

Construction During Coronavirus

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ABSTRACT

In a world grappling with the economic fallout from COVID-19, countries will be compelled to revisit their erstwhile infrastructure growth story. For starters, the effects of stringent lockdown measures enforced across the world are stealthily becoming evident. The International Monetary Fund (IMF) forecasts that real gross domestic product (GDP) will shrink by around 3% worldwide,



growing 5.9 percentage points less than the 2.9% growth we saw in 2019. The effect on the construction industry will vary across the globe. While the United States will see mass layoffs in the construction sector as in many other industries, and building activity in southern Europe is anticipated to contract by 60-70%, China's economy, including the construction sector, is largely back on track, with the data showing an improvement in the situation there since March/April.

Those engaged in the business of providing accommodation, will now need to study, analyze, and accommodate the obvious impact of Covid-19 on the construction industry, and revise most of its existing rules.

INTRODUCTION

The forecast growth for the construction industry in 2020 has been downgraded to 0.5%, according to a GlobalData report. Prior to the outbreak of COVID-19, GlobalData had predicted that the global construction industry would see a growth of 3.1%, up from 2019's 2.6%. But there is a catch, the current forecast assumed that the outbreak was contained across all major markets by the end of the second quarter, which it was not. Construction in Western Europe was set to shrink by 1.9% this year, with the construction industry facing "severe disruption", and commercial construction in sectors like hospitality and tourism likely to come to a complete halt due to a lack of financing.

Global Data's worldwide forecast also assumed that, following the containment, conditions would allow for a return to normalcy in terms of economic activity and freedom of movement in the second half of the year. The report also drew a distinction between advanced and emerging markets, with construction growth in emerging regions halving to just short of 2% this year before rebounding to 5% in 2021. In advanced economies it forecast a contraction of 1.5% this year, followed by a 2% increase in 2021. The report outlined a lingering and potentially heavy impact on private investment owing to the financial toll inflicted upon businesses and investors across a wide range of sectors.

According to the report, “Governments and public authorities will likely be aiming to advance spending on infrastructure projects as soon as ‘normality’ returns so as to invigorate the industry. This will be spread across all areas of transport infrastructure and energy and utilities. With interest rates falling to record lows, borrowing costs will be at a minimum, but the success of government efforts to spend heavily on infrastructure will be dependent in part on their current financial standing.”

“Moreover, with most governments prioritising cash hand-outs, particularly to the economically weaker segment, their capability to invest in the infrastructure segment is likely to be constrained, especially in countries with high debts.” - Can this mean private players will gain dominance?

This paper will talk about how construction activities should move to a blended model i.e. creation of Special Economic Zones (SEZs), STP, REZRP with super specialty service and medical centres concentrated in one hub.

WHAT NEEDS TO CHANGE

Despite having weathered the storm of the Great Recession, the construction industry still faces challenges, both old and new, moving forward. Rising material and labour costs, labour woes, increased competition, and shrinking profit margins are some of the challenges construction firms face. There are also updated rules and regulations that business owners must stay abreast of, like new OSHA rules, or changes to building codes, or the recent tax reforms.

A survey by the Associated General Contractors of America (AGC) finds that 21% of employees in the construction industry are age 55 or older, compared to just 9% that are 24 or younger. Tech-savvy millennials aren't flocking to careers in construction as past generations have, which will continue to cause issues for firms as they seek to meet growing demand. The lack of diversity and the uncertainty of immigration reform will only make matters worse. Construction firms need to do a better job of creating in-house training and apprenticeship programs, as well as collaborating with state and local governments to create programs designed to attract and train new talent for careers in construction.

A report from McKinsey & Co. finds that, “While many U.S. sectors including agriculture and manufacturing have increased productivity 10 to 15 times since the 1950s, the productivity of construction remains stuck at the same level as 80 years ago. Current measurements find that there has been a consistent decline in the industry's productivity since the late 1960s.” These findings are troubling, especially as construction projects are becoming increasingly more complex.

There are a number of factors that lead to poor productivity on construction projects. These can be due to inadequate planning and scheduling, lack of collaboration and communication between stakeholders on the project, idle time wasted by having to wait on materials and supplies to be delivered, or for prior work to be completed. Fragmentation in the industry from working in silos is also a major contributor to the lack of improvement in productivity levels over the years.

Construction methods like design-build and lean construction practices which require a high level of communication and collaboration among key players on a construction project have been proven to improve efficiency and productivity on projects. Technology such as building information modelling (BIM) and project management software are also tools that contracting firms can use to bolster

productivity. Telematics, mobile devices, and software applications have all been in use in the construction industry for a number of years. Emerging technologies like Virtual Reality and Augmented Reality, robots, drones, 3D printing, the Internet of things (IoT), wearables, and autonomous vehicles are all being adapted for use in the construction industry.

BIM, VR, project management software, and mobile devices can help with scheduling and planning, as well as communication and collaboration which can lead to better productivity. Drones and wearables are being used to monitor workers and keep them safe. VR is being used to train workers in safe environments, and robots and autonomous equipment are aiding workers by alleviating some of the more strenuous tasks they are required to perform, while also removing them from some of the more hazardous areas on construction sites.

INITIATIVES NEEDED TO USHER IN CHANGE

- Governments should allow migration from fixed leased deeds and/or minimum guaranteed amounts to become partners in co-living and adopt revenue sharing models for the industry.
- E-security hub, spending on internet connectivity, security, and networking products ought to increase in favor of more strategic properties.
- One of the very convenient pros of living in a gated community is the access to a number of amenities. Gated communities usually offer facilities such as a golf course, tennis courts, football pitches and more, as well as swimming pools and gyms. Having such a well-integrated community with such shared facilities makes for comfortable living.
- The idea of gated homes is to be in a closed off and well-guarded surrounding. Gated communities usually have fixed entrance and exit points that are either manned or have electronic security. There will be CCTV cameras for 24/7 surveillance, electronic fences, intercom systems and so on.
- Green gated community designs homes with a focus on energy efficiency and resorting to advanced building science by using eco-friendly materials. This way they can promote water and electricity conservation, improve air quality and thus create a healthier living environment.
- On the supply side, we are likely to see companies doing more to digitalize their value chain (e.g. internal processes and go-to-market) and making their business more resilient. This includes construction site digitalization and supplier regionalization in a bid to make the supply chain more resistant to global shocks.
- Consolidation may well turn out to be another focus topic for construction companies in the new normal – consolidating the circular economy, for example, or increased energy efficiency, reduced CO2 emissions and “green” products for a Green Deal.
- New products and solutions that reduce the spread of disease could become more established on the market. The spectrum could range from antiviral HVAC systems to modified work/office furniture.

THE FUTURE OF CONSTRUCTION AS I SEE IT

New Normal

- Demand shift – from commercial to residential/public and within commercial (to warehousing/logistics)

- Structural change – of supply side through accelerated change in market structure, processes, services
- Flexibility and resizing – Operational Excellence – Digitization of processes and value chain – Investments in R&D
- Behavioral changes such as regular working from home have the potential to make living in the countryside more attractive
- In commercial construction, companies' demand for building work may decline due to massive slump in sales and profits some firms are experiencing. The structure of demand may also change as a result of permanent changes in behaviour: fewer hotels (as there will be fewer business/leisure trips), fewer offices (as there will be more remote working), less retail space coupled with increased demand for more warehouse/logistics space (as there will be more online shopping).
- Public sector construction – Cities and local authorities responsible for majority of such spending are under the weight of mounting debts. Loss of business tax revenues in the wake of COVID-19 has exacerbated the situation.
- Construction coordination will be done virtually. Most people involved in the general contracting industry will adhere to the fact that construction coordination and planning involves bringing in project managers and superintendents from all trades involved. Going forward, these meetings which usually bring multiple people face to face will be held virtually.

CONCLUSION

The construction industry has adapted to catastrophes in the past, the current COVID-19 situation is nothing less than the Tsunami of 2004. Keep in mind that the magnitude of physical disaster experienced during COVID-19 is far less when compared to ruinations because of hurricane-like calamities. As we have discussed in the paper above there will be a demand shift and variations of buying pattern emerging in the industry. The outcome of this will be unpredictable, with a likely shift in people working in big cities towards less crowded suburbs. Also, the decreased necessity of travel and tourism business will greatly impact the public construction market.

Against the backdrop of shrinking investments and the changing demand structure, Roland Berger has drawn up two scenarios for construction companies. The scenarios are based on regression analysis of selected indicators combined with empirical values from past crises. The scenarios show that the construction industry will likely reach its nadir in the first or second quarter of 2021, somewhat later than the economy as a whole. At the end of 2021, real revenues may thus be 6% lower than at the end of 2019 in the base scenario (U-shaped recovery), and as much as 8% lower in the negative scenario (L-shaped recovery).

Given the nature of construction projects with their lengthy planning, approval, financing and execution phases, the full impact of the coronavirus crisis will be felt later than in many other industries. The sector will only get back to something approaching pre-crisis levels toward the end of 2022. The biggest losses will be driven by commercial construction, where a 6% drop in real terms could be seen in 2020 owing to the collapse in revenues – with some firms making zero sales during

lockdown. This effect will likely continue into 2021, where a further decline of 2-3% is possible. Housing construction will likely feel the impact in the latter part of 2020 as households express lower demand for new build homes (about 2% lower in real terms in 2020).

In my opinion, there is an exigent need for economic stimulus programs – which tend to be linked to sustainability criteria – or any debt relief granted by federal or state governments to the local authorities would likely help stabilize construction spending on modern infrastructure (e.g. high-speed internet, intelligent building control in the context of the Internet of Things) and “green” public buildings. In order to meet this demand, a large proportion of construction companies will need to invest in expertise and equipment, in some cases substantially, as relatively few companies so far specialize in these segments.

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About the Author:

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