

## Note from the Editor

### Skyscraper-pride

#### 1

During the winter of 1992, I led a group of students on a study tour of India and at about half way into the trip we landed in Delhi. With about fifty students, we took a sight-seeing tour of the city while the Panjabi bus driver acted as our guide, introducing the various places of interest. The bus, at some point in the journey, stopped in front of the imposing Delhi Development Authority (DDA) building and the driver very proudly announced that it was the tallest building in Delhi. "How tall?" was the obvious question from some of the students. "Twenty-two stories," the driver replied and at that the bus full of students laughed out loudly. The bus driver was, obviously, perplexed at that and asked to know the reason for the laughter. One of the students explained that Dhaka City had many such tall buildings and the tallest at the time was a thirty-one story building. The driver swallowed his pride and mumbled that he was just an illiterate driver and did not know much, but, in his defence, argued that Mumbai had many taller buildings.

Not many, Mumbai had only one at that time, the World Trade Centre building built in 1970. It was 156 meters tall with 35 floors. The bus driver was also wrong in that it was not the DDA building but the Vikas Minar, which was the tallest building in Delhi since 1976, with 23 stories and 84 meters in height.

The 31 storied and 137 meters tall Bangladesh Bank building in Dhaka was built in 1985 and remained taller than all buildings in India (other than the World Trade Centre) until 2000; all buildings in Pakistan till 2019 and Sri Lanka till 1996. The Bangladesh Bank building was surpassed in height by the Dhaka City Centre building, 37 stories and 171 meters tall in 2012. It was not until 2015 that Delhi, 2017 till Colombo in Sri Lanka, and 2019 till Kolkata in India or Karachi in Pakistan had any buildings taller than the Dhaka City Centre building. Mumbai had built a taller one in 2009.

So, it appears that my students were justified in their mockery of the bus driver. Dhaka City held up to *their pride* quite firmly.

Unfortunately, NO!

The story of "skyscraper-pride" for Bangladesh is a long and a frustrating one and I shall come to it later in the essay.

## 2

The definition of the skyscraper has changed many times since the first building, the Home Insurance Building, with just 10 floors in Chicago, USA, was dubbed as a skyscraper in 1885. In the USA and most engineers define a building which has 7 floors (23 meters or 75 feet tall) or more as a “high-rise” building and initially all high-rise buildings with 10 to 20 floors were considered as skyscrapers. The Council on Tall Buildings and Urban Habitat (CTBUH) defines a continuously habitable building with 40 floors or taller than 150 meters as skyscrapers. Buildings with 13 floors or higher, but shorter than a skyscraper, are often called “midrise” buildings. However, largely because the building technology has changed and there are many buildings today going higher than 40 stories or 150 meters, buildings above 300 meters tall are called “supertall” skyscrapers and higher than 600 meters are called “megatall” skyscrapers. Currently there are a few proposals for buildings taller than 1000 meters or a kilometer high, including one of 1350 meters, while there is already a building higher than 800 meters, the Burj Khalifa. Hence, I feel the CTBUH needs to come up with definitions for these soon. Perhaps, keeping with their previous ranking system, the buildings taller than 900 meters be called “hypertall” and those going higher than 1200 meters as “ultrtall” skyscrapers.

Dhaka City with only one building in the skyscraper category (171 meters) is by no stretch of imagination in contention of being called a “skyscraper-city”. By the same token, neither Delhi, Kolkata, Karachi (Pakistan), nor Colombo (Sri Lanka) can make such a claim. That honour goes to New York, the skyscraper-city per excellence, and Chicago, where it all began. But, again, that is not the full story. Today, there are a dozen other cities, including Mumbai, which can make the same claim, and they do. There are presently nine cities with more than 100 skyscrapers (150 meters or taller) and they are Hong Kong (355), Shenzhen (289), New York City (284), Dubai (201), Shanghai (163), Tokyo (158), Chongqing (127), Chicago (127), and Guangzhou (118)<sup>1</sup>. Closing in on this number are cities in South East Asia like Jakarta, Manila, Bangkok and Kuala Lumpur and a half a dozen other Chinese cities. Mumbai, by some accounts, also has more than 100 skyscrapers. And today, nearly all major cities in the world host a few to a few dozen skyscrapers.

Before the skyscrapers were built, there were other signs of greatness for a city, such as being the seat of the government or a religious centre but there were always the large and imposing buildings, the royal palaces, temples and commercial buildings all through history adorning the city. In many parts of the world, pyramids, temple or church spires, and minarets soared to major heights and indicated the greatness of a city throughout much of history. These were replaced by the tall chimneys spewing out gas and dark smoke of the industrial powerhouses by the 18<sup>th</sup> century. Soon, however, these dirty industries were shipped outside of the cities and as the cities increased in population, larger and taller buildings began to showcase the importance and power of the city, look at the colonial cities like London and Paris. But there was always a major limitation to building tall. Since it was difficult to climb higher on foot, buildings were restricted to five or, at best six, stories high, Paris exemplifies this principle to its

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<sup>1</sup> Wikipedia

best utilization. It was not until the invention of the safe elevator system that buildings could actually grow much taller and that happened first in the USA.

Skyscrapers, just by their imposing presence, overwhelmed people from the very beginning and began to define the greatness of the city in people's mind. This simple fact, more than any other considerations, had propelled skyscrapers to proliferate across the world. The business world was quick to cash in on the importance of the "awe-inspiring" quality of tall buildings as it offered greater "visibility" even within crowded cities. So that, nearly all skyscrapers built in the USA are commercial buildings. Be it Woolworth, Singer, Sears, Chrysler or Rockefeller buildings, were all corporate offices. Indeed, all through the first decades of the skyscraper construction in the USA, there ensued an intense competition among business enterprises to build taller, to surpass one another, as if, announcing to the world, that "taller is better", reliable, trustworthy, which bred in a sense supremacy for the owner, the institution, the city, as well as the country. Cities like Chicago and New York were in competition to build the "tallest" building while that laurel alternated between the two cities for over a century.

But these cannot be the only reasons to build higher. Scholars have regularly scratched their heads to identify the real causes for building a skyscraper. The economy of building higher in a land scarce area as in Manhattan or in highly valued land area like in a downtown, which immediately increases the floor area many folds, does seem to be the most convincing argument. The tall buildings in such an area do become cost-effective and profitable in the long run. The presence of skyscrapers in nearly all downtown areas of the USA attest to that assumption being true. Yet, that is not necessarily the case, as we shall see below in cases of recent skyscrapers being built in Asia. But more importantly, shown as early as in 1930 by W. C. Clark and J. L. Kingston<sup>1</sup> that building beyond a certain height, 63 floors to be precise, become counter-productive. Yet, people, particularly in the present times, are building many *times* higher!

Perhaps, the social and psychological factors could explain the construction of skyscrapers better. First, the very notion of "prestige" got associated with the skyscrapers because they were being constructed in the most powerful economy and polity, the USA, as well as in the Soviet Union, the two superpowers of the last century. Building a skyscraper was a step to display such powers for a country. Second, the process of urbanization got intertwined with the growth of cities in the USA, and cities in the USA built skyscrapers. So the path towards urbanization, particularly in the newly independent countries of Asia and Africa, as well as in Latin America, was to imitate the process in the USA. The only exception was the Western European countries, who could have done the same while rebuilding after the World War II, but largely opted to rebuild their old cities (more on this later). And third, the very concept of modernization, as was promoted by the West, meant westernization. Therefore, the life in a country or a city needed to copy the life in the West. Building skyscrapers was the most visible way of doing so. Building skyscrapers, like in the USA, was to get noticed, get recognized as a developed country, or city.

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<sup>1</sup> W. C. Clark and J. L. Kingston (CK), an economist and architect, respectively, published a book called, [\*The Skyscraper: A Study in the Economic Height of a Modern Office Buildings\*](#)

Along with the sense of prestige, certain amount of “pride” also got mixed with being able to build like the USA, or becoming a city like New York.

Today, the building of skyscrapers in many parts of the world goes beyond the prestige factor, the pride of being able to build, “because we can”, dominates the psyche. We have the money, technology and the will, so we build, often just to satisfy our over-blown ego, the “pride of possession”, whether we need it or not. Technology has improved tremendously since the 1800s and particularly after the 1960, which have made building previously impossible structures possible, made the construction cheaper. The will is supplied by the need to get noticed and the sense of superiority associated with the possession of skyscrapers, to be like the developed countries. While for countries like China, building taller in already crowded cities, has become a necessity. Money is often available in abundance, many developing countries have huge amounts of money to spare, as do many individuals, and they can build to their hearts’ content.

But more importantly, we do not have to build in the costliest land, in the downtown area, any more to make it profitable. We can build, literally, wherever we want to. We can build in the desert, the new capital city of Egypt, or the whole cities of Dubai, Abu Dhabi, Kuwait, and Doha etc. We can build in a swamp or a marsh, like the Pudong area of Shanghai, or the low lying river basin, as in Shenzhen or Guangzhou. Or in agricultural land purposed for the same, as in Dhaka. We can build in reclaimed land from the sea, as in Colombo, Lagos or Malaysia’s “Forest City”. Or in a stone quarry, as the “Moscow International Business Centre”, or even in an abandoned mine, as in the case of “Intercontinental Shanghai Wonderland Hotel”. We do not have to build tall, we can build skyscrapers along the ground, and call them “ground-scrappers”, as in the Apple Headquarter, or on top of other skyscrapers, as the “Crystal” in Chongqing, and call them “horizontal skyscrapers”. We can build skyscrapers and abandon them, the 105 storied Ryugyong Hotel in Pyongyang in North Korea, or build whole skyscraper-cities and abandon them, as with the ghost cities in China. All, “because we can”!

And that is why, countries even with near zero supporting technology, build skyscrapers, if necessary, by buying everything: engineers, architects, workers, material, as well as equipment and technology to build dozens or hundreds of skyscrapers, even when the economy or the population does not require them; countries just coming out of poverty, or still in poverty, build skyscrapers; a pariah country, regularly plagued by famine and mal-nutrition, build skyscrapers; and even a country where 50% people lack basic toilet facilities, build skyscrapers!

Absence of skyscrapers pose an existential threat to these countries or cities. It is the “pride of possession”, of even just one skyscraper, spending billions, that they may not possess, can put a city or country on the map of the world, “see, I have what you have”! So, beg, borrow or steal, but put up one of those skyscrapers, often a misfit, totally out of place, out of harmony with the environment, culture and economy, an eyesore, where they should not be. But we must have those! Build me a skyscraper, please!

## 3

These social and psychological tensions initially played out in the USA as well, where, businesses and industries faced similar existential threats and had to put up skyscrapers not only in Chicago or New York but all over the country, even if they were just 20 or 30 story buildings in a small town with only a hundred thousand people, but had to build to get noticed! This actually became incumbent on the USA since it portrayed itself as the economic and political super-power. The sky-piercing buildings, publicized through numerous posters, pamphlets and books and used as the setting for the Hollywood movies, mesmerized the rest of the world. Ironically, it soon became obligatory on the other super power, the socialist Soviet Union, also to build skyscrapers for the same reasons, to project power.

By the 1930s the very notion of “urban” living in the USA got intertwined with the skyscrapers, and it seemed only befitting for the most powerful country to build those cloud-touching structures in its cities. The picture of Manhattan, the 13 mile long stretch of skyscrapers, etched in our memories, was like a living picture, as if we were there. I remember, the first time I visited Manhattan in the summer of 1978, I was entering the city from New Jersey and as I turned a bend on the road towards the Lincoln Tunnel, suddenly the whole vista opened up in front of me. An involuntary “wow!” was my only expression as I drank in the scenery.

Perhaps, like me, many millions, who have ever been to New York, or seen the city in pictures, have dreamt of having some of those awe-inspiring buildings in our own cities or countries. So that from the 1930s skyscrapers started appearing in other countries. After the World War II, from the 1950s, this fever, like a pandemic, spread across the world, city after city opted to build skyscrapers, including even in the socialist bloc countries. The Moscow State University building, 36 floors and 240 meters, was the tallest structure in Europe for nearly four decades.<sup>1</sup> Soon skyscrapers spread to Asia and Africa as well. But the real craze in building skyscrapers did not unfold till the 1990s in China; the 2000s, in East and South East Asia and in the Gulf Countries and 2010s in India.

In China, as its economy improved and urbanization caught on, building skyscrapers seemed to be the only option to house the *hundreds of millions* that were flocking to the cities to escape poverty in the rural areas. China achieved miracles over the last four decades, converted a poverty stricken backward rural population into an industrialized, urban nation. Indeed, it attained a level of growth in its industry, commerce and basic structures comparable to the USA in just 40 years what the USA took 150 years to build. China’s cities reflect this growth more than anywhere else. The skyline of dozens of cities deserve the “wow”, while tens of skyscrapers adorn a hundred other city skylines.

I sit dumbfounded looking at the videos of the spectacular skyscraper designs and the skylines of these Chinese cities, whose names I never heard of and, am sure, few in the world knew of, even a decade ago. Hong Kong, completed construction of 54 skyscrapers in one year! Shenzhen has most skyscrapers measuring 200 meters and taller; Shanghai has the second tallest skyscraper in the world. Guangzhou,

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<sup>1</sup> Wikipedia

Chongqing, Beijing, Nanjing, Tianjin, Wuhan and Changsha etc. are cities with enviable number of skyscrapers and skylines. China has most of the supertall and megatall skyscrapers of the world too. Overall, China has so far constructed 1980 skyscrapers in 35 or so years, more than double that of the USA and nearly as many as the top ten countries *combined!* Many more are under construction and in the proposal stage, to the extent that the Chinese authorities had to put a brake in the construction this year and limit the height and the types of skyscrapers to be built. Nonetheless, China is today a skyscraper-country, more so than the USA. China wanted to be like the USA and its economy is closing in on that. China wanted to build skyscraper cities like New York and it has built at least a dozen!

However, the notion of “pride” and the concept of “because we can” have played out most blatantly in the Gulf States. Because they have the “money”, gifted by nature, *they can* build to satisfy their super inflated egos, to become “proud” owners of, to put their names on, the “tallest” buildings on the street, in the city or the country and finally the world. And they DID! Cities like, Dubai, Abu Dhabi, Doha, Kuwait are today skyscraper cities of unprecedented growth. Built, primarily on perched dry land of the desert, these cities have grown from ramshackle villages into world class cities in a matter of just two decades. Skyscrapers in Dubai are the most spectacular, with furious competition for over 15 years to build the tallest, until the tallest building in the world, Burj Khalifa, 163 floors and 828 meters tall, was constructed in 2010<sup>1</sup>. For a population of less than one million Emirati citizens, nearly 500 of skyscrapers, 100 meters and above, have been built or are in various stages of completion in the Emirates!

I can understand China building 2000 skyscrapers for a population of 1.4 billion but I find this to be sheer madness, there is no rational explanation other than to satisfy their ego, quench their “pride”, and build “because they can”, although the only input of the Emiratis is the huge amount of money needed for such a maddening construction spree. The world tolerates this appalling display of easy money for the simple reason that everyone, including Bangladesh, can profit from this ludicrousness of the *novae riche*. Indeed, if anything, the world encourages such wanton destruction of resources. In Dubai, 49 more skyscrapers were under construction in 2019 and 127 more are coming in the near future, the reason given is to transfer the oil based economy into one of tourism.

The population of the whole country has only 11% Emirati citizens and the rest 89% are expatriates, slaving away to build these wonders, reminiscent of the ancient Athens with 90% slave population! So, who are they building these skyscrapers for? The buildings lining up the E 11 Road is a horrid agglomeration of architectural experimentations, following no particular logic of arrangement or care for the harmony, let alone the aesthetic beauty. Are all those 100 story buildings really necessary? Who live and work in those? And what if, and when, the tourists stop coming, as is happening right now under the Covid-19 situation, what happens to these buildings!

The pride factor played out most nakedly in the construction, or not, thereof, of the “Dubai Creek Tower”. The 1350 meter tall tower was proposed to protect the title of having the tallest building in the world in

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<sup>1</sup> Wikipedia

Dubai, as soon as The Jeddah Tower, a 1000 meter, (kilometer) high tower began to be built in Saudi Arabia, to overtake the Burj Khalifa. The Dubai structure was supposed to be more of a tower than a building with only 20 floors and the construction proceeded up to putting up the base. However, as soon as the construction of the Jeddah Tower, half done, got stopped due to corruption charges against the owners, the Dubai tower also stopped. It may or may not finally get constructed since the cost of \$1 billion is hardly justified for a 20 floor building. However, the title for the tallest building may also be lost to Dubai in any case since other countries or cities may come up with a taller one, like the Burj Mubarak Al-Kabir, the 1001 meter tall building in Kuwait City in the pipeline or the proposed “mile high” (1,609 meters) one in Tokyo.

Skyscrapers are not necessarily good looking buildings, particularly during the construction phase, which may take ten years or more while they tarnish the skyline of the city, standing out like a sore thumb. The hotel in Pyongyang under construction for decades, became the laughing stalk of the whole world. In any case, it is not easy to make a skyscraper attractive looking. First of all, you cannot even see the whole building up close, you need to be hundreds or even thousands of meters away to appreciate its grandeur. Second, to build in the desert, or in a city that was only a fishing village just decades ago, with no particular character or a sparkling cultural background, the architects and engineers, left with no model or tradition to base their creation on, have to base the designs on imagination, rather than the culture or the history. Third, the architecture, in an atmosphere of competition among the owners to build the “tallest” and the most “extraordinary looking”, as well as among the architects, each following a different school of thought, of necessity, become experimental, each try to out-do others; and fourth, because the engineering has become easy, the architects can actually take full liberty in dreaming up, previously unconceivable structures. In the end, therefore, they produce a jumble of structures, each out of harmony with the rest, making the agglomeration into a dreadful looking ensemble. Some of the ugliest looking buildings, in my opinion, crowd these skyscraper-cities in the Gulf area. For some, Dubai is an “absolute mess”<sup>1</sup> and according to British architects, Dubai is not only “a sprawling mess” but “hell on Earth”!<sup>2</sup>

China, too, fell into a similar trap. But with a centralized government, who often had a direct stake in the buildings, reigning in both the builders and the architects and engineers, and with a five thousand year culture to fall back on, have produced far better results. Conscious urban planning has also led to a more harmonious placement of tall buildings, and mixing them more judiciously, has produced far prettier settings. Over and above these, just this year, the government has put a stop to buildings taller than 500 meters and have ordered these to be of about 200 meters in height, and strictly reflecting the culture. The competition and the pride are there too, but because of such deliberate interventions by the powerful centralized government, Chinese cities offer some of the more beautiful looking skylines.

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<sup>1</sup> Dubai: An Absolute Mess! You Tube: Michael Beach. July 2, 2018.

<sup>2</sup> Arabian Business: Tue 15 April, 2008.

However, the title of the ugliest looking skyline today is reserved for London. In the opposite scenario from the Gulf, the cities of Europe are steeped in thousands of years of traditions and culture. All their buildings, over the centuries, have built an environment of organic harmony and the modern skyscrapers, poking above the traditional setting, really stand out as eyesores. Londoners themselves are critical of their skyscrapers and have seen them as caricatures, giving them funny nick names, like the walkie-talkie, the cheese-grater etc. to these buildings. These are the results of experimentation by the architects to make the new buildings compete with the older traditional ones in looks and majesty, unfortunately, ending up with hilarious creations, one of the buildings can fry eggs on the street by the reflected sun rays!

After resisting the temptations to build taller for many decades, some of these beautiful cities in Europe, finally felt left out of the rat-race, as if by *not* building skyscrapers they were losing out to the newly developing countries, and wanted to bring back their old glories. London, Paris, Rome, Istanbul, Madrid, Moscow all are rushing to erect their own skyscraper jungles. Just look at the muddle of eleven skyscrapers, the \$15 billion dollar concrete jungle, in Moscow, put up on a few small acres of land which was a stone quarry only decades ago! How can these ever compete with the spires and onion domes of the Kremlin? Yet, they are planning a few more in the same tiny location. The view of the Eifel Tower gets tarnished by the newly built ugly monstrosities just behind it (looking from some particular angle). Only Frankfurt, which started early, and to some extent, Warsaw, have been able to balance their skyscrapers with the old traditional buildings. Fortunately, most European cities have remained out of the race so far and are satisfied with one or two midrise buildings. Nearly all of the over two hundred skyscrapers in Europe have been built primarily in five cities: London, Paris, Moscow, Istanbul and Frankfurt, and, regrettably, more are on the way in these cities.

The South East Asian (ASEAN) countries, some with a comparable history and culture, also joined the race to have their *own* skyscrapers as their economies began to flourish. It all began with the “PETRONAS Towers” in Malaysia. People used to seeing the world’s tallest buildings in the USA with the titles of the “tallest” alternating between New York and Chicago, suddenly woke up to a set of two 452 meters high, rather beautiful looking buildings based on Islamic culture, in the city of Kuala Lumpur as the world’s tallest in 1998. These were soon overtaken by “Taipei 101” in Taiwan, by a 508 meter tower, fully steeped in the Chinese culture in its design and functions in 2004.

These buildings, more than anything else, have broken through the “glass-ceiling”, of building tall, indeed the tallest, only in the USA, and boldly stated that even developing countries can build taller. Country after country in Asia, have since, either proposed or constructed buildings taller than in the USA, while the title of the tallest buildings for the last 20 years has been in Asia, with only one in the top ten and two in the top twenty tallest belonging to the USA. On the other hand, of the tallest 50 skyscrapers in the construction or the proposal stages worldwide, there is *only one* in the USA and the rest are in Asia, and these are all in the supertall or megatall categories, in fact, all taller than 400 meters. Of these under construction or proposed skyscrapers, again, half are in China, with the 700 meter “Shimao Shenzhen–Hong Kong International Centre” as the tallest, set to beat the current second tallest in the world, the 632

meter “Shanghai Tower”. The USA currently have a total of 7 buildings over 400 meters tall, of these the tallest is the One World trade Centre with 541 meters and 104 floors. However, to give the devil its due, in recent years, New York, as of before, has started a new trend of building skinny skyscrapers and is finishing up work on some of the most spectacular buildings of the recent times, including those in the Hudson Yard.

Malaysia and Taiwan have been followed by Thailand, Indonesia, the Philippines in the race to build supertall and megatall skyscrapers. While, Vietnam, has built the current tallest building in the ASEAN countries, the “Landmark 81”, 461 meters 81 floors. Cities like Bangkok, Jakarta and Manila have begun to claim themselves as skyscraper-cities and will soon have megatall skyscrapers like the “Grand Rama 9” (615 meters) in Bangkok and the “Signature Tower” in Jakarta (638 meters). Not to be outdone, Malaysia will have its own megatall structures: “Tower M” (700meters), “Mardeka 118” (644 meters) is nearing completion, and “Tradewinds Square Tower A” (608 meters). These buildings are way taller than anything the USA have. Add to this list the hundreds of skyscrapers in Korea (the “Lotte World Tower”, 555 meters, the tallest) and Japan (“Tokyo Skytree”, 634 meters, the tallest building), and you have a *continent full of skyscrapers, and it is not North America!*

#### 4

Left out of this list, so far, was South Asia, which, getting out of colonial rule earlier and by the 1960s was more promising than East and South East Asia and definitely far better off than the Gulf countries then. Unfortunately, India’s economy was inward looking till the 1990s while the breakup of Pakistan in 1971, left both parts, (West) Pakistan and Bangladesh, more impoverished, as a result very little progress was made in these South Asian economies. Pakistan is still in the doldrums, but India since the mid-2000s and Bangladesh since the 2010s have made great strides with their economies and are now breaking into the skyscraper world.

Pakistan, like Bangladesh, has just one completed skyscraper (above 150 meters), the “Bahria Icon Tower”, 300 meters and 62 floors, the current tallest in South Asia and 3 others are about to be completed. It is interesting to note that the “Habib Bank Plaza”, 102 meters and 25 floors, in Karachi, completed in 1963, was the tallest building in Asia till 1968 and South Asia till 1970. Sri Lanka has built a few more skyscrapers and all of these are in Colombo. Of the currently completed 9 buildings, “Altair-Straight Tower” is the tallest with 240 meters and 68 floors.

Though midrise buildings are noted in nearly all major cities of India, skyscrapers seem to be the exclusive possession of the financial capital Mumbai. Some skyscrapers are found in other cities like 20 buildings in Delhi and 9 in Kolkata, but, by far, most of India’s skyscrapers are in Mumbai. With nearly 100 completed and over 100 more in the construction and proposal stages, some in the supertall category, Mumbai is also a claimant to the skyscraper-city title. However, the title of the tallest building in India today is claimed by “The 42” (249 meters, 63 floors) in Kolkata. While the tallest under construction in Mumbai is “Three Sixty West, Tower B”, (372 meters 83 floors) and the “Supertech

Supernova Spira", (300 meters and 80 floors) in Noida (Delhi). Delhi and Kolkata are also planning the construction of scores of skyscrapers.

Unlike in other countries, the skyscrapers in India are almost exclusively residential in nature. This is understandable in view of the huge population of India in general and these cities in particular. Unfortunately, most of the apartments in these skyscrapers are super costly, in the crores and tens of crore rupees range (\$ 1 million equals 7 crores) and not built for the masses. They are called "luxury" apartments and let alone the lower class, luxury is not the word one associates with even the middle class in India. These apartments, therefore, remain beyond the reach of the common people. Add to this the largest slum population of the world in Mumbai, you end up with an anomaly of gigantic proportions.

Here again, like in the Gulf cities, India build skyscrapers "because they can". Mumbai is a city of billionaires, 39 in the last count, and millionaires, close to 4,000 multi-millionaires (greater than \$10 million) live there. Delhi has close to 2000 and Kolkata about 800 multi-millionaires. Indeed, with a total of 138 billionaires, which includes some of the richest people in the world, and 117 of their combined worth of more than \$300 billion<sup>1</sup>, one of whom is worth \$88 billion, and with 330,000 millionaires in 2017, which is projected to rise to a million millionaires by 2027<sup>2</sup>, India's nominal GDP per capita of \$1,877<sup>3</sup> is partly inflated by these wealthy people and does not reflect the real picture. Nearly 74% of the economy is in the hands of 10% of the Indian population<sup>4</sup>, roughly 135 million, which includes these millionaires. Rest of the 26 % is, hence, shared by over 1,217 million people! No wonder, therefore, that the nominal GDP in some eastern states is less than \$1000, it is about \$666 in Bihar<sup>5</sup>, close to some of the poorest African countries. Compare these with the nominal GDP per Capita of Taiwan of \$24,828, Malaysia of \$11,373, China of \$10,099, Thailand of \$7,273 or even of Indonesia of \$3,893, the recent builders of skyscrapers, and the folly of India's sudden love affair with skyscrapers become only too apparent. The skyscrapers in India are built by the millionaires and built for the millionaires! The common people can only look at them and feel sorry for themselves.

In the recent Global Hunger Index India falls in the "serious" hunger category and is ranked 94th among 107, lowest in South Asia and is way behind Bangladesh, Nepal, Sri Lanka and Pakistan<sup>6</sup>. Hence, with hundreds of millions still in poverty or barely out of poverty and millions living in slums, construction of these skyscrapers are hardly defensible. And, as the saying goes, "it is dark under the lamp", so is true of the gleaming skyscrapers of Mumbai. Under the lofty heights of the skyscrapers there are millions squandering away their lives in the largest slums of the world in appalling conditions. So, it doesn't come as a surprise that one of the billionaire's built the costliest home in the world, a 27 story, 173 meter skyscraper, in a cleared out slum! Yet, for the sheer pride of owning the tallest skyscraper, Mumbai has

<sup>1</sup> <https://www.businessinsider.in/india/news/checkout-the-list-of-total-billionaires-in-india-with-net-worth-according-to-forbes/articleshow/78161500.cms>

<sup>2</sup> <https://qz.com/india/1316124/india-will-have-nearly-a-million-millionaires-by-2027/>

<sup>3</sup> IMF projection for 2020.

<sup>4</sup> Vivek Menzes quoted by DK Vohra in a You Tube Video, Oct 24, 2020.

<sup>5</sup> DK Vohra, You Tube Oct. 24, 2020.

<sup>6</sup> The Tribune, 29 October, 2020.

a proposal for 912 meter tall, “India Tower”<sup>1</sup> overtaking Dubai, in a country which probably needs to spend such resources for building basic toilet facilities for over half a billion people!

Bangladesh is doing better with most social and economic indicators compared to India and currently has a faster growing economy than India, thanks, unfortunately, to the poorly paid hard labour of the garment workers and remittances from the Bangladeshi manual labourers working under slave-like conditions to build skyscrapers in the Gulf countries. For the year 2020 the nominal GDP per capita is recorded at \$2,173<sup>2</sup> and it is expected to rise to \$2,326 in 2021<sup>3</sup> and to \$2,846 in 2024<sup>4</sup>. Impressive gains, no doubt, and looks better than India, but a far cry from the glorious pre-colonial economy, contributing half the GDP of South Asia to the tune of over 13% share of the world GDP, close to the same as the present US economy (with 15% of world GDP), for millennia. And, definitely, far from having enough resources to become a skyscraper-country. Indeed, Bangladesh, so far, has a more realistic approach than India, has only one skyscraper, completed back in 2012.

However, that is not the whole story.

While it would be foolish to expect one of the poorest countries, and for a long time dubbed as the “poorest” country in the world, to build skyscrapers, as I showed in the opening paragraphs, Bangladesh was doing rather very well in terms of building high-rise and midrise buildings compared to other South Asian countries. But that situation was in the past. Over the last five years things changed quite radically. Nearly all the skyscrapers in Delhi, Mumbai and Kolkata or in Karachi got built over these five years, while Bangladesh built none. Well, to be precise, a couple, just making the grade, are under construction in Dhaka and one in Kushtia city.

So, let’s look at this a bit more closely, and it is kind of a personal story in that my interest in skyscrapers is one of a lifelong passion. I have followed the rise of skyscrapers in Bangladesh and elsewhere with a kind of childlike fascination and my wife often teases me for that, as to when I am going to build one of those for myself. (Never, I might add, with my professor’s salary and my recent retirement.) However, I remember, when the first high-rise building, the 11 story WAPDA building, was about to be completed in Dhaka in Motijheel area in 1961, I ran with my camera for a shot (even a camera was rare for a school boy to have those days). My motive was pure “pride”; to take it back to my school in West Pakistan and show it to my friends from Lahore, where, I knew, there were no such high-rise buildings. The picture, as can be understood, was of a very low resolution and the building was still wrapped up in bamboo scaffolding, so that you could barely make out the building amid that jumble. My school friends, instead of being awed, promptly dubbed the building as the “house of bamboo”!

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<sup>1</sup> Wikipedia

<sup>2</sup> IMF suggests \$1888, still higher than India’s \$1877.

<sup>3</sup> <https://thefinancialexpress.com.bd/economy/bangladesh/budget-for-fy-21-govt-set-to-target-2326-per-capita-income-1591587829>

<sup>4</sup> <https://www.ceicdata.com/en/indicator/bangladesh/forecast-nominal-gdp-per-capita>

The Motijheel area was then just being developed as a “commercial area”, sort of the “downtown” of the US cities and with the same intensions. Soon, high-rise and later, increasingly taller, midrise buildings started to come up in the Motijheel area, until the Bangladesh Bank, the 31 story, building, which made my students so proud, came up in 1985. To be sure, the area resembled not so much the downtown of a large city like Chicago or Huston, but definitely one of those small US towns, with 20 or so storied structures crowding in that location, the only such location in South Asia. However, by that time, a number of other “commercial areas” were opened up in the city, like Kawran Bazar, Mohakhali and Banani and later, Gulshan, where similar midrise buildings continued to be built. A drive through Gulshan Avenue and Kamal Ataturk Avenue in Banani, with their line-ups of midrise buildings, presents quite a sight! Currently, there are over 60 buildings 20 stories or taller and a total of 85 buildings taller than 17 stories in the city<sup>1</sup>, nearly all are commercial buildings. But, as far as the real skyscraper (40 stories or taller) construction is concerned, it is still missing.

It is rather surprising since by the 1990s Dhaka city had begun to grow at a very rapid pace and the city population about doubled between 1991 and 2000 and then nearly redoubled between 2001 and 2010. To cater for such a fast growing population, in a rather small area of only about 306 sq. kilometers, the city had to build tall. Initially, Dhaka began to build the high-rise buildings and soon midrise buildings all over the city. Currently there are hundreds, indeed, thousands, of 13 stories and taller, midrise, residential buildings all over the city, largely because the government now allows construction of midrise buildings even in the posh residential areas. A dozen midrise buildings, 14 to 20+ stories are coming up within 250 meter radius of my apartment house in Gulshan, replacing the earlier three or four story buildings. I, too, live in a recently built 14 story building. The result is that the whole city has risen substantially in height. A cursory look at any picture of the city will confirm this, it is a veritable “concrete jungle”. My estimation is that the average height of the buildings in the city today will be at least 23 meters (75 feet) or 7 stories, possibly higher. Actually, one would be hard pressed to find a “single family” dwelling unit, a two or even three story building, let alone a one story building, in most parts of the city!

In a comparatively new residential area, Bashundhara, because it falls in the airport landing approach, no more than ten storied buildings are allowed and lo and behold, nearly every building in about a few square kilometer area of Bashundhara is ten storied. Another such area, Uttara, also close to the airport, has at least 8000, buildings over 6 stories, by one estimate, and nearly 4000 over 10 stories<sup>2</sup>. Another 79 residential buildings, 16 stories tall have been just completed by RAJUK, the city development agency, in the same area. Perhaps, these buildings would have gone taller, but restrictions from various building authorities, have forced these buildings to be of certain heights only, particularly in the residential areas. However, that should not have stopped skyscrapers from coming up in the commercial areas. So, what happened?

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<sup>1</sup> Wikipedia

<sup>2</sup> Sheikh Moshir Rahman, “Uttara, Dhaka”, You Tube

After the Bangladesh Bank building 1985, no taller building has come up in the city for 35 years, except for the City Centre building, in 2012. Judging from the earlier start in 1961, which was even before Japan allowed skyscraper construction, it is difficult to see why Thirty-five years have gone by without a skyscraper being built in Dhaka. After scratching my head, now full of grey hair, I have identified two very important things that happened to the country: First, democracy happened and second, money laundering drained the country of disposable surplus.

Democracy, in whatever form it has operated in Bangladesh since 1991, has made a quick replacement of the people in power, five years at a time over the last thirty years, and as such, of people having access to wealth, be they politicians, businessmen or officials. And every new government allowed its supports and workers, often of poorer economic background, certain amount of leeway and they could enrich themselves, some in illegal and covert ways. It is not surprising, therefore, that Bangladesh has the fastest growing upper class in the world. The rate of growth of the rich in Bangladesh is double that of China and the USA<sup>1</sup>.

And this brings us to the second point. The ill-gotten money is difficult to display, as in the form of tangible property, building industries, businesses or, as in our case, skyscrapers, and are syphoned off to off-shore banks for “safe” keeping. Swiss Banks are no longer the best choice for stashing away ill-gotten money because they are bound by law to identify the owner, therefore, most of the money probably goes to other shady banks. In spite of that, even the Swiss authorities every year report \$5 to \$6 billion belonging to Bangladeshis.

At home, every successive government since the 1980s, in order to reign in illegal money out there, have permitted ill-gotten “black money” to be “whitened”, but had little success since most of it leaves the country. Bangladesh is still Kissinger’s “bottomless basket”, and as was true when the statesman made that comment in the first years after independence, whatever you put in the basket, it leaks out from the bottom. I am yet to learn how they actually do it, since people are not allowed to take even a single penny out of the country, except in some limited cases like student tuition fees or for tourism etc. So, all that transfer of money is definitely done illegally, such as over-invoicing or personal exchanges known as “hundi”. These are termed as “money laundering” in the formal financial circles.

There are reports in the media of \$8 to \$10 billion leaving the country every year! Until very recently, ten billion dollars were not even earned by the country from trade or remittances! There is a saying in Bangladesh that the profit from selling sugar is eaten away by the ants. The amount of sugar is too little but there are too many ants in this country. As an inevitable result, the progress of the economy has stalled over and over again. The growing economy, built at the cost of unimaginable hard labour of the poor, have regularly been subverted by the rich and the powerful of the country, indeed, by anyone who ever had access to power. The economy should have grown at a much faster rate if its hard earned

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<sup>1</sup> I have covered this in “Crystallization of Classes in Bangladesh”, *Bangladesh e-Journal of Sociology*, Vol. 16, No. 1. January 2019.

surplus could be *invested in the country* and not taken away to reside idle in some foreign banks, or to build property abroad, in Malaysia, Canada, and the USA and even in the Emirates, *but not in Bangladesh!*

This also explains why the economy is so consumption or service oriented and not building enough industries and businesses to the extent that it could, also why no skyscrapers are built in the country. Few in Bangladesh have the money to put up skyscrapers, and those who do, unlike like the millionaires in India, have taken their money out of the country. I am sure, the rich in India also send their money abroad covertly, but, being far more patriotic, they like to have one foot in the country as well. The Bangladeshi rich, on the other hand, simply jump ship as soon as they make their millions. After shipping off their ill-gotten money and the family abroad, at some opportune moment, they also leave the country. It is not, therefore, surprising to note that some of the richest Bangladeshis, who made their millions, even billions, in Bangladesh, live abroad!

Interestingly, again, those who had some money, particularly, land and a house in Dhanmandi or Gulshan residential areas in the 1960s and 1970s (the “rich” of those days) passed on their properties to their children upon death. Most of these children are now residing abroad permanently, including the owner of my rented apartment in Gulshan, in the USA, Canada, or Australia, transferring their inherited land and houses, which have little or no real value for them and are often seen as a burden, to the “developers” (real-estate firms). For them it is kind of a bonus to make some money from a property that means little to them, so they exchange it for whatever money they can make by selling their share of the apartments, normally around 50%, after hard bargaining, of the number of apartments built in their parent’s lot by the developers.

For the developers also the land comes as a bonus since it is received in exchange for some apartments, whose prices are fixed by them! In the cat and mouse game of bargaining, the developers are cautious and do not take too much risk by building huge skyscrapers, where they have to part with a lot of apartments as the share to the land owner, while the rest may or may not sell. I am sure, some of the developers do have the knowhow and the money to build taller buildings but they play it safe. Also, in most cases, they try to build in high priced areas, like Dhanmondi and Gulshan, for maximum profit, but these areas are often under various government regulations and restrict tall buildings. Skyscrapers are not permitted in any of the rich neighbourhoods. However, just recently, some allowances have been made in selected places, like in Gulshan, where one skyscraper, a 35 floor and 152 meters tall hotel, is currently under construction.

The continued lack of growth of skyscrapers in Dhaka soon translated into my lack of interest in skyscrapers. I had lost interest in general and did not keep any account of the world skyscrapers after the 1980s, was not even aware of the City Centre building coming up in 2012. Also, during my occasional trips to the USA, primarily New York, I noticed very little change in the skylines there too. As a result, I came to the wrong conclusion that the days of the skyscrapers were in the past. Little did I suspect that a whole new revolution in skyscraper construction was going on right in my back yard, in Asia! I did learn, with some excitement, about the tallest buildings in the world as they were completed in Kuala Lumpur, Taipei and Dubai respectively, but I treated these as one-off incidents.

Friends often talked of the great cities like Singapore and Bangkok which they visited and of the gorgeous structures there but I actually told a friend once that after seeing the skyscrapers in New York and been on top of the Empire State Building and the (previous) World Trade Centre Building, these Asian structures would hardly impress me. Singapore was still a small town and Bangkok, a playground for the American soldiers. Korea, Taiwan and Hong Kong were just catering to the American economy and of little interest to me, they could never have an economy independent of the US economy. I did some research on Chinese poverty and was happy to learn that they had taken 800 million people out of poverty, but I was not aware where they were taken to! In every way, I was still living in the 1980s<sup>1</sup>, and after visiting Kolkata and Delhi in the early 1990s, I was doubly assured in my beliefs. I also remained busy with my own life issues and did not have much time to explore.

Then, a couple of years ago, I began hearing in my social circle of professors, engineers, doctors etc., about the *second tallest* building in the world being built in Dhaka. Some, mostly engineer friends, were super excited at the prospect of such a building in Dhaka while others, mainly the professors, were sceptical and did not much believe in such a huge building in the first place. Debates often ensued between those in favour and those who thought the building could not be built in Dhaka. We did not have the soil for it, there was no bedrock on which to place such a huge structure. We did not have the know-how or the skill to construct such a building and, most importantly, the billions of dollars needed to construct such a huge structure was definitely not available, were all legitimate concerns. I was a mere listener, may I say, a very unconvinced listener, and could not participate because I had no knowledge of the project, other than what I heard during such exchanges.

But, the debates became a regular phenomenon in my circle and, by then, had picked my curiosity and after learning about “the building” being a common topic among the people in general, as it had become talk of the town, and a “pride” project for everyone, I decided to learn more and went to the internet and the You Tube, which were buzzing with the news of an “Iconic Tower” in Dhaka. Upon further research I found out that a Bangladeshi born American businessman, originally a physician, Dr. Kali Pradeep Chowdhury, of the KPC Group, a billionaire in his own right, had actually proposed to build not only this one building of 142 stories and 734 meters tall, second only to Burj Khalifa, but also a whole complex of

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<sup>1</sup> Because of the absence of serious journalism in the country, I stopped reading newspapers and watching local television channels from the mid 1990s and been happily out of touch with much of what goes on in the country.

twenty-seven buildings, some of the others as tall as 70+ stories on a hundred acre land, to be allotted for the purpose in Purbachal, a satellite town of Dhaka, only minutes' drive from the airport, at a cost of over \$3 billion. The town, though it is yet to be habitable, is a planned project of the government on more than six thousand acres of land, originally agricultural land, acquired for the purpose. The building and the whole Iconic Tower complex with a hospital, convention centre and even a stadium, would take over three years to be completed and the construction would start any day now. To say the least, I became seriously impressed. My only regret was that I was so late in learning about it.

While researching this Iconic Tower, the whole world of the Asian skyscrapers opened up to me, almost as a revelation. For the first time, I learnt about and was completely overwhelmed by the skyscrapers in China, of all the places! Hundreds of videos on the You Tube showed me sights, which I had shut out for a long time now. Not only China but Singapore, Korea, Taiwan, Thailand, Indonesia, Malaysia, Philippines and even Vietnam had forged so far ahead in their own ways, while I slept. Since then, I have literally spent hours after hours watching the videos of skylines as well as of life in so many of their cities with the wonder of a discoverer, resulting in this essay. They have all impressed me, a skyscraper buff, enormously, but nothing like the developments in China. I could have never imagined *this* China even a couple of decades ago, when I was writing on Chinese poverty, no one could have! Mao's China! Impoverished, famine and hunger driven population in ragged clothes, have been transformed into a vibrant nation, with industries, roads, bridges and houses to match any of the developed nations and surpassing even the USA in many spheres! WOW and HOW were the only two words that could express my amazement.

Compared to all that, Bangladesh, Pakistan and India are still very poor. Suddenly, an intense sense of inferiority took hold of me, while these East and South East Asian countries rushed forward, we South Asians went backward, or at best, were static with little or not much real progress since the 1960s! The glamour of the Indian society portrayed by the Bollywood movies, are only that, scenes from the movies. The reality of life for hundreds of millions in India, particularly in the rural areas, as well as millions in Bangladesh and probably in Pakistan, (since I have not been to Pakistan for decades, I know little about their current situation) is one of stark poverty, does not matter how much one tries to hide it. Compared to these East and South East Asian countries, we, in South Asia, are a pathetic lot, in spite of the talk about the fastest growing economies, which, in reality, translates into a growth of only a few dollars per year. The poverty is still very genuine and millions, hundreds of millions in case of India, are poverty stricken. India tries to mask that poverty by building skyscrapers among the slums of Mumbai, the "Iconic Tower" in Dhaka, I felt, in the same manner, may conceal some of our poverty and shame as well, offer an opportunity to be among the best, return some "pride" for us! And that was exactly the reason for so much excitement among my friends and people on the streets of Dhaka as well.

Unfortunately, as days and years went by, and the "Iconic Tower" failed to materialize, I too began to doubt the authenticity of the project. But an interview of Dr. Chowdhury in the social media, restored some of my confidence. In this interview, Dr. Chowdhury was narrating his reason for building the tower and that impressed me immensely. He noted that the inspiration to build such a skyscraper came from

Tunku Abdul Rahman, the Malaysian Prime Minister (1955 to 1970), who in one of his speeches argued that to put a country on the world map, something “extraordinary”, something spectacular, something totally unexpected from that country, needs to be done. Malaysia put up the PETRONAS Towers, which did come as a real surprise, if not a shock, for many, and look where they have taken Malaysia! Malaysia is not only a powerful economy today but has hundreds of skyscrapers to show for.

Dr. Chowdhury, a son of Bangladesh, wanted to give something back to the country of his origin, in the same manner, to shock the world into recognizing Bangladesh, to jumpstart an economy by bringing foreign investments that would follow in its wake, as it did in Malaysia. It would not only put Bangladesh on the world map and restore some of its lost “pride” on the world stage but also put food on the table for millions as the economy would also prosper. At the very least, it would contribute \$3 billion dollars to the economy of a country which barely manages to receive FDI of that amount in any given year.

Well, the country held its breath for the Tower to be built for years now, since 2016, and it was suddenly announced at the beginning of this year that the construction of the Iconic Tower was about to start. However, in reality, Dr. Chowdhury, even after making nearly 40 trips to Bangladesh to talk to the authorities, could not manage to get all the necessary clearances and had actually pulled out. Neither Dr. Chowdhury nor any government authority made any clarification as to why the project did not work out. However, in another recent interview Dr. Chowdhury noted that he was still committed to the project and the finances and expertise were still at hand and that he could build the “dream project”, if and when the permission and the land to build upon were made available.

This failure to have the “Iconic Tower” in Dhaka has come as a heart wrenching blow for many, who like me, rather unexpectedly, had something big to dream about in this poverty stricken country. Something to be “proud” of. The critics, as of before, continued to argue that it was never going to happen in Bangladesh. Bangladesh did not have the resources, the expertise or even the soil to build such a tall skyscraper, all the same old arguments reinforced. Dr. Chowdhury had managed to overcome all such obstacles but could not manage the authorities! The title of the *Second Tallest Building* will no longer be uttered with the name of Dhaka city! Sad, though, for many, but it definitely felt good while the prospect lasted.

Then, for Dhaka skyscrapers, it is never the end of the story.

And, surprise, surprise! Dhaka is going to have its supertall skyscraper after all, a skyscraper that will outshine the tallest buildings in South Asia again! The government has, in place of the Iconic Tower, set up a “mega-project”, like many of its other mega-projects, costing Tk. 96 thousand crores or a little over \$11 billion (the source of fund is not known), to build the Central Business District (CBD) of the Purbachal Satellite Town, in the same location of the Iconic Tower. As a part of this mega-project, a supertall skyscraper will be built to celebrate the legacy of the Prime Minister, to be called the “Legacy Tower” of 465 meters and 111 stories. The complex will also have two more towers, the “Language Tower”, 52 stories and 259 meters and another supertall, “Liberation Tower”, 71 stories and 338 meters, combined,

to be called the “Bangabandhu Tri-Tower”, to commemorate the legend of Bangabandhu, also, the father of the Prime Minister. There will be *another 49 skyscrapers of 40+ story* each, along with a convention centre, a stadium, with the name of the PM, the “Sheikh Hasina Cricket Stadium”, to be added to the complex, one of the costliest real estate development projects in the world, scheduled to be completed by 2027. According to some reports in the media, work on the Towers has already started (from September 2020).

So, there you have it. The tallest skyscraper in South Asia will again be in Dhaka! Along with ten other skyscrapers proposed and under construction, totalling 60 or so skyscrapers, Dhaka may soon claim the title of a skyscraper-city as well.

Unfortunately, the pride of housing the tallest building in South Asia will not last very long for Dhaka. A building in Karachi, the “Karachi Port Trust” building, of 1947 feet (593 meters) tall, to commemorate the year of their independence from colonial rule, has been proposed and likely to be built by 2030. While another skyscraper, a megatall building, the “Al-Aman World Trade Centre”, already approved for construction in Colombo, Sri Lanka, will overtake all with its 625 meters, possibly earlier.

As it stands, the “Legacy Tower” is ranked 45 among the skyscrapers currently under construction and proposed in the world. It falls a few more notches, if one includes the 12 taller buildings already in existence, and ranks 57, nowhere close to the Second Tallest. So, the “proud moment” will be lost almost as soon as it arrives.

While, on the other hand, the “Iconic Tower”, if Dr. Chowdhury can get the approval in the near future, and even if it can be built by 2030 or later, will still hold the second place in the world since the Jeddah Tower and the Dubai Creek Tower, now on hold, are very unlikely to be completed. While, if either of the proposed India Tower or the Burj Mubarak Al-Kabir gets built, the Iconic Tower will still be number three, and definitely offer a bit of pride to Dhaka.

Yet, and in spite of all that has been said above, the real skyscraper-pride for Bangladesh does not rest on a building, *it resides in a person*, again a Bangladesh born American structural engineer and architect by the name of Fazlur Rahman Khan, or F.R. Khan for short, who, in the early 1960s, achieved a successful marriage between architecture and engineering of skyscrapers and is respected all over the world for that. “His central innovation in skyscraper design and construction was the concept of the “tube” structural system, including the “framed tube”, “trussed tube”, and “bundled tube”. His “tube concept”, using all the exterior wall perimeter structure of a building to simulate a thin-walled tube, revolutionized tall building design”<sup>1</sup>. Besides the economic efficiency, these construction systems are very flexible and allow tremendous freedom in the building designs and the result is that the architects and engineers are no longer tied to the “box-shaped” structures and can make all kinds of experiments. Numerous skyscraper designs, often gravity defying designs, with unbelievable twists and turns, reflect

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<sup>1</sup> Wikipedia

this flexibility. Hence, *nearly all skyscrapers built in the world since the 1960s follow these innovations and the name F.R.Khan is tied to all those skyscrapers and therein lies the real skyscraper-pride for Bangladesh!*

Nazrul Islam