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International Valuers of Industrial Plant and Property

Asset Replacement Costs in China

Can you really index your historic costs?





Summary

In the period since internationally owned or managed manufacturing and industrial facilities were constructed in China there have been material changes in government incentives, the supply chain, labour markets, construction regulations and commodity markets.

These changes mean that indexing up historical costs or using standard pan-China or regional unit rates per square metre to arrive at replacement costs will often produce results significantly different to actual replacement costs for insurance purposes.

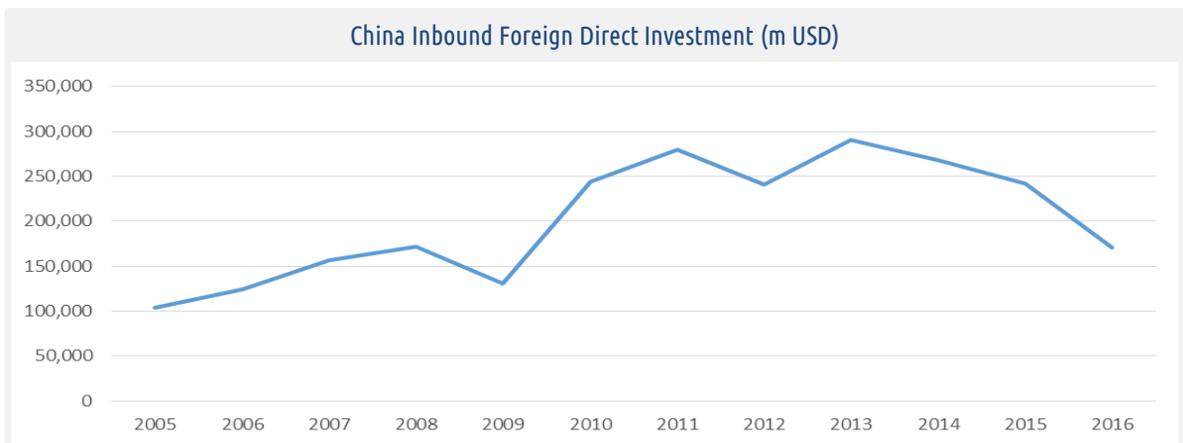
Owners and insurers of these facilities need to consider a much more detailed analysis of a facility's assets and estimated replacement costs in the current climate.



Introduction

For decades, international firms have been investing in new manufacturing or production facilities in China. Much of the early investment by foreign businesses was through joint ventures or collaborative activities with Chinese partners.

Following China's accession to the World Trade Organization in 2001, the economic and regulatory environment changed and there has been a particularly rapid growth in the number of multinationals establishing wholly owned facilities or acquiring existing facilities. The growth in foreign direct investment into China can be seen in Graph 1 below.



Graph 1: Source: OECD

In the years immediately after the global financial crisis of 2008, China pumped approximately, RMB 4 trillion into the economy through an unprecedented financial stimulus program of central government funding, local government support and loosened bank credit. Most of this stimulus found its way into fixed-asset investment, which rose 66% in 2009. The consequence of this huge increase in investment was not only a rapid change in the economy, but also a significant shift in the economy towards state-controlled entities.



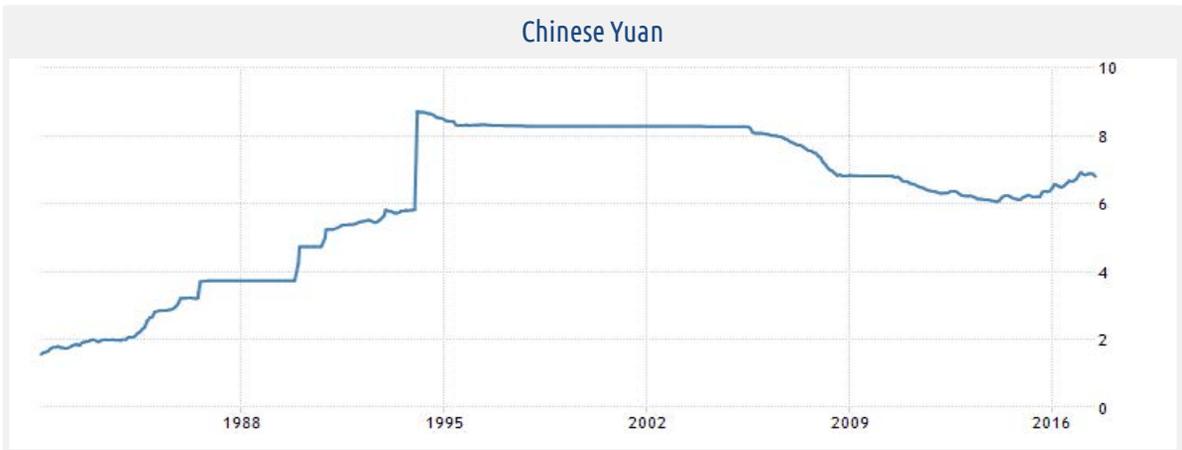
Why is this important?

The cost of new manufacturing facilities mainly comprises of three components – direct construction costs, services provided during the construction process, and materials and equipment:



1. Construction costs are influenced by construction techniques, site and neighbouring access, tendering and procurement processes, health & safety regulation and enforcement, environmental and other regulations.
2. Provision of services reflects the use of architects, engineering consultants, designers, project managers, agents and governmental support.
3. The cost of materials not only includes the provision of primary materials (fuel, steel, cement, etc.) but also building components (glazing units) as well as whole building systems such as electrical control systems and air conditioning.

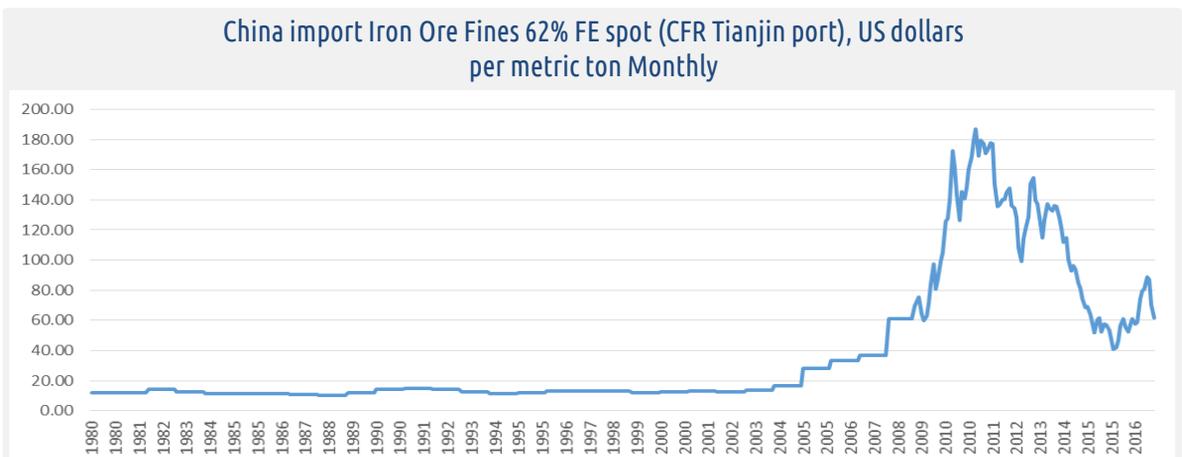
The effects on the above by the recent development of China's economy has had a major influence on the construction and reconstruction costs. By way of example, construction techniques have greatly improved, services have localized, wages for construction workers in key areas have increased, environmental regulations continue to tighten, and global economic pressures are shaping commodity markets. The influence of the exchange rate of the Chinese Yuan in changing costs for imported items (see Graph 2 below) should not be ignored either.



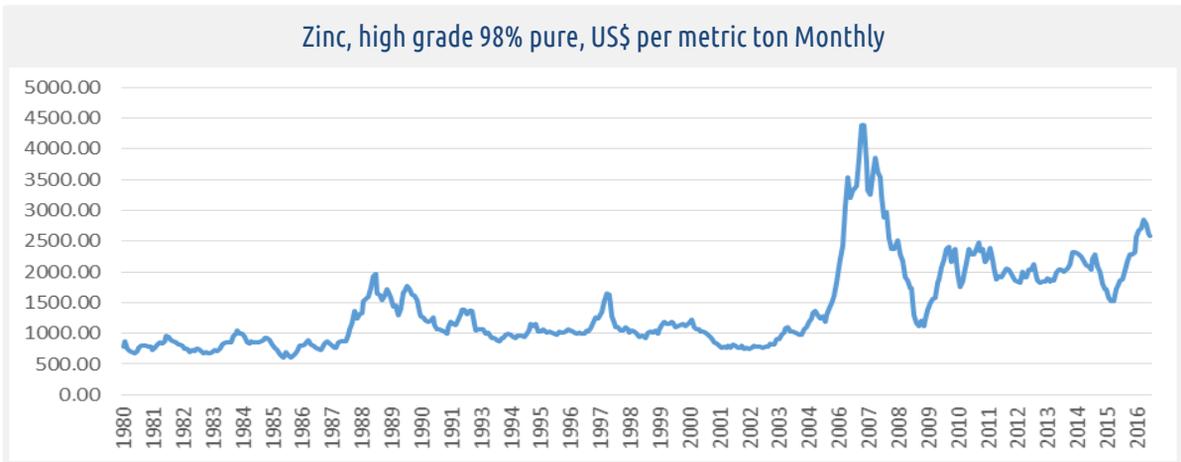
Graph 2: Source: TradingEconomics.com : OTC Interbank

Probably the most significant influence on the cost of construction and reconstruction in China has been the volatility in the price of basic commodities.

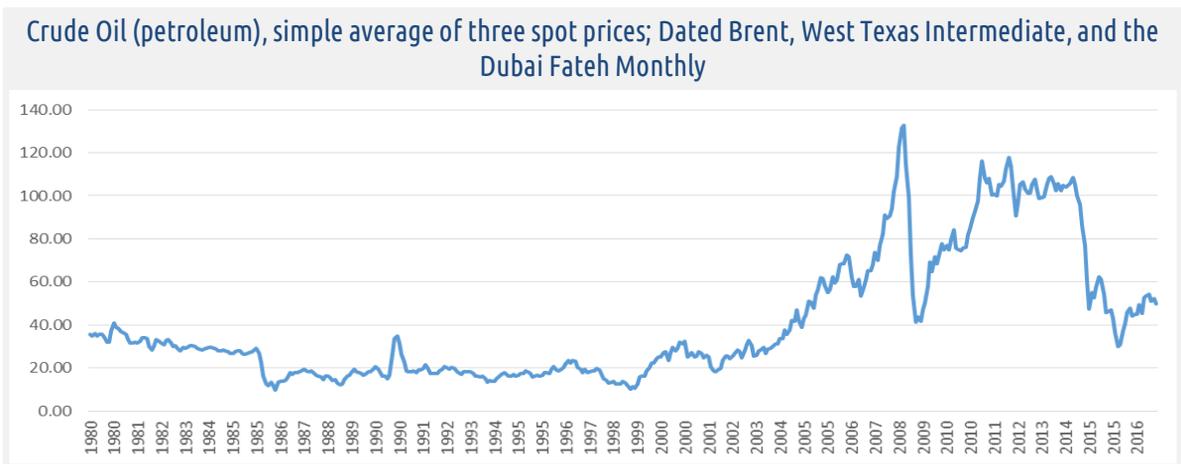
Driven by a focus on investing in infrastructure, along with access to cheap finance, government encouragement and the influence of international markets, the cost of oil, metals, cement and other key commodities has shifted continually over the last two decades (see Graphs 3,4 and 5 below).



Graph 3: Source IMF



Graph 4: Source IMF



Graph 5: Source IMF

As discussed, the cost of construction materials not only includes the provision of primary materials (fuel, steel, cement, etc.) but also building components (glazing units) as well as whole building systems such as electrical control systems and air conditioning. These costs are influenced by general market sentiment, competition, access to funding and other factors. Again, this has historically been highly volatile in China (see Graph 6 below), so the timing of purchasing equipment and materials has had a critical influence on construction and reconstruction costs.



Graph 6: Source: TradingEconomics.com : National Bureau of Statistics China

So how does this information translate into establishing replacement costs today? Additionally, and despite this volatility, with indices for China widely available, why can't these indices simply be applied to historic costs, the analysis of which could provide suitable replacement cost for insurance purposes?

The six challenges with using indices to arrive at current replacement costs



1. Do the original costs accurately reflect the assets?

In the heady push for GDP growth, the Chinese government at national, city/provincial and district level was highly supportive of foreign investment, often creating a nurturing environment for these investments in terms of incentives, removal of administrative barriers and provision of associated infrastructure.

Today, Chinese national and local economic policy is now more focused on state-owned enterprises, consumption and sustainable development, so many of the incentives and support mechanisms for foreign businesses have been withdrawn or scaled back.

Accordingly, it is harder to secure land rebates, development grants and other incentives that were available in the past.

Most acquisition costs in asset registers fail to reflect these grants/incentives and therefore would materially understate the true replacement cost if indexed to today's prices.

Besides the obvious and direct incentives that firms were offered, in many cases foreign investors were provided with disguised benefits during initial construction or set-up, including contractor worker subsidies and interest-free loans, administration and project management support. Furthermore, for new industrial zones, local governments often subsidize costs by providing construction of land boundaries or financing connections to utilities. Most of these payments would not be available in the event of a post-loss reconstruction.



2. Has the infrastructure around the subject location changed, so increasing or decreasing current replacement costs?

One of the consequences of rapid urbanization in China has been the growth in the geographic expansion of cities. Certain industrial zones on the fringes of cities now have to incorporate noise- and emission-reduction measures as a zone has become encircled by residential development. These increased expectations or regulations on noise and emissions could significantly drive up the cost to replace an existing facility post loss, or even restrict the ability of the facility to be reinstated at all at the same location.

On the other hand, urbanisation has often been matched with infrastructure investment including improved utilities, road and rail links.

For some historically remote locations this can now mean easier or cheaper access to both materials and labour, so potentially reducing reconstruction costs.



3. Have global or regional markets shifted, so affecting access to products or services?

One of the changes that occurred with the growth of China as a global manufacturing hub is that many international suppliers and producers have moved operations to China to take advantage of access to the Chinese market and to further lower running and manufacturing costs.

In practice, this now means that products and equipment that were only available from overseas markets are today readily available from (cheaper) China-based producers and suppliers.

Combined with the removal of import duties through national manufacturing, and reduced transportation costs as infrastructure has improved, many firms would be able to replace machinery and equipment at prices significantly below those originally incurred.



4. Which indices can you use and how reliable are they?

So where should you look for appropriate information? Statistics from the National Bureau of Statistics in China tend to be focused on national economic data rather than construction costs, while indices rarely reflect the nuances of local price differentials across China's cities and provinces.

Over the last ten years there have been several instances where Chinese statistics have been reviewed and subsequently amended several months or even years after original publication. Often this was due to either overzealous local administrators trying to match what they thought were required by central government targets, or the core underlying information was subsequently found to be questionable and amended. In this context, the use of indices needs to be treated with caution, especially in more-remote cities and locations.

As shown in the previous graphs, varying commodity prices and production costs continue to make the use of indices challenging. By their nature, government-produced indices are often based on longer-term and regional/national trends rather than localized spot prices. Across China there can be huge regional differences in pricing, depending on whether you are close to or further away from production hubs for commodities and materials. As a result, costs (and indices) in individual cities or regions could deviate significantly from published rates.



5. Economic changes in China?

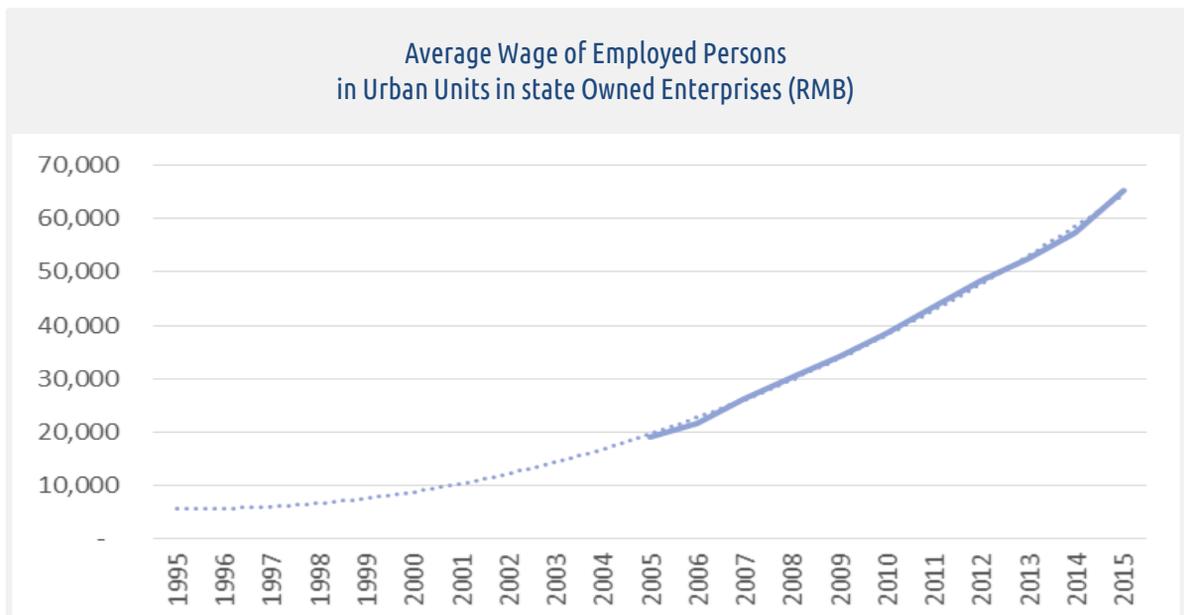
As the economy in China has matured, so have some of the labour laws and protection of workers' rights. Employment laws and minimum wage legislation have dramatically changed the cost of manual labour (see Graph 7 below).

The increased prosperity in traditionally rural locations has also meant that in some parts of the country there are now seasonal labour shortages which can slow down construction periods, this driving up overall costs.

Although large numbers of migrant workers are still a characteristic of Chinese labour markets, they are commanding higher wages and benefits, including longer holidays.

China has shifted its economic focus from manufacturing- and investment-driven growth to consumption-driven growth and this is also having an effect on the manufacturing sector and labour markets.

Key elements of this new strategy are a shift towards services, real wage growth and improved welfare (i.e. healthcare). This shift does not just mean higher wages but is also likely to influence the way manufacturers and suppliers focus their sales, in turn influencing costs.



Graph 7: Source: National Bureau of Statistics China



6. Other issues that can distort historic costs?

One reason why the use of asset registers for insurance purposes can be challenging is that the treatment of costs as capital expenditure or expenses may be defined in local, generally accepted accounting practice (GAAP). These rules continually evolve over time and occasionally fixed asset costs are expensed rather than recognized in the asset register. This can mean indexing up historic costs could materially undervalue the true reconstruction cost of a capital project.

Asset registers often include a number of items that would be considered as non-insurable for the purposes of property insurance. These can include one-off non-repeatable costs like licences or approvals but can also include road-registered vehicles and similar assets insured elsewhere.

Likewise, asset registers can often omit third-party assets where the liability for insurance may rest with the borrower.

Many would argue that, with its status as the world's second-largest economy, it is no longer justifiable to call China an emerging economy. However, it was a different story two or three decades ago and localized power, lack of enforcement of rules, weak legal clarity and common practices meant that facilitation payments and similar one-off enabling costs were commonplace. These unrepeatable costs are often still reflected in historic asset registers.



Conclusion

Accurate assessment of replacement/reconstruction costs for manufacturing, utility and industrial facilities is probably the most challenging it has ever been in China. This is creating problems for insurers, owners of assets, lenders and insurance brokers alike. More-sophisticated indexing models based around historic costs may address some of these challenges but, as mentioned, in this article historic costs are rarely totally reliable. Carrying out a regular detailed insurance valuation remains the primary and most defensible way to ensure that replacement costs reported to insurers are accurate and realistic.



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