Overcoming labour and commodity-related challenges

Related challenges in the Singaporean construction industry

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EXECUTIVE SUMMARY

COVID-19 has served to exacerbate the magnitude of certain challenges within the Singaporean construction industry, and while it is not the sole cause of said challenges, it has certainly played a central role in bringing these aspects to the fore. Labour availability is proving to be a core challenge for the industry, as is the surge in commodity pricing. In this paper, we discuss these two aspects that are proving particularly impactful for construction in Singapore at present.

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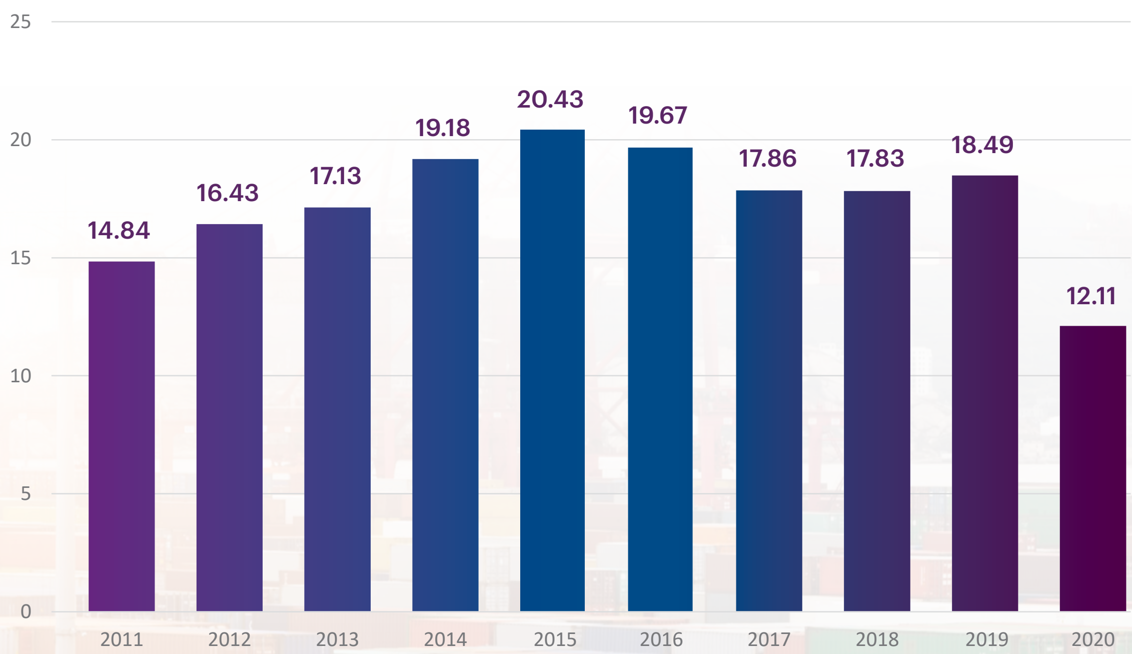
SINGAPORE CONSTRUCTION IN NUMBERS

Construction industry performance
-17.8%
in 2020

Employment in construction
11.2%
of total employment

GDP from Singapore's construction industry, 2011-2020



Source: Statista
Note: Value in Singapore dollars, billions

LABOUR

A heavy reliance on foreign labour

Construction is an integral industry for the Singaporean economy and its growth drivers, accounting for 11.2% of total employment. However, the resource pool for construction is heavily reliant on labour from various parts of Southeast Asia rather than the domestic labour pool – particularly Bangladesh, India and China. Looking at the vast majority of other major markets, such as the U.S., UK and Australia, the proportion is much higher in Singapore. In fact, as of last year, the number of Singapore residents involved in construction stood at around 97,200, while the foreign component of the construction workforce was almost 300,000.

Ultimately, there was a lack of local labour available to meet the market demand, and so foreign labour became increasingly important and constituted a higher proportion of the overall construction workforce. While there were some challenges with regards to this overreliance pre-COVID, the pandemic has really magnified and highlighted them, and brought it to the fore as an issue that the industry now has to address.

Labour outflux

During 2020, there was a marked outflux of the foreign workforce from Singapore, which can be attributed to a few factors. It was kickstarted by the onset of the pandemic. Following the extended circuit breaker period, running from 7th April 2020 to 6th August, the site restart period was slower than expected, due to the tightly-controlled BCA approval to resume work, reduced numbers on-site to maintain social distancing measures, swab tests and labour unavailability.

The initial outbreak in Singapore coincided with late January and early February, when many foreign workers typically take a break to return home to their own countries. With the timing in question, they faced the dilemma of being unable to return to Singapore as both countries began to lock down and travel restrictions evolved from there on in.

Furthermore, there were cases whereby workers returned home due to the holidays, had to extend their stay at home due to COVID and ended up eventually deciding not to return to Singapore, as their home market offered a better opportunity than Singapore did and they were closer to their families.

Migrant workers have traditionally been housed in communal dormitories, with just 9.2% staying in alternative types of accommodation, according to a May 2020 statement from the Minister of Manpower, Josephine Teo. As the circuit breaker was imposed and the role of the dorms in the spike of COVID-19 cases in-country was recognised, strict dorm quarantines were introduced, leading to a much lesser extent of social interaction, and new dorm restrictions were put in place. This in turn will have had an impact.

Having accounted for approximately 90% of Singapore's total employment contraction in the first three quarters of 2020, according to the Ministry of Manpower (MOM)'s labour market report, the number of migrant workers has dramatically reduced. Of the 158,700 decline in the total number of people working between January and September (excluding foreign domestic workers), non-residents made up over 139,000 of this figure, and the Q3 decline was the steepest (72,300). At the end of 2020, the Ministry of Manpower put the fall in the number of migrant workers year-on-year at 200,000.

Lastly, the Singaporean Government built upon its measures in the preceding years to more tightly control the influx of foreign workers, and took action to tackle the spread of COVID-19, lowering the quota for work permits, raising the qualifying salaries for S Passes and Employment Passes, issuing travel bans and border restrictions for Bangladesh, Nepal, Pakistan and Sri Lanka.

However, it should be noted that were the calls to close the country's borders to the migrant workforce entirely following the 2020 circuit breaker heeded, there would be 30,000 fewer construction workers in-country, according to the Ministry of Manpower.

Effects of the labour shortage

The effects of the labour shortage are being felt in a number of ways, as outlined below:

Premium rates now associated with labour in Singapore

Labour availability in-market has reduced, and this supply-demand imbalance is placing upward pressure on labour pricing. This pricing pressure is then further compounded by the fact that the domestic workforce typically commands higher rates, which becomes more relevant as the market becomes more reliant on said workforce.

These premium rates are being reinforced by the newly-introduced pilot programme, bringing migrant workers from India into Singapore for the construction, marine and process sectors. The additional cost per worker under this programme is expected to lie between S$2,000 to S$3,000, which is in addition to quarantine costs in Singapore, according to a spokesperson for the Singapore Contractors Association Ltd (SCAL), Association of Singapore Marine Industries (ASMI) and Association of Process Industry (ASPRI).

Some instances of schedule impacts and project postponements

The reduced availability of labour has had a knock-on effect on project schedules in some cases and can prove to be a barrier to project success. With a smaller workforce on-site, works will, in turn take longer, or projects may have to wait for specialist skills to arrive on-site, which will have an impact on construction programmes. The slow restart of work on-site means that the project will face further delays in reaching completion as well.

Furthermore, with the heightened safety precautions on-site, the project faces a decline in the productivity rate with a reduced quantum of workers allowed in an area due to safety distancing measures, and to a lesser extent, workers having to attend swab tests. The COVID-19 safe restart criteria issued by BCA has mandated that project sites are to be segregated into various zones. The workers assigned to a specific zone are only allowed to enter their assigned zone. This can impact the project schedule, as where a certain number of workers could complete a construction activity previously, multiple workers may now be required, when there are anywhere up to four or five zones on-site. The accumulation of these individual issues can lead to compounded schedule delay.

Projects are more susceptible to the impacts of a number of issues at present, such as labour shortages and project cost increases, and clients may decide to put a project on hold or reschedule until the industry stabilises. Clients that want to continue with a project might be forced to postpone, as they are unable to source suitable contractors with the adequate capacity at an appropriate rate. There have been instances whereby contractors faced insolvency, as they're unable to meet their contractual obligations due to insufficient workers and materials. Ultimately, these factors may be the catalyst for a project to tip into being cost-prohibitive and no longer feasible.

Increased construction costs due to project delays, as well as material and labour cost increases

These project delays due to premium wage rates will in turn push construction costs up further. This is further compounded by the material cost increases being seen at present, not only in Singapore but in the global commodity markets. This is discussed in more detail in a later section below.

Impact on tendering

As contractors and sub-contractors must now factor in the increased rates mentioned above, this is translating into higher bid costs being seen, as well as a potential reticence to take on an increased rate of risk. The current impacts have the potential to inflict numerous knock-on effects to the bidding process in Singapore. The tangible one is and will be increased tender prices. This is the most obvious outcome, and whilst the full effects of increased labour and material costs have not yet consistently manifested themselves in the bidding market, it is the management of these increases behind the bid that has the bigger potential to cause significant damage to the local market.

With the evidence to date suggesting there is now a cost premium associated with labour and certain materials in the Singapore market and a tender price index showing levels at their highest in over a decade, it would be fair to assume there is an obvious uplift in bidding rates across the market. This, however, is not always the case, especially for new bids in historically competitive markets such as commercial, which would suggest that while the sub-contractor is purchasing material at an inflated rated and a main contractor is submitting bids at rates consistent with 2019, there is a squeeze on one or both parties. There is only a finite period of time where such a trend can be sustained before it comes to an end.

Building dedicated project dorms to curb spread of COVID-19 amongst workers

In order to stem the spread of COVID, a number of owners/contractors are undertaking their own, dedicated dorms to house their workers. Complying with the latest regulations and housing workers on multiple sites can prove challenging, so they are essentially a dedicated resource for that specific owner/contractor and site/project.

Continuing to deliver construction success

While labour is proving a key challenge for Singaporean construction, there are a number of different steps that can be considered and implemented to secure project success, which we discuss below:

Source from existing local labour

In the absence of sufficient migrant workers, an integral part of the solution lies in resourcing projects from the existing local workforce, and accounting for the premium rates, as discussed above.

Following the amendments to the April-issued COVID-19 (Temporary Measures) Act 2020 in June and September, construction organisations facing challenges may apply to a registrar of assessors (appointed by the National Development Minister) for support with the unforeseen cost of preliminaries, when sites are not operational.

Although contractors are continuing to dedicate workforce to key projects, the decline of existing labour is forcing contractors to source overseas. There is feedback from the contractors that they are required to expend additional monies in order to bring in this workforce. These additional costs include several swab tests for each worker, mandatory quarantine order bills, increased levy costs, worker’s entry approval charges and COVID-19 medical insurance. The costs outlined above, which are initially experienced by the contractors, are in some instances being redirected to the client.

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Consider prefabrication and off-site methodologies

Even before the outbreak of the pandemic, the Singapore Government was encouraging the employment of prefabrication and buildability technology via the Buildability Score. PPVC in particular is being championed, with the Building and Construction Authority (BCA) pointing to an 8% cost saving and a 40% boost in productivity versus traditional construction methodologies, putting the latter down to more productive 'manpower' and 'time savings'. Since 2014, the agency has even made prefabrication a requirement for certain sites.

Singapore is already home to the world's current talent prefabricated building, Clement Canopy, and in early 2023, this will be overtaken by the 192-metre high Avenue South Residences, upon its completion, so the market is most open to these methodologies.

Staggered working hours on-site

With the need to reduce the density of workers on-site in line with COVID-19 guidelines, site productivity is unsurprisingly impacted. However, by implementing staggered start times to spread those numbers out across more hours on-site, this can be somewhat offset. Due consideration should be given as to the additional safety protocols necessary for night-time working.

COVID-19 Temporary Measures Act Part 10A

Further to the BCA COTMA, the government has issued an amendment (Part 10A) on 6th August 2021, which focuses on addressing the challenges associated with the increase in labour costs. Part 10A provides a relief framework which:

- Permits the contract sum to be adjusted to address increase in foreign manpower costs
- Is applicable for a 12-month time period (01/10/20 – 30/09/21)
- Is applicable to the built environment industry, i.e. public and private

We see this as a positive step in assisting clients and main contractors in addressing the manpower issue, and we would envisage positive negotiation in the market going forward.

COMMODITIES

Lack of local resources

Singapore does not have a supply of natural resources conducive to the construction industry, and so, the vast majority are imported. Where materials can be produced locally, the social distancing requirements observed at factories has also curbed their output.

However, with this reliance on global supplies, and the increasing demand and competitive nature of the global markets for materials, Singapore is facing challenges to secure the commodities required. This has been further exacerbated by Malaysia's most recent Movement Control Order (MCO 3.0), which is impacting the supply of materials from there.

Commodity pricing increases

The problem is that global commodity markets are volatile at the moment, with massive pricing pressures at play. With commodity prices facing particularly sharp inflationary pressure over the last 18 months, there has been talk of a 'supercycle' in recent times, whereby prices record an extended boom. It would mark just the fifth such supercycle in over a hundred years. However, there is a divergence in opinion amongst economists, as some view the price pressures as being cyclical as opposed to structural. In the face of a rebound from the pandemic-induced economic shock, robust Chinese demand and increased demand from the US as it faces significant supply chain disruption, it is expected that these factors will temper in due course and the market will somewhat stabilise.

Steel

Based on the Building and Construction Authority's January 2021 construction price update, preliminary figures show high tensile steel bars of 16-32mm were priced at S$809 per tonne in December — a 13.3% year-on-year increase.

DBS Group Research attributed rising steel prices to higher input costs — from strong iron ore and coking coal prices — as well as a tighter market situation on the back of improving demand from steel-consuming industries.

13.3%
increase in steel price

Lumber

Prices of raw materials like plywood and steel also increased, on the back of supply shortages as builders across the world gradually return to work. The value of exports of commodities like plywood, veneered panels and similar laminated wood from Singapore totalled $9.79 million in 2020. Sales of these commodities from Singapore decreased by 25% in value terms compared to 2019.

Lumber has gone from one of the most impressive pandemic performers to simply an example of incredible volatility, with the price falling 70% in the two months following the May peak of $1711.88. On the supply-side, the huge surge in prices appears to have come as a result of the supply constraints emerging off the back of COVID-19 restrictions and lockdowns. However, with restrictions easing, both sides of that dynamic appear to have eased over recent months.

25%
decrease in lumber sales

Copper

The supply-demand gap is widening, with higher prices being seen (almost doubling over the last year to hit over S$12,750 per tonne in recent times, before a moderate decline again), and lockdowns impacting the already-strained supply. In May, global analysts raised concerns about the potential for a market shortage, as inventories hit a 15-year low.

$12,750
per tonne

Shipping and transportation

Demand for container cargo had increased significantly, as industries restock inventories following initial lockdowns across the world. This eventually led to congestion at ports, shortage of containers and higher freight costs.

Based on container shipping rates at Shanghai Shipping Exchange, the price of shipping a 20-foot container to Singapore from Shanghai surged 370% to around US$798 as of 11 December from US$170 in October. A critical shortage of containers is driving up shipping costs and delays for goods purchased from China.

The pandemic and uneven global economic recovery has led to this problem cropping up in Asia, although other parts of the world have also been hit. Industry commentators are noting that desperate companies are waiting weeks for containers and paying premium rates to get them, causing shipping costs to skyrocket.

Global cargo shortages, shipping port logjams, rising air freight rates, border closures, petrol price hikes, factories operating at half capacities and other factors are causing shipping delays and major setbacks to the retail industry worldwide.

International trade accounts for about 300% of Singapore's gross domestic product, and drives its export-focused manufacturing and services sectors. Container volumes at Singapore port hit a record high of 3.3 million twenty-foot-equivalent units in March, up 2.3% year on year, and yet, in the face of such demand, as referenced above, this still made for a considerable shortage.

In a normal situation, the average waiting time for Singapore port was around five to six hours, but now ships have to wait for two to three days due to severe congestion at the port.

One of the major causes of the congestion at Singapore is the rollover of a significant number of cargoes from Port Klang and Colombo into Singapore after several lockdowns were imposed last year and the supply chain was disrupted.

An unprecedented and volatile surge in cargo demand, congestion across all nodes in the global supply chain (including depots, warehouses and seaports) due to renewed lockdowns, a lack of usable empty containers while laden ones are held up longer at these nodes, and the reliability of shipping lines' vessel sailing schedules dropping to ten-year lows have caused delays at almost every seaport worldwide.

Also, companies that work with a large number of suppliers are especially vulnerable to the effects of these various challenges and the overall slowdowns in global logistics.

The Suez Canal and its impact on shipping and transportation

Around 12% of global trade flows through the Suez Canal on massive ships like the Ever Given, which can hold 20,000 containers. More than $9 billion worth of goods passes through the 120-mile waterway each day, translating to around $400 million per hour. Nearly 19,000 ships passed through the canal during 2020, for an average of 51.5 per day, according to the Suez Canal Authority. Hundreds of ships, laden with oil and goods, waited for the route to be clear and as stories about the enormous vessel 'Ever Given' dominated the headlines, and the world economy suffered significant consequential damage. The blocking of the canal and the subsequent 'jam' held up a whopping $400 million an hour in global trade.

The unprecedented halt in the Suez Canal, which is a gateway for the movement of goods between Europe and Asia, will put temporary stress on trade, resulting in higher transportation costs, tighter supplies, and a delay in delivery of goods, not just to the producers but the consumers as well. The added stress will most likely be passed on to the consumers, resulting in short-term inflation of prices.

Delays caused by Suez Canal blockage are forcing shipping carriers to skip port calls and prioritise returning empty containers to Asia, disrupting business in both Europe and Asia.

Severe shortages of containers have pushed freight rates to an all-time high. It's been months since the Suez Canal blockage happened, but its impact continues to cause challenges for the shipping trade, as severe shortages of containers have pushed freight rates to an all-time high for key markets like the US and Europe.

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SUMMARY

The pandemic has undoubtedly served to further emphasise the challenges faced by construction in Singapore, and while it has evidently not been the sole cause of these issues, it has played a fairly central role. More so, it has served to bring some of the issues and complexities that were bubbling under the surface to the fore, and in many cases, has forced the industry to look towards implementing improvements, technologies and new processes to overcome these challenges with regards to labour.

However, the effects of the labour shortage have undoubtedly been felt in Singapore, coupled with a high degree of volatility in global commodity markets. Ultimately, we believe that the current market dynamics are relatively transient, and the market will stabilise in due course. We have also identified some actionable points with regards to securing project success against the background of the challenges that exist at the present time.

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