

## CHAPTER 5

# Gupta Efflorescence

## 1. Introduction

This chapter studies how military technology shaped geopolitics and economic performance of the late classical world. The battlefields of the late classical world were largely dominated by heavy infantry legions. During this era, massive continental-sized empires were the norm: namely the Chinese, Persian and Roman empires. The late classical Chinese, Persian and Roman systems are sharp contrasts to the early modern European Westphalian competitive state system: they had extremely high concentration of capability.

Late classical India is of special interest. The Hume-Kant hypothesis of Bernholz et al. (2004) is unable to successfully explain the cultural creativity and economic vitality of the Indian classical golden age. During the late classical era, India was under the reign of the powerful Gupta Empire. An international political order dominated by a powerful empire was not what the Hume-Kant hypothesis expects for a period of cultural creativity and economic achievements. In contrast, the argument proposed by this book has no difficulty in explaining the Indian classical golden age.

## 2. Heavy Infantry

The Greeks pioneered the development of heavy infantry. They packed fully armored infantry men into dense formations that charged forward like a tank—the so-called Greek phalanx. The Spartans were famous for being the masters of this tactic in battle. With this innovation, the tiny Greek city-states stood up to the gigantic Achaemenid Persian Empire. King Phillip of Macedon built upon the Greek success and established sophisticated combined arms within his armies with heavy infantry forming the core. The combination of light cavalry, missile weapons and siege apparatus increased military effectiveness and added economies of scale. Of special importance was the adding of light cavalry, which made possible deadly pursuit after the heavy infantry core had already delivered a decisive charge. King Phillip's son, Alexander the Great, capitalized upon the military revolutions introduced by his father to capture the whole of the Achaemenid Persian Empire.



In the early periods of the Roman republic the Romans utilized the Greek phalanx. Close-order heavy infantry was also the backbone of the Roman legions. Over time the Romans discarded phalanx as their primary strategy however did reserved the phalanx as a last resort weapon against enemy pursuits or charges. The phalanx could charge with great force, but only on flat plains, and was therefore a cumbersome military unit to maneuver in difficult and complicated terrain. The Romans developed the manipular formation which was more flexible and could more easily be adapted to different complicated terrains. Roman victories in the four Macedonian Wars (215 to 205 BC, 200 to 196 BC, 172 to 168 BC and 150 to 148 BC) against the much vaunted Macedonian and Greek phalanxes proved the battle value of the Roman military innovations.

With the emergence of heavy infantry combined arms legions, warfare entered a new era. There were greater economies of scale in conflict. Armies grew in size, and so did political units. In Europe, the tiny Greek city-states gave way to larger territorial Hellenic states which were, in turn, conquered by the continental-sized universal Roman Empire. This trend toward greater political agglomeration occurred in Middle East and South Asia as well. In the Mediterranean region, this increase in the economies of scale in warfare was reinforced by the parallel development of triremes and gigantic war fleets which aided the rise of the Roman Empire.

At the other end of Eurasia, in China, the military use of iron weapons started at the end of the Spring and Autumn Era though bronze weapons were still popular even in the Era of the Warring States. Besides the rise of massive infantry legions, the replacement of horse-drawn war chariots by light cavalry as the main quick mobile force at around that time increased military decisiveness too. The invention and use of crossbows further enhanced the rise of massive infantry legions and made warfare more destructive. It was these massive powerful infantry legions that made possible the unification of China under the First Emperor.

### 3. Roman, Persian and Chinese Empires

Greater economies of scale in warfare due to the rise of heavy infantry favored the Romans over their rivals. The Roman Republic, an agrarian society with a large pool of manpower, was able to field larger numbers of legions to overwhelm and outlast their opponents. The resolve of the Romans to endure great losses in war till final victory made the Roman Republic a formidable enemy. Before the rise of Rome, in the Eastern Mediterranean world, the rough balance of power between the three Hellenistic states of Macedonia, Ptolemaic Egypt

and Seleucid Syria was maintained for approximately a century. However, Roman conquests proceeded fast from around 200 BC, after Rome had defeated the leading trading power of Carthage and its mercenary military in the Western Mediterranean region. The result was the Roman domination of the whole Mediterranean basin.

After defeating Carthage, the Roman navy had unchallenged control of the Mediterranean Sea. The control of the Mediterranean Sea further shifted relative combined military and economic advantage to the Romans, with further advantages in logistics and mobility. Roman fleets could quickly transport large quantities of food, equipment and troops to the campaigning regions. Aided by the control of the sea, the Roman heavy infantry legions were almost invincible in the Mediterranean Basin. After the conquest of the Carthaginian Empire, Rome proceeded to conquer the whole Mediterranean world and beyond; although the republican form of government ended in 48 BC, when Caesar defeated Pompey, the Roman conquests stopped only in 117 AD.

The larger mass factor created by the heavy infantry military revolution, and the more asymmetric relative combined military and economic efficiency (partly due to the Roman control of the sea) combined to generate a very high concentration of resources and capability in the Mediterranean region. By the late classical era, the whole Mediterranean world was in the firm grip of the Roman imperial order. Beyond the borders were tribes and nomads who made incursions but posed no organized challenge to Roman authority. Worthy rivals to Roman power were no real threat: the Chinese empire of the Han Dynasty was at the other end of the Eurasian landmass, and therefore too far away; the Persians were closer, but occupied a very different kind of geopolitical niche, that of desert, steppe, highland and oasis, and therefore were fighting with the Romans only over margin lands. The Roman Empire had extended to its natural boundaries: to the south was the Sahara desert, to the west was the Atlantic Ocean, to the East were the deserts, steppes, highlands and oases of the Persian Empire and, to the north were the forests of the Germanic tribes. The Roman imperial order survived for over five centuries or more, practically uncontested within its own geopolitical niches.

The high concentration of capability in the hands of the Roman Empire lowered relativist concern. Political-military competition was further dampened due to the large mass factor and Roman supremacy, and relativist concern took a further dip. Consequently, in the Roman lands, stagnation and decline resulted. Moreover, the combination of a high concentration of capability and a large mass factor brought forth an extremely risk-averse power-induced risk attitude on the part of the Roman Empire. The creativity of the classical Greek and Hellenistic eras soon disappeared during the reign of the Roman Empire. The extremely risk-averse power-induced risk attitude also caused severe distortions in the economic policy of the Roman Empire.

The commercial classes of the Roman Empire were small in size and enjoyed neither the wealth nor the status of the landowning aristocracy. Most production in the empire was small in scale, under-capitalized, and combined with a surprising lack of technological innovation. There was a reduction in trade, regionalization of economic activities, a growing number of deserted lands and a decline of urban areas.<sup>94</sup> In the late Roman Empire, the expensive navy was neglected and allowed to decline. Consequently, pirates plagued the Roman waters and trade suffered.<sup>95</sup> Although the Romans refined the area of law beyond what the Greeks had done, in other areas the empire suffered. The Roman culture, well known for its stress on discipline and seriousness of purpose, became a synonym of conspicuous consumption and public display. Due to massive economic mismanagement, the repression of commerce, and a decline in trade, the empire disintegrated into autarchic units. This trend of disintegration ultimately ended in political decentralization and dissolution of the western part of the empire.

The Roman Empire failed to conquer the whole Hellenistic world. Roman power was basically confined to the coastal regions of the Mediterranean Sea. The older seats of ancient civilizations, Mesopotamia and the Persian Highland, were largely out of the reach of the Roman legions. In the Middle East and Central Asia, which were once parts of the Hellenistic world, a revived Persia dominated the scene from 250 BC-226 AD as the Parthian Empire. The Parthian Empire was then succeeded by the even more powerful Sassanid Empire (226-651 AD).

The Parthian Empire had its origin in the northeastern part of modern Iran. The Parthian Empire defeated and deposed the long-declining Hellenistic Seleucid Empire, and reunited and ruled over the Iranian Plateau. At the height of its power, the Parthian Empire covered all of Iran proper, as well as regions of the modern countries of Armenia, Iraq, Georgia, eastern Turkey, eastern Syria, Turkmenistan, Afghanistan, Tajikistan, Pakistan, Lebanon, Israel, Palestine, Kuwait, the coastal regions of Persian Gulf of present day Saudi Arabia, Bahrain, Qatar, and the United Arab Emirates. The Parthian Empire was also in control of the Silk Road, the trade route between the West and China. The Parthian Empire was ruled by the Arsacid Dynasty, the third native dynasty of ancient Persia, after the Median and the Achaemenid dynasties. Practically uncontested within their geopolitical sphere, the Arsacid kings styled themselves "king of kings".

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<sup>94</sup> In contrast, the Eastern Roman Empire of the medieval era, in constant competition with the Sassanid Empire, undertook institutional reforms and survived much longer due to the pressure from Persia. Refer to Leppin (1998, pp. 249-262) in Bernholz et al. (1998).

<sup>95</sup> Refer to Starr (1989, pp. 72, 117) on the economic decline of the Roman Empire.

The Parthians were nomads originally. In their long contests with the Seleucid heavy infantry combined arms legions, the Parthians had invented an effective and unique mode of warfare which became the prevalent way of war during the medieval era. Parthian military power was based on a form of the guerilla warfare of a mounted nomadic tribe, with light cavalry being the mainstay of the fighting force, and support from heavy cavalry and sizable light and heavy infantry. The Parthians were superb horsemen; the light cavalry were trained to shoot at full gallop while advancing or retreating. This was the famous “Parthian shot”.

The political structure of the Parthian Empire was highly decentralized, partly due to the rather complicated terrain and the reliance on light cavalry. The earlier Seleucid Empire and the later Sassanid Empire were highly decentralized too: all three regimes were far short of the Achaemenid Empire in terms of political unity.<sup>96</sup> The constituent units of the Parthian Empire were highly independent, with many of the Hellenistic cities retaining much autonomy. That was the main weakness of the empire, causing it to lack the ability to mount sustained long-distance military operations: the independent regional lords whose support the Parthian monarchy depended upon were reluctant to travel far from their home power base for long periods.

The archrival of the Parthian Empire was the Roman Empire. The Parthian form of warfare suited the desert, oasis, steppe and highland topography of Middle East, Persia and Central Asia very well. In contrast, the Roman Empire relied mainly upon heavy infantry legions, supported by the navy as circumstances necessitated. The Roman Empire found it difficult to defeat the Parthian Empire, whose main battlefield fighting force was cavalry. Both the light and heavy Parthian cavalries were much faster and more mobile than the Roman foot soldiers.

In the Battle of Carhae (53 BC), Crassus, the Roman general who tried to conquer the Parthian Empire, was disastrously defeated by the Parthian commander Surena. This defeat testified to the limit of the Roman way of warfare in Middle Eastern terrain. The Battle of Carhae was a harbinger of the medieval form of warfare, when cavalry would become the dominant force on the battlefield.

The Romans had great trouble defeating the Parthians, but the reverse was also true. The Parthians found it difficult to conquer Roman eastern provinces, especially well-fortified areas guarded by the Roman heavy infantry legions. Furthermore, the great distance between the core regions of the two empires added to the difficulties of conquering and controlling the territories of the rival. A delicate balance of power was therefore imposed by nature. The two

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<sup>96</sup> Refer to Garthwaite (2005, pp. 66 – 68).

major powers, despite many clashes and turns of fortune, were largely confined to their own natural spheres of influence.

Though neither could truly threaten the survival of the other, some kind of political-military contest was however always going on between the Roman Empire and the Parthian Empire. The relations between the Parthian and Roman Empires consisted largely of intermittent warfare separated by periods of stalemated truce and exchanges of gifts and hostages. The fights were mainly over the borderlands between them, especially Armenia. In later interactions, Parthia was recognized by Rome as co-equal.

Several centuries later, the competition was more intense between the Sassanid Empire and the Roman (and later Byzantine) Empire. The Sassanid Empire (226-651 AD), the last pre-Islamic Persian Empire, defeated, succeeded, and became more powerful than the Parthian Empire: the traditional territory of the Sassanid Empire included all of present-day Iran, Iraq, and Armenia; the southern Caucasus (including southern Dagestan); southwestern Central Asia; western Afghanistan; parts of Turkey and Syria; coastal parts of the Arabian Peninsula and the Persian Gulf area; and some parts of southwestern Pakistan. For brief periods the Sassanid Empire also held Egypt, as well as Yemen and Oman, and controlled the maritime trade route with the east through the Red Sea, especially after conquering Yemen in 574 AD. Sassanid Persians established a military and political presence in present-day Yemen, for this choke-point between the Red Sea and the Indian Ocean could control the profitable trade between the Mediterranean and the Indian subcontinent.

From the third to seventh centuries AD, the Sassanid Empire with its heavy cavalry was the most important power in the Middle East, rivaled only by the Roman (and Byzantine) Empire. Compared with the Parthian military, heavy cavalry played a more important role in the Sassanid army. The mainstay of the Sassanid army was heavy cavalry, made up of elite aristocrats trained since youth for military service. The heavy cavalry was supported by light cavalry, infantry and archers. Administratively, the domains of the most powerful aristocrats functioned as semi-independent states.

Changes in relative power—the Roman Empire had weakened and become the Byzantine Empire, while the Sassanid Empire strengthened Persia—increased the competition between the two major cultures. The Romans and, later, the Byzantines treated the Sassanid Persians as the only equal power. Given the natural geography and the different forms of warfare that the Romans and the Persians specialized in, the mass factor between the two major empires was quite small. Consequently, the marginal effect of relative capability generated by the intermittent conflicts between the two empires was quite moderate and so was the development drive. The existence of a worthwhile rival and the small mass factor between the two major empires prevented the emergence of highly risk-averse power-induced risk attitude. Consequently,

imperial complacency and conservatism had lesser chances to settle in both empires. The Persian culture had a renaissance during this time and the eastern half of the Roman Empire had its fair share of reforms—and of course eventually outlived the western half. The results were the Byzantine Renaissance and the Sassanid Golden Age of Persia.

Sassanid society, economy and culture were among the most flourishing of the late classical and early medieval era, matched in the Middle Eastern area only by those of the Byzantine civilization, their longstanding political and military rival. The level of scientific and intellectual exchanges between the two major cultures testifies to the competition and cooperation of these two major civilizations during their times. The Sassanid period saw the most advanced achievements of Persian civilization and had a great influence on medieval European and Asian (and especially Islamic) culture and art.

The Sassanid Empire had intensive development plans. Sassanid rulers consciously sought to revive Persian traditions and to eliminate Hellenistic cultural influence. Sassanid rule was known for its urban planning, agricultural development and technological improvements.<sup>97</sup> Canals were built and many cities were founded, some settled in part by migrants from the Roman territories, including Christians who could practice their religion freely under Sassanid rule. The Empire also had an amicable attitude towards Jews, who lived in relative freedom most of the time. (The official state religion was Zoroastrianism.)

This remarkable peak of Persian power was paralleled by a blossoming of Persian art, music, and architecture. Cultural expansion followed political influence and military victories, and Sassanid art penetrated Central Asia, reaching as far as China. The Academy of Gundishapur was a famous learning center with a great library. During this time the best pieces of ancient Persian literature were written and notable pieces of music composed, and sports such as polo became royal pastimes, a tradition that continues to this day in some regions. The time also saw the blooming of the indigenous religion of Zoroastrianism, which was a synthesis of several major religions and philosophies of the Middle Eastern, Western and Indian cultures.

Meanwhile, at the other end of the Eurasian continent, in China, the larger economies of scale in warfare due to the use of massive infantry legions and light cavalry set in motion a chain of changes that eliminated smaller states and created larger and larger states and alliances. Political and military competition was so intense that historians have called it the Era of the Warring States or the Era of the Contending States. After the Kingdom of Qin started a

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<sup>97</sup> Refer to Garthwaite (2005, pp. 99, 109).

series of reforms under the draconian legalist statesman Lord Shang (395 BC-388 BC), thus bolstering the war capacity of the state, the relative combined military and economic efficiency shifted significantly in favor of the Qin Kingdom. This asymmetry in relative efficiency and the large mass factor caused an irreversible tilt in the balance of power in favor of Chin. The ultimate outcome was an extremely high concentration of resources and capability in China; the unification of China under the First Emperor, Yin Zheng, King of Qin; and the establishment of the Qin Dynasty in 221 BC.

Though the Qin Dynasty was soon overthrown, the subsequent Western Han Dynasty swiftly reconstituted the imperial order. The late classical Chinese imperial order was highly stable and survived for over six centuries. It spanned four major dynasties: Qin (221 BC-206 BC), Western Han (206 BC-24 AD), Eastern Han (25-220 AD) and Western Jin (265-317 AD). The imperial order of late classical China was more complete than that of the Roman Empire: while the Roman Empire still had an equal in the form of Parthian and then Sassanid Persia, the Han Dynasty of China, however, practically had no equal.

The establishment of the imperial order in China, with its associated extraordinarily high concentration of resources and capability, reduced political-military competition, dampened relativist concern and sapped developmental energy. Given that the imperial regime nearly monopolized resources and capability, the larger mass factor greatly enhanced the power of the empire relative to possible challengers with much lesser resources and capability. Political-military competition was therefore further dampened. For instance, it was a popular belief that the Han Dynasty would last forever. Consequently, relativist concern took a further deep dip. Furthermore, the extraordinarily high concentration of capability in the hands of the imperial regime together with the large mass factor generated an extremely risk-averse power-induced risk attitude which bred strong conservatism and severely distorted economic decisions. The vigor, creativity and achievements of the pre-Qin competitive state system soon disappeared and were never repeated. In the Chinese lands, stagnation and decline resulted.

This period mainly saw the reign of the Han Dynasty. The core area of the Han Dynasty was the Northern Plain, centered along the middle and lower stretches of the Yellow River. This core area contained approximately two thirds of the total population, and its agriculture and economy formed the economic and military foundation of the imperial order. The Han Dynasty relied upon the massive infantry legions supported by this economy to hold the empire together and keep nomads and barbarians at bay, while a unified writing system facilitated the empire's bureaucratic administration.

Compared with the vigor of the preceding pluralistic Spring and Autumn Era and the Era of the Warring States, the Han dynasty was characterized by

stagnation and decline. During Han China, the government deliberately repressed commerce. Economic growth was sacrificed for the sake of political stability.<sup>98</sup> The merchant class suffered a brutal loss in status and professional autonomy due to official policies and restrictions.

Except during the reign of Emperor Wu Ti, the ambitious sovereign who adopted a policy of actively pursuing and destroying the Xiongnu nomads who once harassed China, the Han Empire had a small and non-intrusive government that provided few public goods, in accordance with the teachings of Taoism in the earliest period and the teachings of Confucianism in later periods. A simple and self-sufficient agrarian society was the official ideal. Han Confucian scholars, for instance, severely criticized Lord Shang for the commercialization of land.<sup>99</sup> Government refrained from any intervention in the economy, including the provision of much-needed public intermediate inputs which, though not directly consumed, raised productivity and were critical for the functioning of the economy (but could not be effectively supplied by private initiative due to the problem of collective action or free-riding).<sup>100</sup> Consequently, productivity suffered, commerce declined and the economy deteriorated, especially the urban economy. Han Dynasty cities were generally smaller than their predecessors of the Warring States Era.<sup>101</sup>

Partly due to the faltering economy, the military capability of the Han Dynasty declined from that of the Era of the Warring States. In that earlier era one of the seven Warring States, the Kingdom of Zhao, effectively repulsed the encroachment of the nomadic tribal alliance of Xiongnu and conquered large tracts of territory in Inner Mongolia from the Xiongnu. Yet, it took the later and supposedly-stronger Han Dynasty Chinese Empire seven decades of preparation to successfully deal with the Xiongnu after suffering much humiliation, even though the Xiongnu threat consisted mainly of border incursions that did not truly threaten the survival of the Han dynasty.

On the cultural front, the Han Dynasty produced few great literary works of which to boast. Han Dynasty poetry was merely second-rate imitations of that produced during the Era of the Warring States. The policy of Emperor Wu to elevate the position of Confucianism to official orthodoxy suffocated both philosophical and political intellectual inquiries. In contrast to the First Emperor's bluntness in enshrining the orthodox teachings of Legalism by burning the

<sup>98</sup> Refer to Wesson (1967, 1978), Huang (1988) and Hui (2005).

<sup>99</sup> Refer to Raaflaub and Rosentein (1999, p. 39, footnote 83).

<sup>100</sup> Refer to Stavrianos (1982, p. 148). Wesson (1967, p. 99) makes an economic contrast between the Era of the Warring States and the Han Dynasty.

<sup>101</sup> This had been demonstrated by archaeologists. Refer to Raaflaub and Rosenstein (1999, p. 38, footnote 78).

books of the other schools of thought and burying alive the Confucian literati, the Han dynasty resorted to more subtle measures to elevate Confucianism to orthodoxy. Chinese minds of this era turned away from philosophic and intellectual exploration to mere superstition. Confucian orthodoxy also meant a small and non-interventionist government and, to ensure the smooth functioning of society and the polity, relied on moral teachings instead of law enforcement. Confucianism discouraged innovation and independent thinking as well as manual work or business dealings—and with such things discouraged, China's classical empires slowly declined.

## 4. South Asia

India was the exception during this era of universal empires. Geographically the South Asia subcontinent is composed of three major regions: the verdant Ganges River Valley, which is economically the most important; the mountainous south, which was the last to be transformed by civilization; and the arid Indus valley, which produced one of the earliest civilizations, the Harappan civilization. The great variations in South Asian's compartmentalized terrain have always posed onerous problems for empire building.

The first pan-South Asian Empire was the Mauryan Empire (321-185 BC). Originating from the Kingdom of Magadha in the Indo-Gangetic plains in the eastern side of the South Asian continent, the consolidation of the Mauryan Empire was partly due to the advantage gained when Chandragupta Maurya borrowed political know-how from the Macedonian invaders. The political know-how and philosophy of the Mauryan Empire was enshrined in the teaching of Arthashastra by Kautilya, and Chandragupta instituted a strong central administration. However, the effective rule of the Mauryan Empire lasted only for three generations, under Chandragupta Maurya the founder of the empire whose reign was from 322 BC to 298 BC, his son Bindusara who reigned from 297 BC to 272 BC and his grandson Ashoka the Great who ruled from 273 BC to 232 BC. In 185 BC, the last Mauryan emperor, Brihadrata, was assassinated by the commander-in-chief of his guard, Pusyamitra Sunga, who took over the throne and established the Sunga Empire.

The Mauryan Empire (322-185 BC) both began and ended earlier than the Qin and Han dynasties of China, the Parthian and Sassanid Empire of Persia and the Roman Empire. Around the time that the imperial orders began to establish themselves in China, the Mediterranean and Persia, the Mauryan Empire broke down into a state system functioning from around 200 BC to 300 AD. The major powers of this state system were the Kushan Empire in the Northwest, the Sunga Empire in the Northeast and the Satavahana or Andras Empire in the South.

These three major powers, especially the Sunga Empire and the Satavahana Empire, were states with compact and centralized structures.

The distribution of capability in South Asia during this era was highly even. Relativist concern was therefore high. Furthermore, the highly even distribution of capability prevented the rise of extremely risk-averse or risk-seeking power-induced risk attitudes to distort economic decisions. Consequently, there was in South Asia a significant intensity of interstate political and military competition and drive for development and creativity. The developmental drive generated by this state system propelled the Indian civilization to the pinnacle of its classical golden age.

Trade thrived in the Kushan Empire, whose territory extended from the Aral Sea through present day Uzbekistan, Afghanistan and Pakistan into northwestern India and controlled the link between the Silk Road and the maritime trade routes of the Indian Ocean. The dominance of the Kushan Empire over international trade was ended only when the rise of Sassanid Empire and Gupta Empire basically ended the rule of the Kushan Empire. The Satavahanas Empire greatly influenced Southeast Asia by spreading Hindu culture, language and religion into the region. The Sunga Empire had its share of achievements too. Within its realm saw the rise of the indigenous Mathura school of art, a counterpart to the Hellenistic influence in Indian art.

The arrival of the Gupta Empire ended the highly even distribution of capability within the Indian system. The Gupta Empire existed approximately from 320 to 550 AD and effectively governed northern India from 375-475 AD. The Gupta Empire was the last of the classical empires and the first of the medieval empires. From the fall of the Mauryan Empire (185 BC) to the establishment of the Gupta Empire (ca 320 AD), waves of nomads entered northwestern India. The Kushan Empire was in fact established by Indo-European nomads from central Asia. The establishment of the Kushan Empire and the invasions of nomadic tribes from Central Asia was the harbinger of the medieval era. Established at the end of an era dominated by massive infantry legions, the Gupta Empire relied more on cavalry, but the backbone of the Gupta military was still light infantry legions composed mainly of archers. The Gupta Empire was constantly under threat from the nomads from the northwest, especially the Hephthalites or White Huns.

The classical Indian state system did not come to an abrupt end when the Gupta Empire was established. The Gupta Empire was largely confined to northern India. More decentralized than the Mauryan Empire, it relied on matrimonial alliance with the Vakataka Empire of southern India for its influence in southern India and, to a large extent, its dominant position in northern India as well. Hence the Gupta Empire was a hegemonic power in a state system: the Gupta Empire's position was constantly contested and the system was not an unchallenged imperial order that monopolized military capability within

an international political system. Given the constant threats that the Gupta Empire faced from the nomads from the northwest and the rival southern Indian states, it was less likely that imperial complacency and inertia could set in. The distribution of capability within the Indian system during the Gupta era was therefore moderately uneven or largely even. Given the largely even distribution of capability, the larger economies of scale associated with the use of massive light infantry legions in South Asia generated mostly positive scaling effect and very little negative unbalancing effect. Furthermore, since the increase in asymmetry in distribution of capability was quite moderate, the negative asymmetric effect was quite minor too. Consequently, the relativist concern during the Gupta era was at least as high as that of the state system of the previous era. The largely even distribution of capability also prevented the rise of extremely risk-seeking or risk-averse power-induced risk attitudes to distort economic decisions. This pluralistic international order of India with its constant political-military competition in turn enabled great developmental achievements to continue.<sup>102</sup>

There were great advances in science and arts. The Gupta Empire was a great patron of education and supported the Universities of Nalanda and Vikramasila. During this era, Sanskrit learning was revived to serve as a lingua franca and Sanskrit literature flourished.<sup>103</sup> The two great epic poems of India, *The Mahabharata* and *The Ramayana*, achieved their final form during this era. There was the compilation of the authoritative Hindu Law Books (Manava Dharma-shastra), the foremost of them being the Code of Manu. In the second century, Charaka compiled the oldest surviving Indian medical textbook, the Charaka Samhita; the great linguist, Panini, brilliantly analyzed the physiology and morphology of the Sanskrit language in his "Eight Chapters" (Ashtadhyayi), and then Patanjali's "Great Commentary" (Mahabhashya) on the "Eight Chapters" was completed. Sanskrit was therefore the first language to be scientifically analyzed. The decimal place system of numerical notation, one of the great inventions of the human mind, emerged in India by 270 AD. In art, after centuries of Hellenistic dominance, an indigenous Indian style flourished. Politically, economically and culturally during this period southern India too was on the rise. One of the southern India power, the Chola Empire, was a thriving trading state, with its navy being the mightiest in the Indian Ocean. It conquered the Maldives and defeated the fleet of Srivijaya, the great maritime empire of Southeast Asia that spanned present-day Malaysia and Indonesia.<sup>104</sup> This period saw the Indian colonization of Southeast Asia, while in Southeast Asia, beginning

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<sup>102</sup> Refer to Stavrianos (1982, pp. 134-137).

<sup>103</sup> Refer Kulke and Rothermund (1998, pp. 79-81).

<sup>104</sup> Refer to Wolpert (2004, pp. 68-113).

at about the dawn of the Christian era, there was a massive acceptance of Indian culture.<sup>105</sup> Local states in Burma, Sumatra, Java, Malaya, Siam and Vietnam eagerly imported as much Indian civilization as they could. Hindu states and empires established in Southeast Asia included the Majapahit of Java and the Khmer of Indochina.

International trade prospered with extensive trade to the west, to Southeast Asia, to China and to Central Asia. Indian cultural influence spread far abroad, especially to Southeast Asia, and a Greater India emerged. Buddhism was established in Southeast Asia, Central Asia and East Asia. In Northeast Asia, Buddhism, with its accompanying art forms, flowed like a mighty torrent into China, Korea and Japan in the period ca 200-600 AD.<sup>106</sup> The period from ca 184 BC-320 AD and the subsequent Gupta Era were times of political fragmentation in India, but therefore also times of economic enrichment and cultural splendor.

## 5. Eurasia

During the late classical era an inchoate mega-Eurasian international political and economic system was taking shape. Major empires or great powers from different civilizations started to interact culturally, economically, politically and militarily. How did such interactions of a pan-Eurasian scale affect the relativist concern and power-induced risk attitudes of the major empires or great powers and their developmental performance?

The political and military rivalry between Persia and the Roman Empire was the most important among such interactions. It was also unique, for the interactions between other pairs of major empires or great powers were either non-political or non-military in nature, or were much less frequent and on a much lower level of intensity. For instance, though China and Persia had constant contacts during late classical times, there was however no political-military competition between them. The great distance between the core regions of the two empires meant that both faced strong diminishing returns in establishing political and military influence in the geopolitical niche of the other. That is, there was a very small mass factor or low levels of economies of scale in conflict between the two major cultures. Therefore, trade and cultural exchanges were the main concerns of that relationship. That being the case, the relativist concern between

<sup>105</sup> Refer to McNeill (1999, p. 274).

<sup>106</sup> Refer to McNeill (1999, pp. 180-193).

the Parthian Empire and the Chinese Han Dynasty of China was very low or non-existent. Similarly, though the Romans and the Chinese were aware of the existence of each other, there was no political and military contest between them due to the great distance between the two cultures.

The Mauryan Empire had a conflict with the Seleucid Empire in 305 BC. However, given the vast distance between the core areas of the two empires, the Mauryan core area was in the Eastern part of north India and the Seleucid Empire had its core in the Mesopotamia and Anatolia, it was difficult for either to conquer the other or to have a long protracted war. Consequently, Seleucus and Chandragupta sealed a treaty in 305 BC through which the Seleucus ceded a number of territories to Chandragupta, including southern Afghanistan and parts of Persia. In return, Seleucus obtained five hundred war elephants, a military asset which proved useful in his latter campaigns.

The interactions between the Persian Parthian Empire and the Kushan Empire of Central Asia and India were of a similar nature centuries later. The Parthian Empire made significant inroads into India, controlling extensive territory in modern day Pakistan after defeating the Kushan Empire. However, given the great distance from the Parthian core area and the decentralized administrative structure of the Parthian Empire, this far-flung province soon declared independence and became the Indo-Parthian Kingdom. Since there was such a great distance between the core areas of Persia and India and, there was also a significant difference in the modes of warfare suitable for the two regions, the mass factor between Persia and the Indian states was quite small. The interactions between Persia and India were therefore somewhat similar to the contests between Persia and Rome, though at a lower level of intensity. Consequently, the sporadic interactions between the Parthian Empire and the constituent members of the Indian state system were not significant enough to generate high relativist concern or to spur great development effort.

Summing up, the great distance among the major cultures made wars of conquest between them an impractical option during the late classical era. Consequently, the distribution of resources and capability among them was determined more by natural endowment than by political and military contests. This geopolitical compartmentalization of the major cultures would be broken up only in the medieval era due to progresses in military technology, especially the rise of heavy cavalry which created greater projection of power for the military.

## 6. Conclusions

Summing up, the heavy infantry military technological revolution led to structural changes in international politics of the late classical major Eurasian civilizations.

India, with its more even distribution of capability and higher intensity of political military competition, was more creative and had better developmental performance. The heavy infantry military revolution facilitated the rise of the late classical era gigantic empires in the Mediterranean world, Middle East and China. Consequently, imperial complacency and conservatism reigned in these diverse lands and sapped the energy of progress.

