire operation: particularly open garbage dumps and landfills such as Nam Son and Xuan Son;
 - Enterprises invest and operate: Viet star, WS, Ha Ngoc, CITENCO...: appear hygienic incineration, compost methods
- Benefits**
 - Local budget pays the total expenses for solid waste treatment; collection-transportation companies do not pay the expenses for solid waste treatment when discharging garbage to treatment zones.
 - Recycled goods.

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VEPR MSW treatment market

- Costs of solid waste disposal through landfill:** low operation cost, real cost will include:
 - Investment cost: depreciation cost, capital, land cost;
 - Operation cost;
 - post-closure cost ;
 - Cost for negative externalities: land pollution, water pollution... (if any)
- Sanitary landfill: VWS – 20.166 USD/ton in 2015**, not including post-closure cost (26/50 year) → **high**
- Landfills invested by the authorities like Nam Son, Xuan Son:**
 - Provincial budget invested in landfill and pay salaries for landfills managers → not calculated into solid waste disposal cost, transparency in calculating the real cost;
 - Only mention the maintenance cost ~69.000/ton → the real cost cannot be calculated;
 - Are landfills invested by the Authority effective in term of disposal cost and environmental sanitation? There isn't transparency in the real cost calculation of these waste disposal areas → might waste provincial budget.
- Da Lat city: Cam Ly dump** → negative externalities : Dong Nai river, Cam Ly fall
- Modern solid waste disposal methods:** large scale of waste, high technique, large financial source → long-term oligopolistic (Ho Chi Minh city)

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VEPR Cost of several solid waste disposal areas, 2015

No	City	Dump	Price (VND/ton)	Quantity (ton/day)	Technology
1	Hanoi	Nam Son landfill	~ 69.000 ⁽³⁾	5000	landfill
		Xuan Son landfill	~69.000 ⁽³⁾	250	landfill
		Thanh Cong collective	330.000	200	Incineration
		Thang Long company's incinerator	380.000	700	Incineration
2	Ho Chi Minh	Da Phuoc waste company	433.569*	3.000	landfill
		Tam Sinh Nghia	438.170*	1.000	Incineration
		Vietstar	408.500*	1.200	Incineration
3	Da Lat	Xuan Truong disposal plant	129.000 ⁽⁴⁾	150 ⁽⁴⁾	Incineration

*1 USD = 21.500 VND. (2) Initially calculated price (3) Maintenance cost (excluding depreciation and manager salary); (4) capacity of 450 tons/day (5) After March, 2015, the CITENCO landfill brought to 200.000 Area 2.000

Source: The research's fieldtrip

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VEPR Comparison of costs related to services of solid waste disposal, 2012

	Low income	Average low income	Average high income	High income
income (GNI/per capita)	\$876	\$876-3.465	\$3.466-10.725	\$10.725
Solid waste (ton/per capita/year)	0.22	0.29	0.42	0.78
Cost of waste collection and disposal				
Collection	20-50	30-75	40-90	85-250
Sanitary dump, exclude post-closure cost	10-30	15-40	25-65	40-100
Open dump	2-8	3-10	-	-
Compost	5-30	10-40	20-75	35-90

Source: WB (2012)

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VEPR Unofficial solid waste recycling market

- Collecting recyclables units: Large quantity, high competitiveness, small capital;
- Recycling units: recycling villages
 - price decision for the whole chain;
 - Large quantity, small capacity → low technology, lower quality of products, not afford to invest in sewage treatment → environmental pollution.
 - High competitiveness, price pressure (due to the quality of the product)

Several recycling craft villages in Viet Nam, 2015

No.	Craft villages	Number	Name
	Lead waste recycling	200 production households/ 25 furnaces	Dong Mai-Van Lam-Hung Yen
	Plastic waste recycling	> 400 places	Trieu Khuc-Thanh Tri-Hanoi Dong Mau-Yen Lac_Vinh Phuc Tao Phu-Yen Lac-Vinh Phuc Nam My-Nam Dinh
	Paper recycling	> 150 production households	Duong O-Phu Lam-Bac Ninh
	Metal, scrap iron recycling	700 places	Van Mon, Yen Phong, Bac Ninh, Da Hoi Chau Khe, Bac Ninh, Binh Yen, Nam Truc, Nam Dinh; Van Chang, Nam Dinh Tong Xa, Yen Xa, Nam Dinh

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Source: Authors' summary

VEPR Issues on policies related to MSWM in Viet Nam

- Policy of MSW segregation.

Difficult to operate because:

 - The living standard of Vietnam is low, low opportunity cost → Households sell recyclables instead of letting collection companies collect
 - Collection units and disposal plants also benefits from increasing the volume of waste treated, not segregating waste.
- Policy of low collection fee.
- Policy of collecting contract: inadequate in terms of areas and duration agreements and fixed prices for transportation.
- Policy on encouraging to develop in modern methods:
 - Do not perform the transparency in MSW disposal costs in landfills operated and invested by local authorities
 - To be unclear about the incentives for enterprise using modern and hygienic technologies
- Policy of interregional waste management has not widely been implemented

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VEPR Policy vision

- Do policies on budget expenditure on MSWM make participants want to reduce the amount of solid waste?
 - ❖ Disposal enterprises, transportation units have more advantage when there is larger amount of solid waste → they may find ways to increase the amount of MSW;
 - ❖ Waste generators don't have to take enough responsibility for the amount of waste they produce.
- Disposal market relation recommendations:
 - ❖ User fee equals the total management cost of MSW that households generate;
 - ❖ Local authority take the financial responsibilities for public solid waste;
 - ❖ Collection-transportation enterprises must pay tipping fee for disposal enterprises.
- SOEs:
 - ❖ Should contract to collect waste in the waste-security area
 - ❖ Equitization in large scale
- Government should stipulate the standard in management of solid waste. Based on that standard, Enterprises following the standard will enjoy privileged in tax, land, capital... The bylaws have to specify preferential procedures.

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VEPR Conclusion and policy implication

- **Collection-transportation market**
 - + User fee imposed on households should be adjusted reasonably, equal to the total management costs of MSW they generate
 - + Provincial authorities should sign the suitable contracts with collection-transportation enterprises:
 - Contact duration should be 7 years;
 - Local expenditure is the whole costs of public solid waste management and subsidy for the poor. This expenditure should be a suitable lump sum in order that enterprises can be active for their technologies.
 - Collection areas should be large enough, favoring the economic scale.
 - Supports for collection units to be able to collect recyclables should be needed

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VEPR Conclusion and policy implication (cont)

- **MSW treatment market**
 - + Changes in market demanders and suppliers.
 - Now, in several plants, authorities directly invest in, become *the service suppliers*. Meanwhile, almost all of the plants, authorities are the service demanders, spend on waste disposal.
 - To separate clearly the supervisor and the market players, authorities just play the role as a supervisor which observes the whole chain and control the quality. Authorities do not directly supply the services or pay for waste disposal in this market.
 - To clarify that the suppliers are the disposal plants while the demanders are collection-transportation enterprises. The collection-transportation units pay tipping fee to throw waste into the disposal plants.
 - + To add the depreciation, manager salaries, post-closure expenses... up to disposal cost in the authority-invested landfill like Nam Son, Xuan Son.
 - To do this, the competitive environment becomes fair, transparent
 - Disposal costs in these landfills now are just maintenance costs
 - Compare the real disposal costs of different methods to choose the most economic and sanitary method

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Chapter 7: Viet Nam Economic Prospects 2016 and Policy Implications

Nguyen Duc Thanh and Pham Van Dai

VEPR Viet Nam Economic Prospects 2016

Year	2012	2013	2014	2015	2016 Scenario 1	2016 Scenario 2
Growth (%)	5.25	5.42	5.98	6.68	6.05	6.38
Inflation (%)	6.81	6.04	1.84	0.60	4.24	5.17

VEPR Short-term issues

- That the budget surplus increased dramatically in the previous period will be one of the biggest risks faced by this economic cycle. The most fundamental issue was that the budget expenditure for the administrative system was huge compared to the total GDP.
- That inflation comes back was one of the most marked risks after a long time staying low.
- The domestic forex market still had latent external risk factors, with the most remarkable one being the crisis generating in emerging markets.
- Credit for real estate tended to soar. Transactions mainly took place in premium segment and the price level followed an upward trend, which induced worries about the sustainable growth of the market.

VEPR Fundamental issues

- The banking system did not operate effectively and transparently.
- Administrative management measures, such as the interest rate ceiling policy, were weakening the system in the context of fluctuations in the economy.
- Growth momentums coming from the expansion in labor was frail and unable to recover. High economic growth rate must accompany with advancement in manufacturing capital, labor quality and technology.
- Public services should be privatized in a favorable market mechanism, so the social resources will be used effectively and budget deficit will be reduced. Municipal solid waste collecting and treatment market is a typical example.

VEPR Policy recommendations

- Comprehensively and effectively marketizing and easing control on the prices of public services
- Closely supervising the pace and quality of credit expansion, and avoiding a prolonged loosening monetary policy, from which an asset bubble could be formed.
- It is necessary to keep close watch on the development of the real estate market and prevent the formation of a new property bubble
- Administrative management measures distorting market principles should be lifted soon.
- The national governance system should focus on functions of technocrat teams. Establish national competitiveness council led by the Prime Minister or Vice Prime Ministers. This council needs to perform truly effective work to use competitive tools to promote efficiency and innovate the economy.

VEPR

Thanks for your attention!
Q&A

Questions or discussions can be sent to:

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