

The Jewel in the Crown

India is an island surrounded by the waters of the Indian Ocean and the two great rivers, the Ganges and the Indus. The river basins of the Ganges and the Indus run close and are almost joined at Delhi. The diamond shape of this peninsula has long supported great civilisations, and is still home to some of the largest and most densely-packed cities in the world. As a country, it has the second-largest population, and will overtake China by 2025 to become the largest. Its population sustains the third largest economy, and the delta of the river Ganges has for most of the current era been one of the three most important economic centres in the world.

The River

The Indus basin is a populous place, with almost year-round rainfall, the heavy monsoon summer rains supplemented by spring snow-melt. The word *indus* comes from a word meaning river in the local language, and the area today known as Pakistan was usually called Five Rivers (Punjab, from the word for five, *panj*, we get *punch* and *bunch*) or Seven Rivers (Hapta Hindu or Sapta Sindhu, from which we derive the words *heptathlon* and the French word *sept*) referring to the many great rivers that descend from the Himalayas, bringing with them silt-laden water. The river has given its name to the country, in both its old and new names of Hindustan and India, a religion, Hinduism, and the people.

It is likely that hunter-gatherer tribes congregated along the Indus after the annual monsoon floods, which fertilised and irrigated large tracts of land, attracting wild animals as well providing a rich seed bed. Domesticated varieties of rice could be planted in summer during the monsoon, while wheat could grow in the winter, giving twice as many calories and avoiding the danger of drought.

It was only when the flooding became less regular, and the population greater, that the inhabitants of the Indus started building canals for irrigation. Most of their drinking water came from wells, and much of their waste water was reused for irrigation, and the waste itself for fertiliser. But as the water supply diminished, they built longer and longer canals to provide water for irrigation. They also dredged rivers and built the world's first docks. The triangular shape around the southern end of the subcontinent has merely encouraged sea-travel, and from the earliest times Indians generally accepted the right of untaxed navigation at sea, long before Grotius declared it as a principle in European law, even if later they also accepted the corollary of piracy. Trade was carried on throughout India, and the Middle East at least as far as Ur.

It seems that taxes were raised communally: not for warfare or luxury, but for improvement of trade, storage and transport of food and goods, supply of fresh water and removal of waste. As with other tax societies, they created a written language, and were adept at counting. They implemented standard counting systems, and weights and measures. Metallurgy was advanced, and payments were made in gold.

There is no evidence of a hierarchy, priests or kings. Instead of luxury, they built the most complicated hydraulic engineering, with canals, running water, flush toilets and sewage disposal from their houses. The use of almost modern waste removal of a higher standard than is available today in many Indian cities included functional sewage treatment through the use of cesspits. The result was the largest and most populous of the early civilisations.

One failure of the Indus peoples was that they never built dams. The almost constant rainfall, still noticeable today throughout most of Pakistan, meant that they never thought to store water for longer than a few days in their houses. There was a time when the monsoon became less regular, and spring rains disappeared. The rivers that they used for irrigation dried

up for long periods at a time. The inhabitants could no longer raise two crops; they could not feed themselves, let alone use a surplus to buy in goods from abroad. Perhaps others suffered too, from this changing climate, and the Indo-Aryan tribes from further west and north descended into the Indus valley, bringing with them a more martial outlook. The civilised inhabitants moved east, and south, to the Ganges valley, where only a single crop could be raised each year from monsoon rain; or to the Deccan, and further south, where the monsoon was more regular.

At the same time as the Pharaohs were ordering the building of their canals and pyramids in Egypt, and the Chaldeans were building their canals and Ziggurats in Mesopotamia, the dwellers along the Indus were also building their canals, but they had more sense than to waste their effort on items of luxury. There were no temples, pyramids, ziggurats, towers, or palaces. As a result, when they left the Indus, their civilisation disappeared under the sands of time. It was unknown to Greek, Indian and European historians. Benevolent British archaeologists had already started to catalogue India's cultural history during the 19th Century. They had started off badly enough, the head of the Survey was ignorant enough to use the Indus valley ruins as a source for ballast to build the railways. But India's rich heritage was slowly brought to life, although most surviving temples and palaces were only a few hundred years old. Even the Indian archaeologists were surprised when the Indus Valley Civilisation was rediscovered in 1920, for it was four or even five thousand years old. Then, the prejudice of those raised in the Classical Tradition, which ascribed to the Europeans in general, and the Greeks in particular, with the Egypt of the Pharaohs as its birthplace, the precedence for culture, art, civilisation was confronted by culture, art, civilisation at least a thousand years older than the Great Pyramid. It seemed inconceivable to the conquering British that Indians, who were barely more than their slaves, had once had a civilisation that predated any and all civilisation in the British Isles, and that was significantly more advanced than anything in Europe before the great Cistercian monasteries of the 13th Century AD. As much as they wanted to find answers to the question "How was it possible ?" they also ruminated much on the question "How could such a civilisation just disappear ?" a Freudian thought that reflected more the fear for their own civilisation, with the British Empire already well on the road to extinction.¹

Mother, wife and spirit

It is probable that the survivors from the Indus migrated to the neighbouring Ganges valley. Its lower reaches were closer to the Bay of Bengal, and the monsoon would have been more predictable. There they settled and created small farming communities, but never managed to replicate the civilisation.

Unlike the seasonal rivers that fed the Indus, the Ganges flows non-stop. After suffering near starvation conditions, the new arrivals were so grateful to the life-giving powers of the river that they called it the river that flows: *Ganga*. Today, the river Ganges is a holy river to most of the population of India, Hindus who believe that its water purifies, absolves sins and receives the souls of the departed who are cremated on it. Pilgrims and tourists flock to the river from all over the world to bathe in its waters, which are also bottled and sold to those who cannot make it.

The Ganges rises in the western Himalayas, and crosses India from west to east, collecting water from major and minor tributaries, including the waters from the Brahmaputra river. The Brahmaputra is navigable for most of its length: in Tibet where it is known as the

¹ The answer to both questions will be answered more fully in the author's later work *Empire*, now in preparation.

Tsangpo, and in India; except for about 150 miles between these two, where it falls 1500 metres and was for many years hidden from outside knowledge.

The Brahmaputra supplies the lion's share of the water discharge, which in total is the third largest after the Amazon and the Congo. The combination of the Ganges and the Brahmaputra has the highest erosion-produced silt discharge in the world, the natural destruction of the still-rising Himalayan mountains. The river discharges almost two billion tons a year of silt. Over millions of years, it has deposited a ten-mile high mountain in the Bay of Bengal. It is also particularly prone to flooding. But in good years the silt and the flooding make agriculture richly rewarding, and have supported a rapidly-growing population. The silt and water has made transport easy, taxation profitable, and industry developed here long before it did anywhere else in south Asia.

The best place to profit from this is the Ganges delta, the flood plain created by these tons of silt and still flooded every year. It is the largest river delta in the world.² Its main city is Dhaka, now the capital of Bangladesh. It was founded on one of the main arms of the delta, although the floods and silt mean that the river annually changes its flow, and today Dhaka sits on a minor branch. In the 17th Century, before the British arrived in India, Dhaka was one of the largest cities in the world, with a population of a million. It was the centre for the largest weaving industry in the world, specialising in muslin and jute. Dhaka was the capital of Bengal province, which generated most of the tax revenue of the Mughal empire.

As well as the Mughal empire, the Ganges supported other empires during two thousand of years of documented history. There were the Maurya and Gupta empires, which implemented a standardised taxation system from its borders with the Greek empire of Alexander the Great to the Bay of Bengal. Their base was at modern Patna, the capital of the rice bowl of India, at a strategic location on the Ganges river. During the 3rd Century BC, Pataliputra was the largest city in Asia, and vied with Carthage and Alexandria for the title of largest city in the world. Buddhism started here, as did Jainism, and led to a relatively peaceful community of mainly vegetarians. Patna's location made it ideal for trade, and in the days before the British developed Calcutta as a rival it was the main market on the Ganges for international business. From Pataliputra, the Mauryas built a great road to the Indus, where they controlled the border with the Hellenic empire, and maintained diplomatic relations.

It was the arrival of Muslim conquerors from the west that pushed India's capital westwards, to Delhi. Delhi was at the ideal location to control an empire that included both the Indus and the Ganges. The first Muslim conquerors only got as far as the Indus, but the Muslim descendants of Genghis Khan's Turks and Mongols conquered the whole peninsula. While their Buddhist Chinese cousins were busy destroying China, its civilisation and population, the Indian Muslims developed a taste for luxury and sloth, public works and magnificent displays. They profited from India's long history of working precious stones, and dug up the largest diamonds, but they also dug canals.

Hydraulic engineering had disappeared from the area with the disappearance of the Indus valley civilisation. Now, it returned with the skills of Muslim engineers, who had learned their trade from the experience of living in areas where the Greeks, Romans and Arabs had developed it to a high art. Now they turned their attention to the hot land of India, where water was always available, thanks to the monsoon and the Himalayan glaciers, if one knew how to manage it.

² There is no accepted measure of delta size, nor even of a definition of the word *delta*. The Greek word *Delta* is usually written in a triangular shape Δ , which would indicate the shape of an ideal delta. The Congo does not have a large delta; the Amazon has a large delta if it includes the huge island of Marajó, and a case could be made for making most of that river's flow from Manaus to the sea as a sort of long delta. The Nile has a clearly defined delta, but is much smaller than that of the Ganges-Brahmaputra.

The River of Gold

Firuz Shah Tughlaq was the first to close the gap between the Indus and the Ganges, building the Yamuna Canal in 1356, 150 miles long, the longest of his many canals, from the Yamuna river, a tributary of the Ganges; and another from the Sutlej, a tributary of the Indus, to join at his new city of Hisar. He also ordered the building of many dams, and irrigation systems to profit from them. The Islamic religion provided a relatively stable environment for trade, and taxation. Unusually, but usual for Muslim conquests, customary taxes were ignored, and only Muslim taxes, *zakat*, a wealth tax to support the poor, *jizya* on non-believers, *kharaj*, the land tax, and *khams*, a fixed tax on booty from war. Money raised was used to pay for repairs to the Great Trunk Road, and its extension westwards as far as Afghanistan. It also paid for lodging, bridges, gardens, as well as the planting of orchards, clearing of forests and improvement of agriculture. The Ganges basin became the major grain-growing area in India, and its surplus was shipped down-river to the growing industrial centre of Bengal.

The Mughal empire eventually encompassed all of India, but its waste on luxury, of which the Taj Mahal was merely the grossest extravagance, left it vulnerable to attack from more Spartan raiders. A succession of these attacked India from the west, Mongols, Afghans, Persians, and usually departed loaded with booty, leaving a bloody trail of destruction. As the Mughal empire fragmented, Indians stepped up to defend their land: the Marathas in the south, who kept the emperor as a figurehead, and the Sikhs in the west; but neither managed to control all of the Indian diamond. India was also affected less violently by the growing trade controlled by powerful European nations.

English traders from the East India Company arrived in India early in the 17th Century, but struggled for over a hundred years in the face of tough competition from France, Portugal and Holland. Britain was allowed by the sultan of Bengal to open a factory on one of the smaller branches of the Ganges, the Hooghly. There, they founded Calcutta.

After a series of disagreements with the local rulers, the British supported a coup and fought a battle in 1757 which they easily won. The victorious British had already agreed with the coup plotters the share of the spoils: they had demanded and received the *diwan*, control of the state's taxes, finances and spending: the East India Company had become the tax-collector, and the sultan in Dhaka a mere figurehead.

From its base in Bengal, the British expanded westwards up the Ganges. They now controlled Dhaka and Patna as well as Calcutta. Other Indians saw the weakness of the empire and sought their own power; the British defeated the Marathas; the wars against Revolutionary France were used as an excuse to conquer most of the south. The Marathas thought that An uprising by both Muslims and Hindus was put down ferociously, and was also used as a further excuse to conquer more territory. Neighbours who coveted the wealth of India attacked and were conquered, the Sikhs, and the Burmese. These were rapidly conquered by the expanding British empire. Into the 20th Century, Britain was still extending its Indian colonies, into modern Afghanistan, Tibet, and Bhutan, following the smallest tributaries of the Indus and the Ganges, and only stopped with Indian independence.

The British was the last empire that encompassed both the great rivers and the sea coast of the subcontinent. The rivers and the sea would play an important part in the taxation of India. The East India Company was initially set up to trade, but rapidly replaced trade with tax administration; it would become the most profitable tax operation in the world.

Bengal was surrounded by Oudh, Orissa and other Maratha states. Some of these were friendly with the French or other Europeans. The Company raised the taxes on imports from these states to discourage them from exporting their goods into Bengal; while still allowing British imports that arrived by sea. The East India Company (EIC) enforced a monopoly on Bengal's export trade, so that all producers were forced to sell them their silk and muslin for export. The EIC profited from its raw cotton export while other sources in the British Empire did not exist; but lost out to better and cheaper Egyptian and American cotton when this started

to arrive. Bengali manual and later industrial cotton weaving survived only a few years till British industrially-spun, woven and dyed cotton reached the market. Eventually, India became just one port in a complex trading network, in which opium was shipped to China, where it was exchanged for tea, which was shipped to Britain; there, manufactured goods, especially cotton cloth but also all kinds of metal goods were shipped back to India. Other goods included raw cotton and indigo, jute, which was shipped to Scotland to make sacks which were then shipped straight back to India for rice and cotton. It was this ability to trade without having recourse to gold and silver that made possible the great growth in the Indian economy, and the great profit for the British traders and tax-collectors.

Internally in Bengal and later British India, the Company was exempted from customs, and local Indian tax agents could not charge them for passage on the rivers or over bridges; the Company flag became a passport. Company administrators were contractually not allowed to trade privately, but many came back from India millionaires from this illegal activity. The removal of tax controls on Company ships that plied the river Ganges allowed them to participate in private trade, at the expense of the local tax-payers. There were also interlopers, who operated illegally to break the Company's monopoly, often using a fake Company flag to avoid trouble and taxation, and either traded outside the main markets or competed directly with the Company agents.

The British did not significantly change the local taxation; rather, they focused more in its efficient collection. They ignored the corruption that had evolved over the many years that it had operated under the Mughals, and replaced native village officials with salaried civil servants loyal only to the Company. Most of the revenue came from the old Muslim land taxes, and was paid in cash. The amount varied, but was supposedly a third of the value of the produce, a difficult quantity to take in cash as it required that much of it had been harvested and sold, with the inevitable problem for poor farmers that prices are always lowest at harvest time.

The British efficiency at tax collection reduced the amount available for the local nobility, which was pensioned off. These spent less money on luxury than they had previously, and left the artisans, jewellers, tailors and musicians out of work.

With the British taking the available cash from India, and remitting it as profit, salary, retirement pension, the amount of free silver coin and bullion dropped drastically. Much was converted into goods, especially cotton muslin and raw cotton, but this still removed a non-perishable, valuable item from the market. Export taxes had been removed, so trade itself brought little new money into India. Ships arriving in Indian ports brought with them the product of England's factories, not chests of silver and gold. The end result was that when the area suffered, as it did regularly from flooding or drought, there was no spare cash and no valuable goods to pay the higher prices for scarcer food. Famine struck Bengal in 1769, and then again and again throughout British India up to the last, also in Bengal, in 1944-45. Famines killed millions of people.

Partly as a reaction to the terrible sights, and to the reporting of the famines in British newspapers and the arguments in Parliament between those critical of its colonial policies and the government, Britain re-introduced canal building to India. The old canals were repaired, starting with the Yamuna Canal. From 1850 onwards the Punjab was developed into the greatest irrigated valley in the world. Britain did little to improve the Grand Trunk Road; instead, it brought in railways, and for them employed a vast army of workers, who to a great extent replaced the artisans of luxury of previous empires. The rail network grew to become one of the largest in the world. Between the improved irrigation and the railways, the Indian population managed to shrug off the famines, which continued until 1945; the population grew throughout this period, and India remains the second most populous country in the world.

Whatever it may cost

Muslim and Hindu's insistence on partition for the independence of India led to a catastrophic situation for both India and Pakistan: for India, the loss of most of the delta of the two great rivers in the East, the Brahmaputra and the Ganges; and the total loss of the Indus in the west; for Pakistan, the breaking of the link between the Indus and Ganges. Bangladesh, Pakistan and India's economic level today can be traced directly to this monumental decision, which also affected fifteen million refugees, and millions of victims of violence, rape and murder. India had been the largest economy in the world at the time of the Maurya empire, about the time that Jesus Christ was born, and Bengal was still the centre of that economy in the year 1600. India was still a major power at Independence, fourth or fifth in the world. Splitting the subcontinent led to a relative decline against other economic powers, leaving it eighth or ninth.

Only with the collapse of the Western economies following the socialist wage increases of the 1960s, the oil price shocks of the 1970s, and the subsequent collapse of their manufacturing industries, especially textile manufacturing in Britain, did India start to see a relative increase. Britain joining the Common Market helped to maintain its position relative to India, and it was only in the 1990s that India started to pull ahead with its economic liberalisation, and currently (2017) is the world's seventh largest economy by GDP (nominal) and third by GDP (PPP). India has maintained its population growth in spite of these problems, and is currently the second most populous country in the world.

Partition also separated the headwaters of the Ganges and Indus from their mouths. There is almost no inland water trade on these rivers now, and in India in total less than one tenth that of the river Yangtze alone.

The division of the rivers has weakened pollution control. The Ganges is the major source of drinking water for millions of people, and is also the major sewage outlet. The local need to remove waste affects those downstream. Although the Ganges is the third largest river in the world in terms of discharge, its ability to naturally sterilise itself, which was lauded for years by its riverine population, has been overcome for at least a century by Ganges Man's prolific production. At the same time that it receives the excrement from four hundred million bottoms, it also has to cope with the outflow of industrial plants like the Union Carbide factory at Bhopal, thousands of tanneries and textile dyers, power stations and steel works, and rain-washed rubbish from out-of-control landfill sites, sugar and oil refineries, paper mills, and the nitrates from heavily fertilised farmland. Religion also plays an important role in the use of the river, especially at places like Varanasi, where five kilometres of stairs lead into the water, to allow bathing, cremation and disposal of bodies.

The problems of pollution are well-known and documented, but neither those responsible for the waste, nor those in power, can get agreement on how to resolve the problem. The attempts to clean up are thwarted by religious, ethnic and social fragmentation. The Hindu nationalist party leading the attempted clean-up targets the tanneries that are mainly owned by Muslims. Attacks on Muslims are popular with Hindu nationalists, but also dredge up the unhappy memories of Partition. Recent agreements between India and Bangladesh have helped to reduce tensions between the countries, but have not dealt with the pollution.

It is Bangladesh that suffered the most from partition. While Bengal used to be the greatest industrial power in the world, today Bangladesh is only 46th in the list of countries by GDP.³ It controls nothing but the mouth of the great rivers Ganges and Brahmaputra: the hydro-electric energy and the fresh mountain water is taken long before it reaches the delta.

³ This is perhaps not a fair comparison, as ancient Bengal used to include both the area around Calcutta, now Kolkata, and all of the Ganges up to and including Patna.

The pollution is put in, and left in to poison the population of Bangladesh. Trade with India has been very low, although recently relations have improved, and customs have been relaxed; trade is now growing rapidly, although mostly in India's favour. Native industriousness has shown itself robust enough to cope with these difficult circumstances, even rebuilding its textile industry to take 4% of the global export market: but its total economy is still only the size of Ireland's or Finland's. Bangladesh's population is thirty times bigger than either of these two ex-colonies, and has surpassed 160 Million, making it the 8th most populous country.

Pakistan has grown even more, with almost two hundred million people living there, the sixth most populous nation. The borders between India and Pakistan are some of the busiest in the world, restricting trade and investment, wasting energy, time and money, and held hostage to all the minor and major sources of friction between the two countries, which have been fighting an on/off war for fifty years. The two countries have almost no direct trade at all, far less than between Bangladesh and India. Although Pakistan's economy is larger than that of Bangladesh, it is not significantly higher than Ireland's or Finland's.

Taken together, the economy of Bangladesh, Pakistan and India is still only as big as that of the UK. It is only when using GDP (PPP) that things look better, with India third after the USA and China.⁴ With few farm subsidies, and warm weather, the cost of living in India is much lower than in Britain. The large population keeps wages low. The population is rising rapidly. Internal taxes are low, and even divided India is still a huge, common market, with no customs borders between the different states. Indeed, there are actually tax breaks in India that support trade between states. These are ideal conditions to grow an economy. On the other side, all three countries are net importers, and only the generous remittances from their large diaspora help to balance their payments.

The political separation of the great rivers and the sea, along with the religious differences and rampant nationalism prevalent throughout the world makes it unlikely that a customs union in the area will develop, or that trade and industry would benefit from it. The most likely scenario is that greater India will be subsumed into the enormous One Belt, One Road Asian superstate that China is promoting. Although grandiose and impractical in many ways, it is a sign of China's intent and wealth. The only relevant realistic economic development is the link between Kunming in southern China and Dhaka in Bangladesh and Kolkata in India. This route will follow the old Burma Road and railway built during the Second World War, and will cut across the Ganges/Brahmaputra, the Irrawaddy, the Salween and the Mekong. It will help to shorten the Chinese trade routes to Africa and the Suez Canal. China also plans a short cut to the sea from its eastern provinces down the Indus. With China providing most of the funding, and most of the goods that will travel, it will also claim the tax benefits that the British and others so successfully enforced on the Indian and Chinese rivers in the 18th and 19th Century.

⁴ Gross Domestic Product (GDP) (Nominal) is usually measured in US\$ and provides a measure of the total consumption of goods and services in an economy, in other words, its size. It is not the measure of quality, nor of potential for growth, nor of quality of life. GDP purchasing power parity (PPP) allows comparisons to be made based on the cost of living.