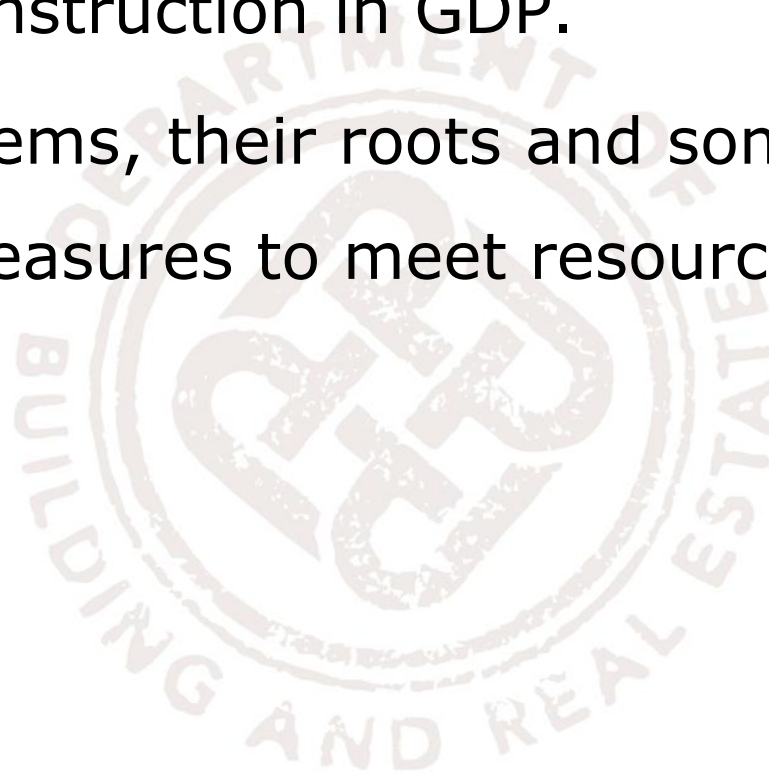


MEETING CONSTRUCTION INDUSTRY RESOURCCES REQUIREMENTS IN HONG KONG

Theme Paper of
The 20th AsiaConstruct Conference

Agenda

- Share of construction in GDP.
- Major problems, their roots and some proposed remedial measures to meet resources requirement.
 - **Land**
 - **Materials**
 - **Labour**
- Q & A



The Context

- **Share of GDP**

- Contributes (or spends?) 175.9 billion HKD to the Hong Kong economy in 2013, accounting for about 8.3% of GDP (Census and Statistics Department, 2014).

- **Prospects**

- Increased infrastructure investment and real estate development in Hong Kong.
- Face the challenge from land, labour and materials.
- The most expensive properties, and the highest construction costs.

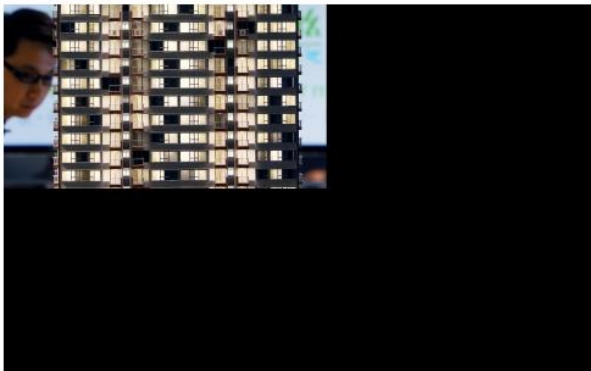
PROPERTY • HONG KONG & CHINA

Hong Kong home prices stay firm on high building costs, strong demand

New private housing supply seen reaching 8-year high of 73,000, near government target

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The number of flats completed in the first half is equivalent to 90 per cent of the 8,300 total completed flats in 2013. Photo: Felix Wong

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High construction costs and strong demand are seen keeping property prices high although new private housing supply over the next three to four years is set to push inventory to an eight-year high, analysts say.

Figures from the quarterly report of the Housing Authority show that there is expected to be 73,000 flats available for sale by 2018. The housing supply included unsold units in completed projects, units under construction, and those ready to start construction. It means new housing supply could reach 18,250 flats every year, close to the government's target of 20,000 annually.

"Housing supply is only one of the factors affecting property price movements. Since the construction cost continues to increase, developers would be reluctant to cut their asking prices significantly. Also, the housing demand is strong," said surveyor Albert So Chun-hin. "But the increasing

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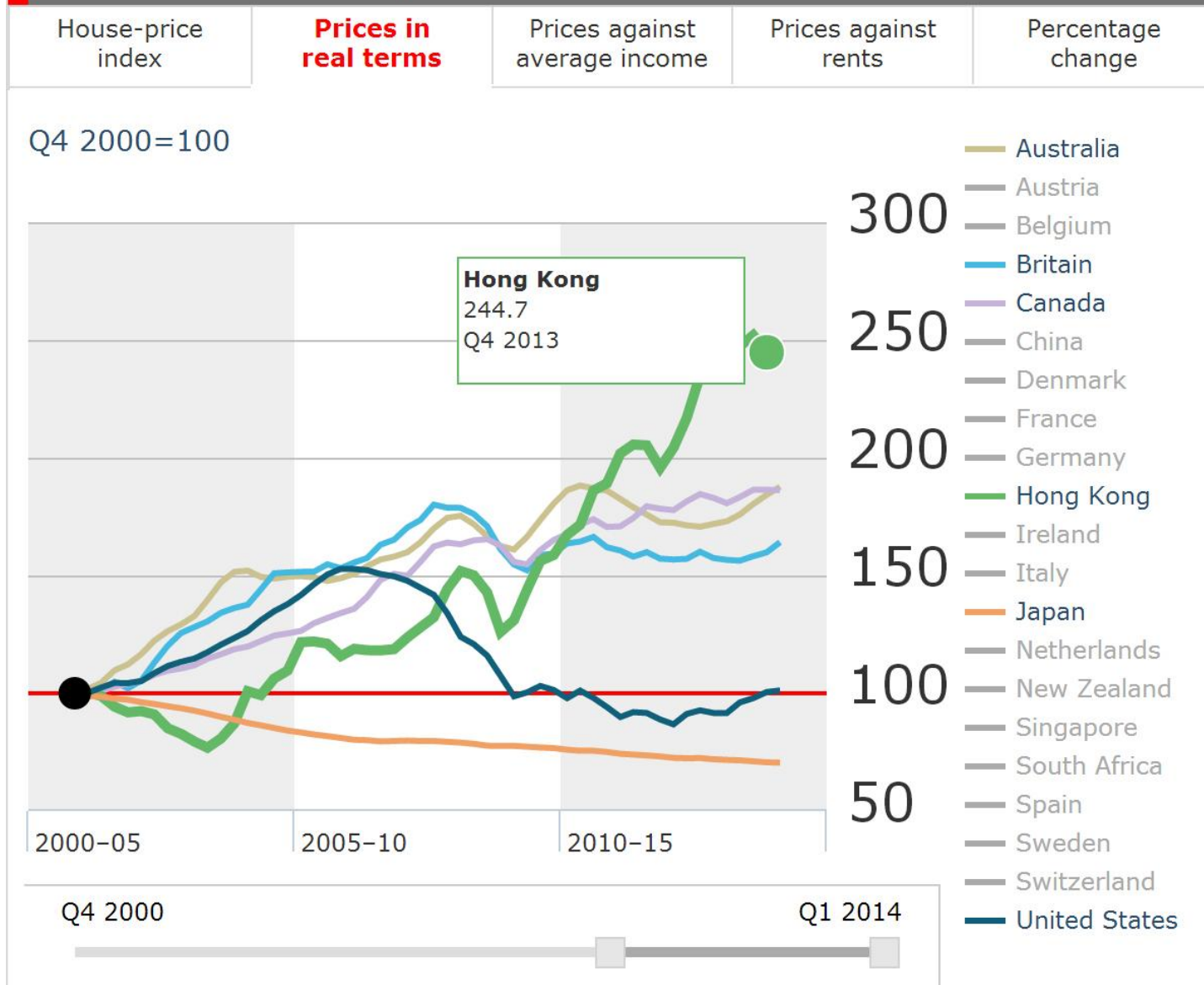
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The Economist house-price index

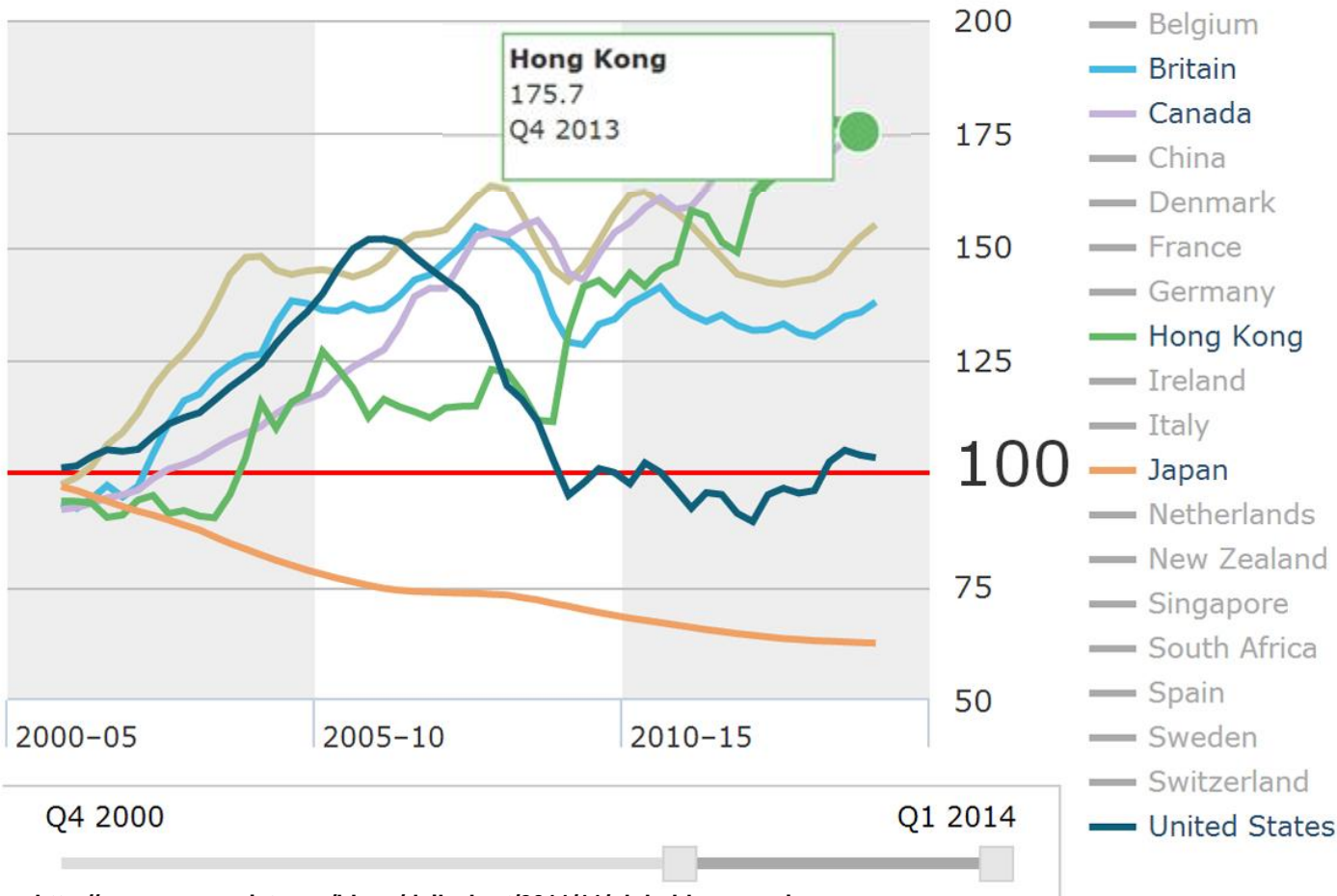


<http://www.economist.com/blogs/dailychart/2011/11/global-house-prices>

The Economist house-price index

House-price index	Prices in real terms	Prices against average income	Prices against rents	Percentage change
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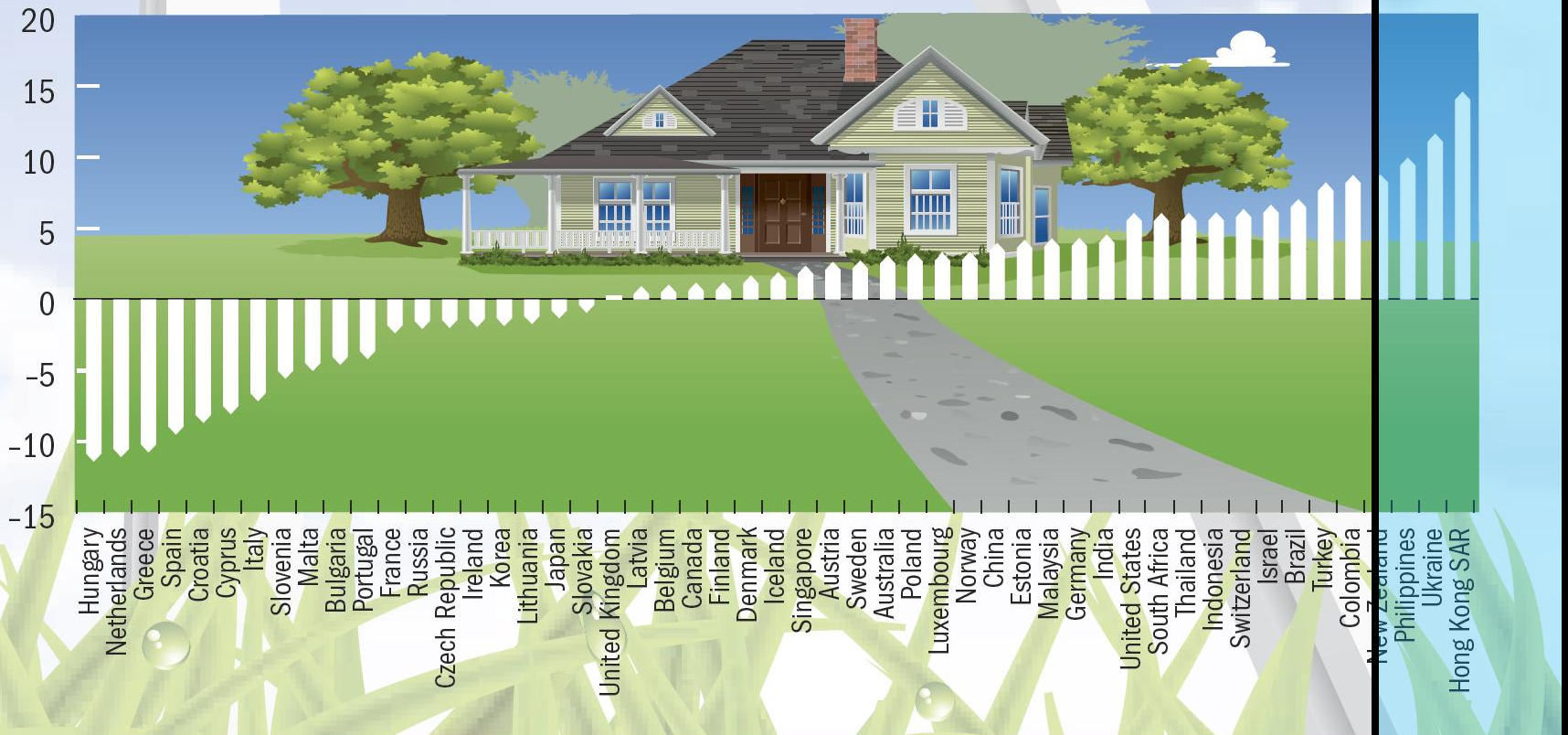
Long-term average=100



<http://www.economist.com/blogs/dailychart/2011/11/global-house-prices>

House prices around the world

(annual percent change, 2013:Q2)



Prepared by Hites Ahir and Prakash Loungani of the IMF's Research Department. The data are derived from the Organisation for Economic Co-operation and Development, Global Property Guide, and Haver Analytics. Unless noted otherwise, data are for the second quarter of 2013 or the latest available.

INTERNATIONAL CONSTRUCTION COSTS: A CHANGE OF PACE



Top 10

1. Hong Kong
2. Switzerland
3. Denmark
4. Sweden
5. Macau
6. Australia
7. Japan
8. France
9. Singapore
10. Belgium

Ranking based on comparison of average costs of 21 building types relative to the UK.

1. Hong Kong





Land

Problem

- **Severe supply-demand imbalance of the property market in Hong Kong**

- **Demand:** the increase in the number of households has generated new housing demand. From mid 2001 to mid 2011, the number of annual net increase households is around 31,500, It is projected from 2013 to 2022, that total increase will be around 294,000 (Legislative Council, 2013).
- **Supply:** Sales records of the Lands Department of Hong Kong from 2009 to 2013 show that only around 1,138,000 square meters of land area were sold, accounting for only 0.1% of the total land area of Hong Kong.

Land Sale Record	2009	2010	2011	2012	2013
Annual Land Sale (sqm)	46,356	152,445	258,984	296,621	384,065
% of total Land Area of HK	0.004%	0.014%	0.023%	0.027%	0.035%

Source: Land Sale Records 2009-2013, Lands Department of Hong Kong

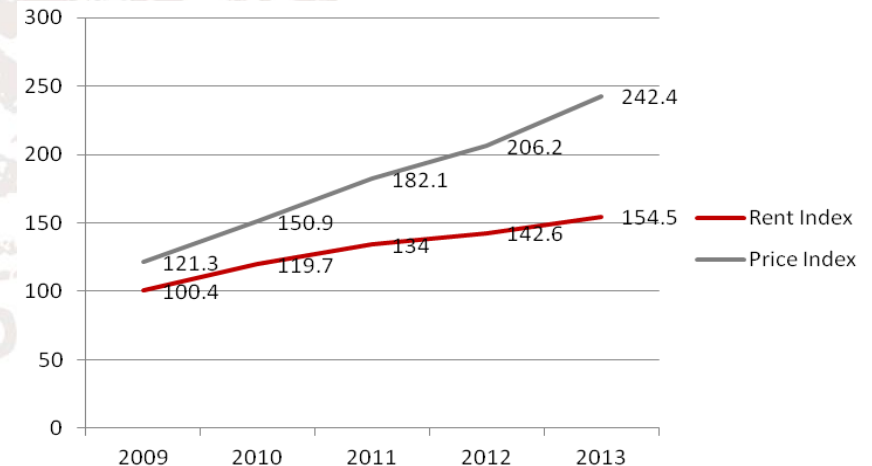
Problem

- The imbalance is reflected in the buoyant property market: the vacancy rate of private domestic housing between 2009 to 2013 is below 5%, and has led to a 100% increase in price and 55% increase in rent.

Completion, Take-up and Vacancy Rate of Private Housing

	2009	2010	2011	2012	2013
Completion	7,160	13,410	9,450	10,150	8,250
Take-up	11,090	8,030	11,400	7,550	8,060
Vacancy rate %	4.3	4.7	4.3	4.3	4.1

Rent and Price Index of Private Domestic Housing Market

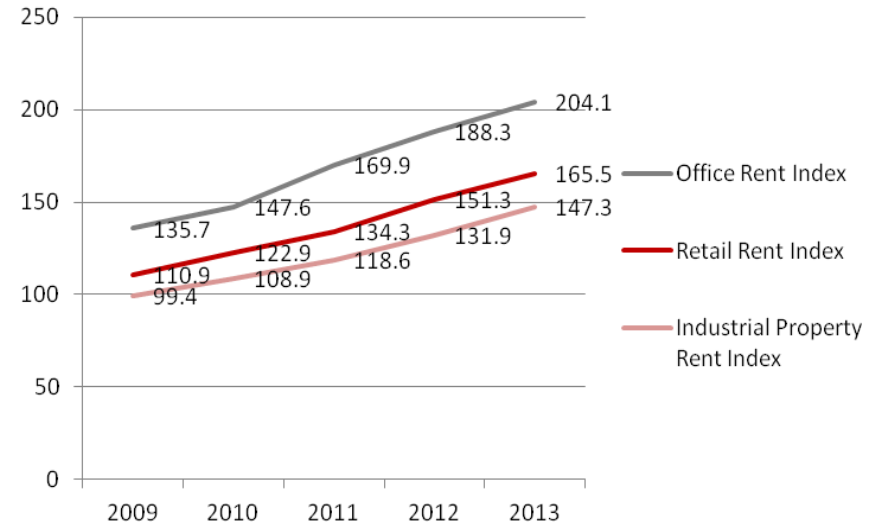
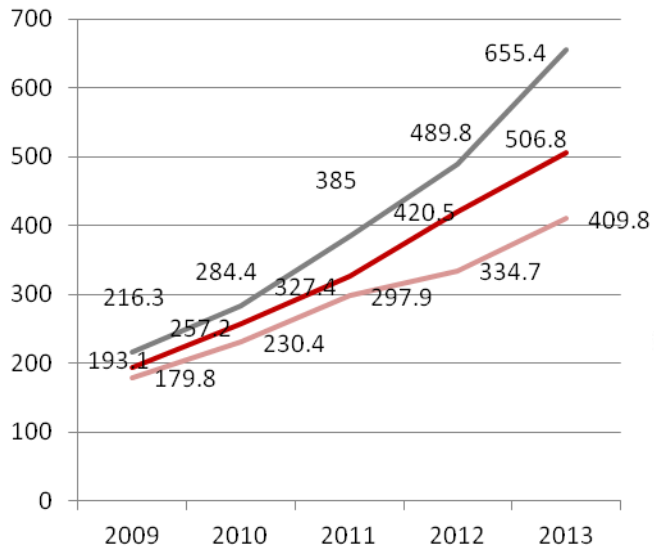


Vacancy rate is expressed as a percentage of total stock at the end of the year, Base Index of 1999 is 100,

Source: Hong Kong Property Market Statistics, Rating and Valuation Department

Problem

- Sharp rise of price and rent in non-residential sectors as well: office, retail and industrial property markets.



Source: Base Index of 1999 is 100, Hong Kong Property Market Statistics, Rating and Valuation Department

Root

- **Limited land resource with poor conditions for development**

- Hills and mountains over almost the whole of the area, about 84% of the total area consists of sloping ground.
- The built-up land area is about 265 square kilometers, accounts for only around 24% of the total land area.

Areas of Various Types of Non Built-up Land and Proportion in the Total Land Area

Type of non Built-up Land	Total Area (sq.km)	Proportion in the Total Land Area of Hong Kong
Agriculture (including agriculture land, fishing ponds)	68	6.1%
Woodland/Shrubland/Grassland/Wetland (including woodland, shrubland, grassland, mangrove and swamp)	738	66.6%
Barren Land (including badland, quarries and rocky shore)	7	0.6%
Water Bodies (including reservoirs, streams and nullahs)	30	2.7%
Total	843	76%

- 443sqkm is delimited as protection zone for natural environment.
- Government has no intention to covert it for development use

Source: Legislative Council of Hong Kong (2013).
Retrieved from <http://www.info.gov.hk/gia/general/201310/16/P201310160338.htm>

Remedial Measures

- **increasing land supply and improving land use**
 - **(1) reclamation outside Victoria Harbour:** HK government has earmarked six potential sites, including Lung Kwu Tan (200-300 hectares), Siu Ho Wan (100-150 hectares), Sunny Bay (60-100 hectares), Tsing Yi Southwest (80-120 hectares), Ma Liu Shui (30-60 hectares) and artificial islands in central waters (1,400-2,400 hectares).

Advantage

- a relatively large area is suitable for land reserve.
- facilitates comprehensive planning.
- provides decanting sites, handle surplus fill materials and contaminated mud.

Drawback

- public concerns on environment protection issues.

Remedial Measures

- (2) Rock cavern development

- The hilly terrain and geology of Hong Kong provide ideal conditions for rock cavern development; it would provide approximately 3,500 ha of land supply (Civil Engineering and Development Department, 2014).
- Mainly developed for public infrastructure such as MTR stations, Stanley Sewage Treatment Works, Island West Transfer Station.

Advantage

- Protects the environment.
- Allows a flexible plan for layout and expansion.
- Removes incompatible land uses.
- Provides a source of rock product.

Drawback

- Cannot be directly adopted for commercial or residential property development.
- Requires advanced construction technologies resulting in high costs.

Remedial Measures

- **(3) Reuse of ex-quarry sites**
 - Redevelopment of the former Lamma quarry area.
- **(4) & (5) Conversion (redevelopment) or renovation of vacant or under-utilized buildings**
 - Industrial buildings, old commercial buildings, sites zoned as “Government, Institution or Community” or “Green Belt” for other more gainful uses.
- **(6) Private land resumption for public projects**
 - Develop and extend new towns such as Yuen Long, Tung Chung, Lantau Island, etc.



Materials

Problem

- **Prices of imported materials have kept rising**
 - In the last ten years, most construction materials prices have increased by over 90%.

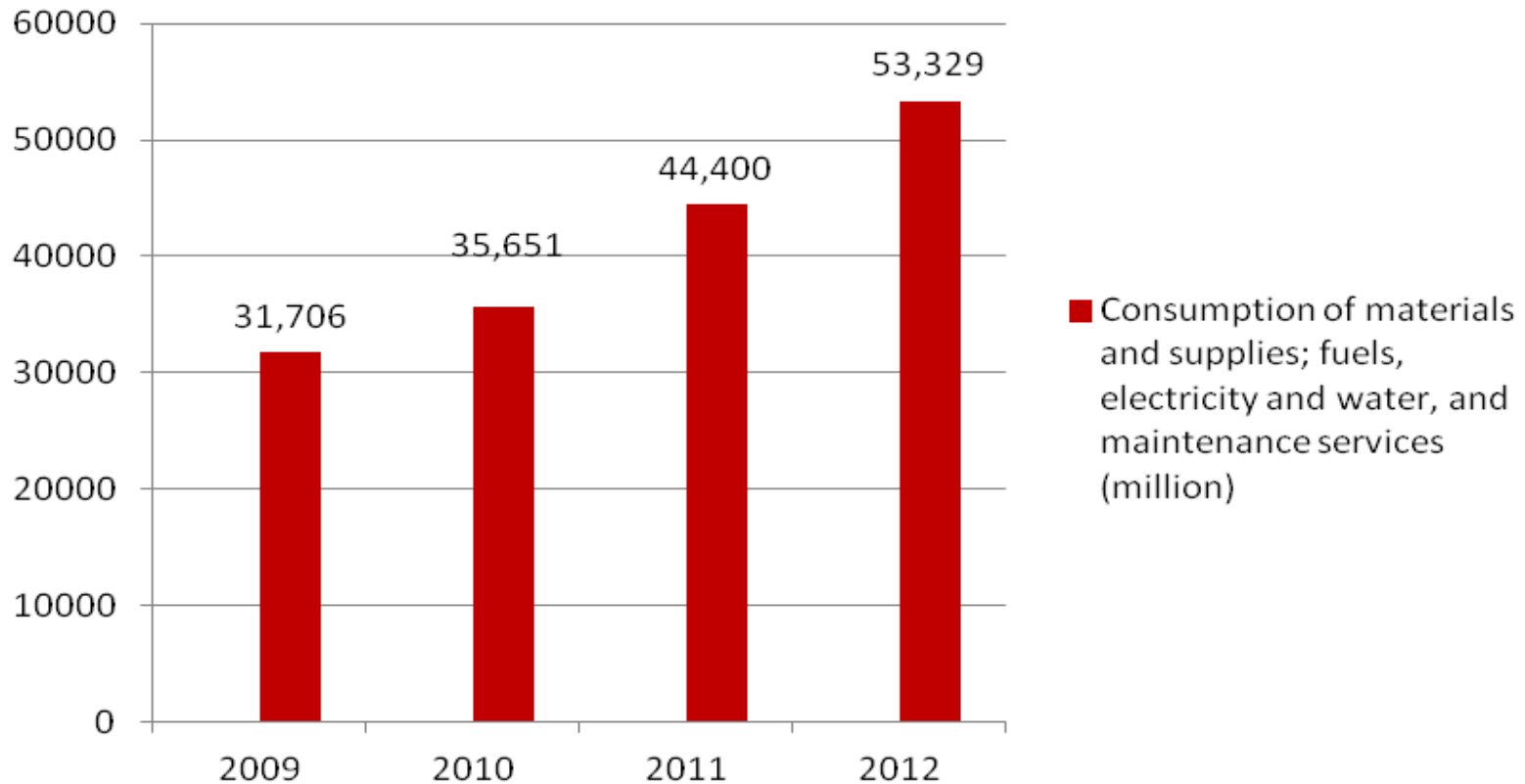
Cost of Materials Indices as of May 2014

Aggregates	161.2	Mosaic tiles	201.2
Bitumen	216.2	Paint	148.4
Concrete blocks	187.4	Portland cement (ordinary)	142.0
Diesel fuel	238.5	Sand	383.7
Glass	161.6	Steel reinforcement	178.6
Glazed ceramic wall tiles	188.7	Teak	200.3
Hardwood	215.9	Timber formwork	183.5
Homogeneous floor tiles	157.6	uPVC pipes	157.7
Galvanised mild steel	264.2	GMS pipes	182.6
Metal formwork	188.1	Copper pipes*	100.2

Source: Base Index of April 2003 is 100, * indicates index of Sep 2008 is 100.

Sources: Overview of Building, Construction and Real Estate Sectors, Census and Statistics Department

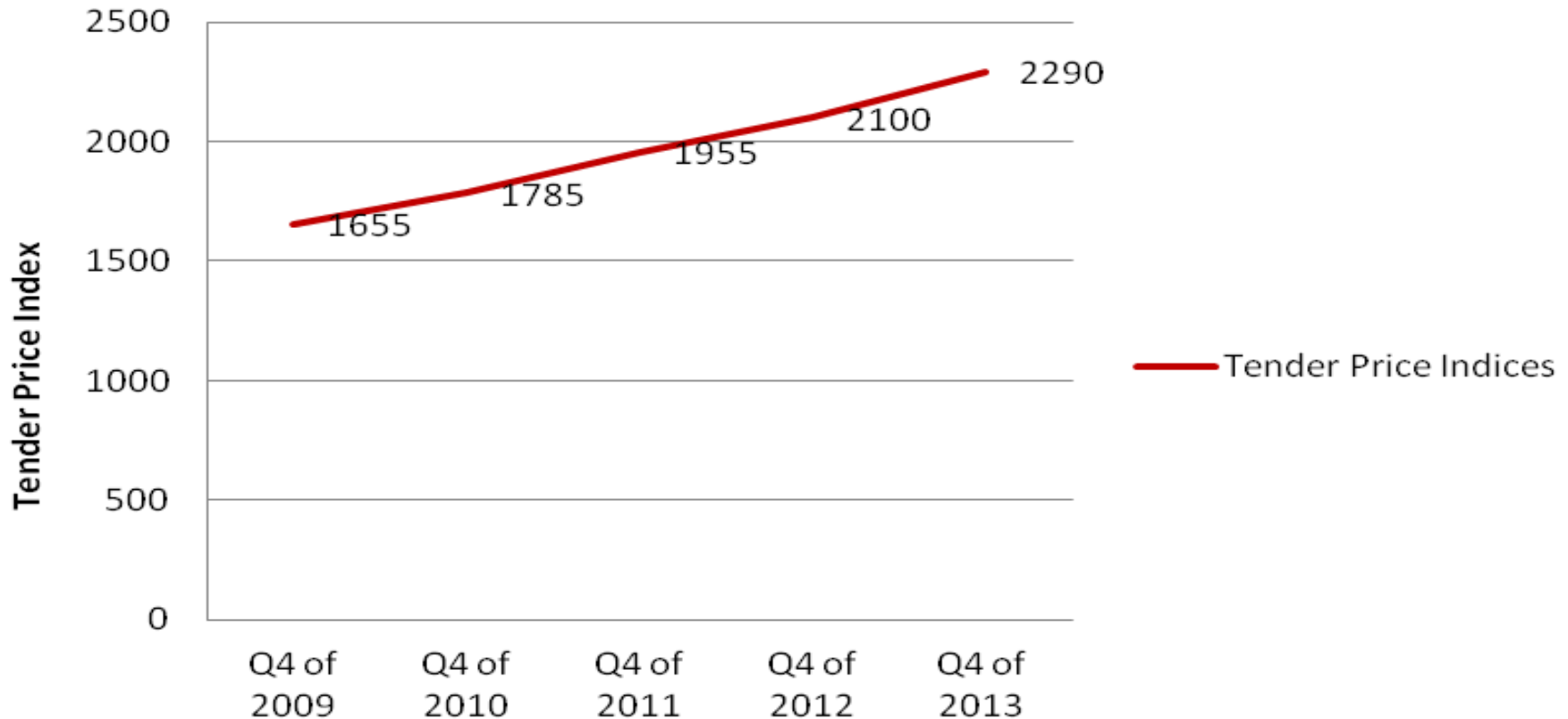
Problem



The expenses on consumption of materials and supplies, fuels, electricity and water, and maintenance services soared at a compound average growth rate of 15% from \$ 31,706 million in 2008 to \$ 53,329 million in 2012.

Source: Overview of Building, Construction and Real Estate Sectors. Census and Statistics Department

Problem



From 2009 to 2013, the tender price index of the Hong Kong construction industry went up from 1,655 to 2,290. In one year alone, the index was up by 9% in the fourth quarter of 2013 when compared to the fourth quarter of 2012. In the first quarter of 2014, the index stood at the historically highest record of 2360.

Source: *Quarterly Construction Cost Update Hong Kong Report (June 2014)*. RLBI Rider Levett Bucknall

Root

- **Devaluation of HK dollars and inflation rates**
 - Hong Kong has adopted linked exchange rate system, which requires both the stock and the flow of the monetary base to be fully backed by foreign reserves.
 - The link between the Hong Kong Dollar and the US dollar is set at the fix rate of \$ 7.8 to the US\$. Due to the depreciation of the weak US dollar, the value of Hong Kong Dollar has markedly dropped against other strong currencies, particularly the Renminbi.
 - The inflation rate of Hong Kong grew dramatically: in 2013 when the inflation rate stabilized at 4.4%, the compound average growth of inflation in Hong Kong over the previous five years reached 48%.

Remedial Measures

- **Probably not much**

- To come up with an effective set of policies and measures to control the cost of materials is hard since Hong Kong is deprived of the prerogative of setting monetary policies.
- Explore new sources of imports is considered one of the measures necessary to cope with the high prices of materials, however the quality and quantity issues need further consideration.
- Therefore the prices of construction materials will be continuously subject to external factors, which may mean continuing price increases in the foreseeable future.



Labour

Problem

- **(1) Labour Shortage**

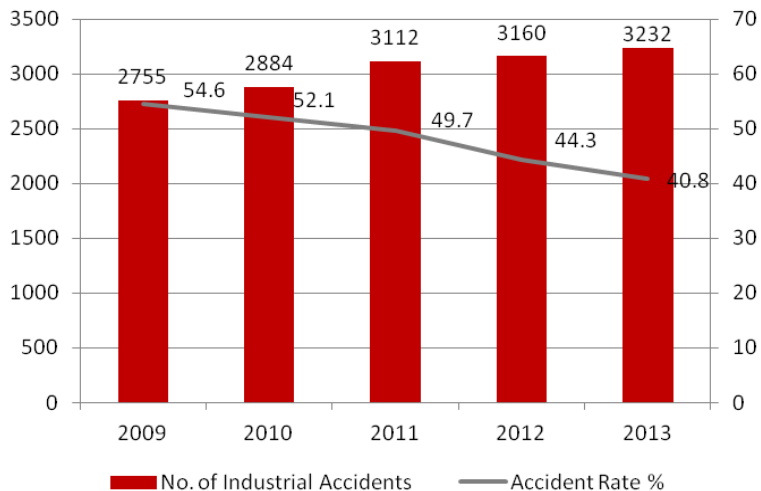
- **Demand:**

- Several major infrastructure projects such as Hong Kong-Zhuhai-Macao Bridge, the Hong Kong Section of the Guangzhou-Shenzhen-Hong Kong Express Rail Link, the Kai Tak Development Plan and the Shatin to Central Link project, 7 new railway lines and the third airport runway.
 - It is estimated that the manpower requirements will increase at an average annual rate of 1.9% from 271,100 in 2010 to 315,200 in 2018.

Problem

- **(2) high risk industry with high accident and fatalities rate**

Number of Industrial Accidents and Accident Rate per 1000 Workers in the Construction Industry 2009-2013



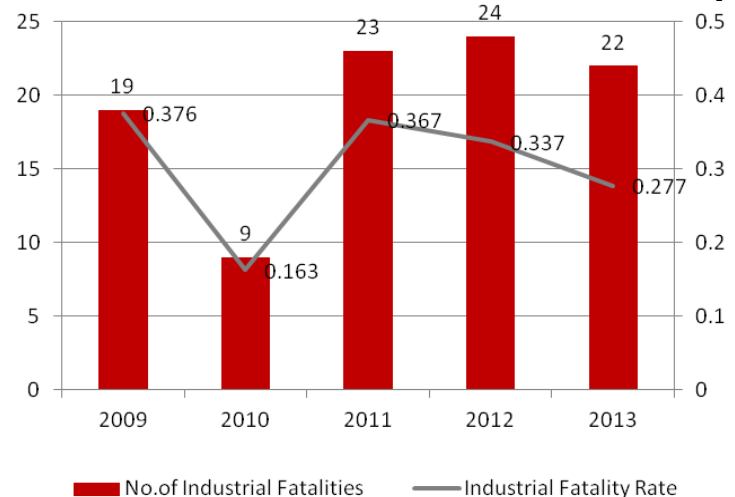
Source: Occupational Safety and Health Statistics Bulletin, Issue No.14, Occupational Safety and Health Branch, Labor Department

In 2013, the number of construction industry accidents accounted for 27.3% of the total number of industry accidents. In all industry, the accident rate per 1,000 employees decreased to 19.6 whereas that number in construction industry was 40.8 in 2013.

Problem

- **(2) high risk industry with high accident and fatalities rate**

Number of Industrial Fatalities and Fatality Rate per 1000 Workers in the Construction Industry 2009-2013



Source: *Occupational Safety and Health Statistics Bulletin, Issue No.14, by Occupational Safety and Health Branch, Labor Department*

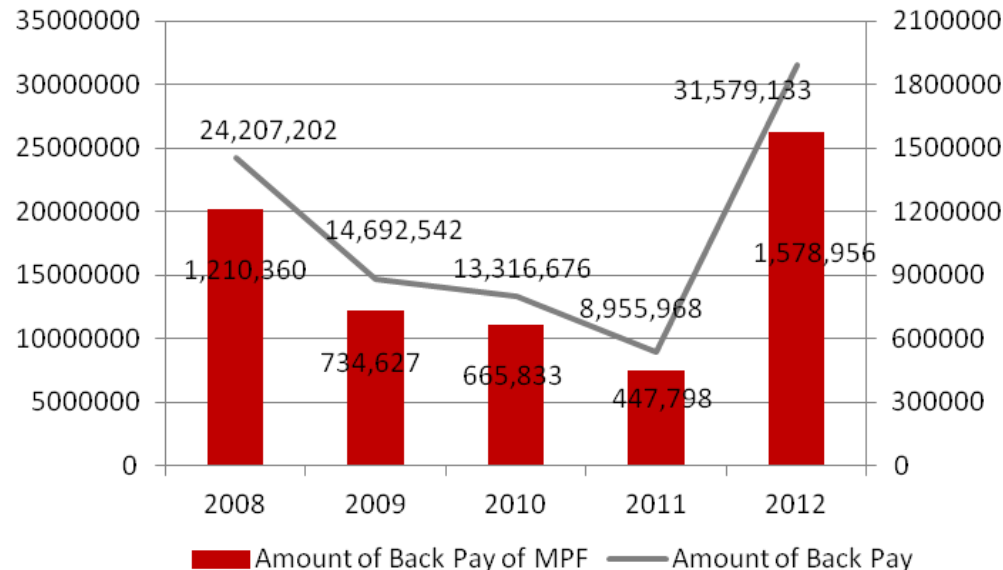
The construction industry fatality rate per 1,000 workers in 2013 was 0.277, lower than the average of the past five years (0.304). However this number nevertheless accounted for 82.8% of the total number of fatalities across all industries.

Problem

- **(3) Diminished labour rights**

- Back-pay issue
- Employer has no capability or intention of supporting employee MPF payments or other labour rights such as paid annual leave, statutory holidays, long service payment, compensation for illness etc.

Amount of Back-Pay and Back-Pay of MPF 2008-2012



Source: Back-Pay over 30 million, Who Will Join the Industry, HKCIEGU (2013)

Root

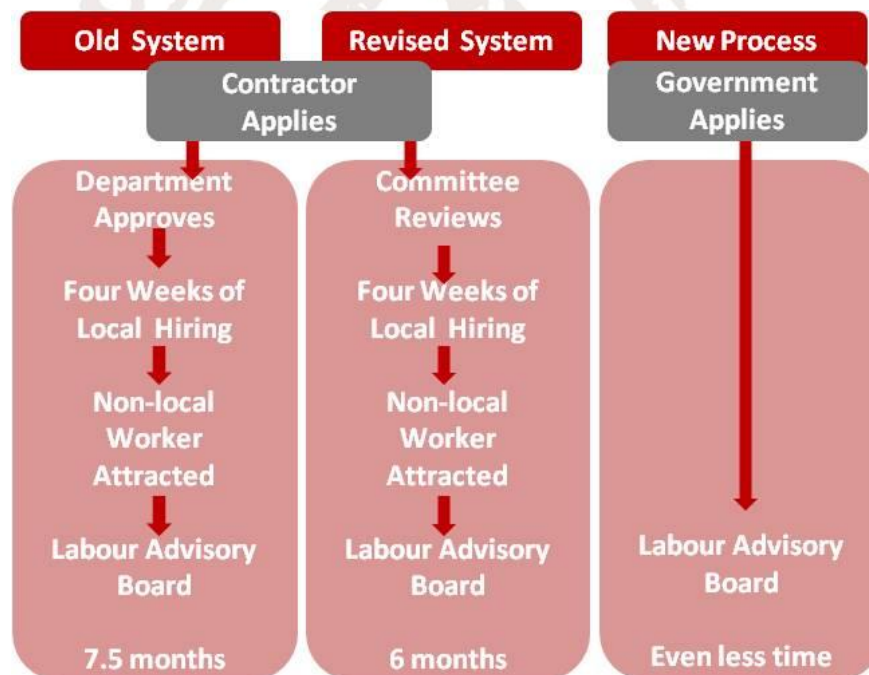
- Hong Kong has adopted occupational divisions and craft-based apprenticeships and training schemes which are very similar to those of the UK, leading to causalisation of labour. Most of them are paid daily wages, and do not have collective bargaining power.
- HRM issues could only be understood from the perspective of the contracting system, which is characterized by long chains of sub-contracting and the contractors not doing construction themselves but only managing the process (Ness and Green, 2012).

Remedial Measures

• (1) Importing construction personnel

- Government “Special Labour Importation Scheme” (SLIS) to import over 800 workers between 2009 to 2013.
- The Labour Advisory Board released a new arrangement in Aug 2014 to simplify the application procedures in relation to the importation of foreign workers.

Comparisons of Three Systems of Application for Importation of Foreign Workers



Source: Adapted from “Fast-track plan to hire foreign workers for construction projects after rail link delay”, South China Morning Post Hong Kong

Remedial Measures

- **(2) Enhance the training of local workers**

- Starting in 2008-09, the CIC obtained approvals from the Legislative Council for allocating funding of \$ 100 million and \$ 220 million in 2010 and 2012 respectively to enhance the training resources of the local construction workforce.
- The CIC has implemented various initiatives, including the Enhanced Construction Manpower Training Scheme (ECMTS), to enhance the skill levels of local workers.
 - in September 2010 to end-November 2012, the CIC has already completed four phases, trained over 2,000 personnel, about 60% aged below 35.
 - In 2013, around 5,500 trainees participated in various courses organized by the CIC to become semi-skilled workers, and approximately 3,200 of those have graduated.

Remedial Measures

- **(3) Better Use of Available Labour Resources**
 - “Borrow” labour from other contractors.
 - Reschedule work and resource usage leveling.
 - Pay extra to labourers to work overtime and on holidays.
 - Multiple shifts.
 - Adoption of labour-reduction technologies such as prefabrication, better management of critical activities, and hiring labour with multiple skills.
 - Adoption of more labour-saving methods and mechanization.

Remedial Measures

- **(4) Monetary Reward**

- To many workers, reward is all about pay.
- It is worth to note that soaring up payroll of workers will also result in increasing construction cost.

- **(5) Learning from Other Countries**

- Take Germany as example, where a social partnership exists with a wage structure based on hours worked and qualifications rather than output. Further, co-ordinated economies (social market economies) in some European countries have a greater degree of regulation of the capital and labour markets, with a tendency for financial institutions to provide long-term capital for industry development.

Summary

- There is a need to learn what we can from overseas and consider all factors influencing the industry. Finally, the measures should be compatible with the specific political and economic structures as well as the special conditions of Hong Kong.



Thank You!

