

## **India's Elevation as a Global Economic Power and the Integration of Its Knowledge System for Development**

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### **ABSTRACT**

The Ukraine War is causing a tectonic shift in the global order, whereby new great powers are showing a different kind of control over world events. Along with the existing great powers, the USA, China, and Russia, India is rising fast as an economic power of reckoning. By Purchasing Power Parity (PPP) term, it is already the 3<sup>rd</sup> largest economy in the world. India is also projected to surpass Germany's economic size and become the 3<sup>rd</sup> largest economy in nominal value by 2027. Its dependence on domestic consumption for economic growth, increasing manufacturing base, young population, diaspora, remittance income, etc., are offering some advantages that many other economies do not enjoy. Side by side, India has a very rich traditional knowledge base, developed from the very dawn of human civilization in the Indian subcontinent. The Indian Knowledge System (IKS) has not lost its relevance and utility with the advance of modern civilization. This paper discusses the elevation of India as a great global power and how the old Indian Knowledge can be used to solve some pressing issues for further development.

**Keywords:** India, Indian Economy, Indian Knowledge System, Great Power, Multipolar World, Development

### **1. INTRODUCTION**

The Ukraine War that began in early 2022 has brought forward the argument for the multipolarity of the world. In that context, China has already emerged as a great economic power on the world stage as a competitor to the US. While the Chinese technological prowess is also growing, its military might be increasing. At the same time, a resurgent Russia is looking more powerful through its extreme resilience in the face of unparalleled hostility from the collective West. Despite all their efforts, Russia has made a comeback with its military might and economic revival. Even during this testing time, its sphere of influence has expanded, particularly in the Middle East and Africa. Some other powers have emerged to crowd the queue, with the potential to grow their economic, political, and military weight and influence. However, in the process, the whole of Asia, in general, is poised to become the new center of economic and, to some extent, political gravity in the world. "However, the glory that Asia is expected to

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be bestowed with is, in fact, going to be a revisit of the past” (Banik and Barai, 2017). Leaving China, which already has uplifted itself to a great economic power status, India stands out as the leading contender for global power and the voice of the Global South. This potential for India to become a global power is a source of pride and optimism.

India’s current economic prowess, rooted in its historical dominance of the world economy for about seventeen hundred years, is a testament to its enduring strength. As the 5<sup>th</sup> largest economy in the world, with an economic size of about \$3.7 trillion in 2023 (RBI Bulletin, 2023), India’s growth potential is set to propel it to the 3<sup>rd</sup> largest economy, surpassing the economic size of Japan by 2025 and Germany by 2027. This impending shift in global economic dynamics is a cause for anticipation and excitement.

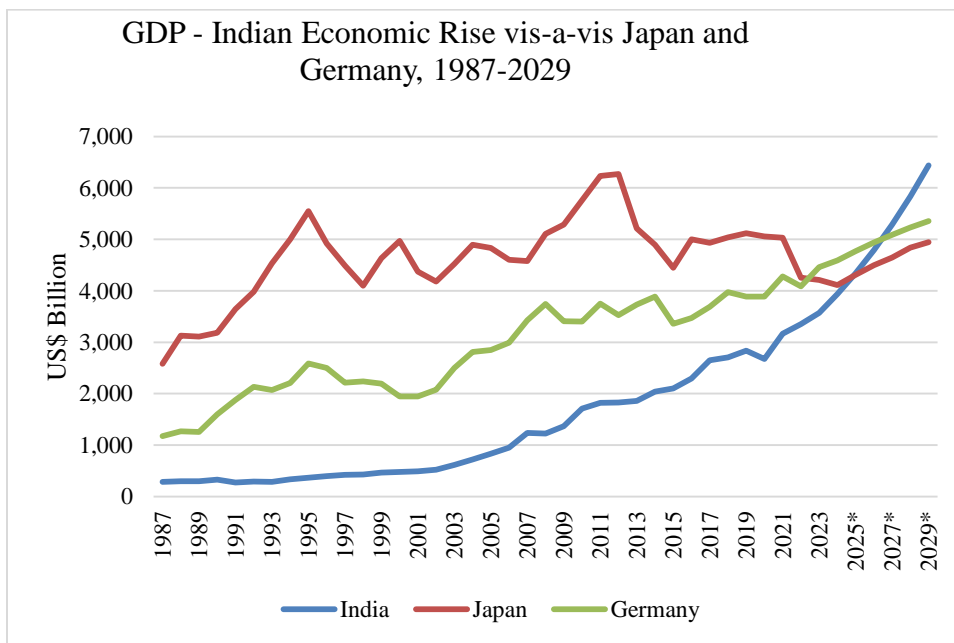


Figure 1: Indian Economic Rise to 3<sup>rd</sup> Position

Note: Figures from 2024 to 2029 are estimated or projected.

Source: Statista

However, in its effort to reach the status of a great power and to turn India into a land of ‘Brown Gold,’ one of the biggest challenges India will face is how to integrate its Knowledge System with the rest of the world in a way that combines its past knowledge system (KS) with the modern one to gain an advantage over the others. Is it feasible and possible? To answer this question, let us remind ourselves that India used to be one of the wealthiest countries in the world, with many highly enlightened people. Recently, some historians have started to provide

this side of the narrative, showing that millions of people have been rendered "poor" during the previous several centuries due to the tremendous economic drain, persecution, societal re-engineering, and other actions carried out by external colonial or expansionist powers (Khanna, 2020).

So, how does Indian society qualify for 're-developing,' and how can the Indian Knowledge System (IKS) play a role in this regard? Indeed, understanding a society's present state requires one to appreciate its previous knowledge systems. Did India always live in impoverished and socially difficult circumstances? Or does the current situation have a past? The answers to these questions resoundingly say no. So, digging into the past KS may show ways and methods to address many of the pressing social issues of the present. That is why IKS may contribute to a sustainable lifestyle, as they are environmentally beneficial and work in harmony with the environment.

This paper understands the vastness of the issue and wants to limit the scope of discussion to a shorter theoretical level. Keeping that limit in mind, the rest of the paper has been divided into five parts. Section 2 gives a historical and theoretical background of great powers. It then has a very short section on the study's methodology. Section 4 describes the way of India's elevation to a great power status, mostly in the economic domain. Section 5 gives an overview of the Indian knowledge system. It then dwells on how the integration of the Indian Knowledge System is possible to integrate for its development so that it not only becomes a land of 'Brown Gold' but also turns itself into a new hub of knowledge for the rest of the world. Section 6 concludes the paper.

## **2. A THEORETICAL HISTORICAL PREVIEW**

### **2.1 What is a great power?**

In a seminal work, Angus Maddison<sup>1</sup> argues, "Advances in population and income have been sustained by three interactive processes: *a*) Conquest or settlement of relatively empty areas which had fertile land, new biological resources, or a potential to accommodate transfers of population, crops and livestock; *b*) international trade and capital movements; *c*) technological and institutional innovation" (Maddison, 2001:18; Banik and Barai, 2017 ).

Although these yardstick processes can be used to explain the growth of population and income in the long-term context, other factors have stimulated economic fortune at some point in history. The growth narrative of the Asia Pacific nations in the post-World War II era might be better described primarily by the fact that Maddison has identified the latter two elements in his study (Banik and Barai, 2017). Nevertheless, factors like ideological conviction to produce more (as was the case in the case of the former Soviet Union after World War II), visionary leadership (such as that of Lee Kuan Yew of Singapore), etc., played a role in the development of countries in the recent history of the world.

We can extend this explanation further by looking at the formation of a great power in the polarization process of the world. John Mearsheimer, a Political Science Professor at the University of Chicago, USA, in a recent interview at the ‘Rising India’ Program in Delhi, India, identified two principal factors that make a country a great power: the nation's wealth and population. Prof. Mearsheimer believes the world is already multipolar, divided into three poles: the USA, China, and Russia. He termed India an aspiring great power, though he was optimistic about its future (Firstpost, 2024). We could also prolong the idea a bit further by defining the world powers in the context of the 20th century and seeing what may happen in the world's polarity scenario in the post-Ukraine War world.

## **2.2 Modern History of Great Powers**

Looking back, we find that some countries dominated the 20th-century history of the great powers. Indeed, there were five big powers in Europe at the beginning of the 20<sup>th</sup> century. They were divided into two groups. “The first grouping were the three most powerful states—Great Britain, Germany, and France. The second grouping was lesser in rank but remained significant for the period—Austria-Hungary and Russia” (Five Great Powers, 2024). Then came the 1<sup>st</sup> World War. It changed the power equation a bit when the US emerged as a World Power like the UK, while the German power was contained through the Treaty of Peace, better known as the Treaty of Versailles, signed in 1919. The Ottoman Empire, a great power, was demised at the end of WW1, while Japan emerged as a big power in East Asia.

However, the great power dynamics changed a lot after the 2<sup>nd</sup> WW. We saw the emergence of two superpowers, one led by the US and the other by the former Soviet Union. Interestingly, the great power status of the former Soviet Union was not assigned based on wealth measures at all. It was rather the military might of the Soviet Union that made it a formidable power, a pole of the World. At the same time, the appeal of communism as an economic and political philosophy to run government appealed to many countries in Asia, Africa, and Latin America. That also created leverage it enjoyed in influencing the decision-making processes of many countries worldwide. The seminal work of Angus Madison 2001 did not talk much about the economy of the Soviet Union.

Nonetheless, with the demise of the former Soviet Union in 1991, the world saw a massive power shift to a single country, the US. It was also considered to have created a Unipolar moment when the US became the undisputed and one of the most powerful nations of human civilization. However, that moment did not last very long, as by 2010, China had emerged as the 2<sup>nd</sup> largest world economy after it became the biggest exporter in 2009. By 2013, it was the single largest trading nation on the planet (Monaghan, 2014). As per Prof. Mearsheimer, by 2017, the world became bipolar again and multipolar later (Firstpost, 2024). He seems to accept China and Russia as other great powers at the pole. Many in the West do not accept Russia to be a pole now, though they may soon change their mind based on the outcome of the Ukraine War.

So, the chronology of worldwide power evolution in the 20<sup>th</sup> century could be identified as follows: The century began with seven great powers. After the Second World War, it became a bipolar one. By 1991, the world saw a sole power, or a unipolar moment emerge. By 2024, we are now talking of a multipolar world.

### **2.3 World Polarity and the Market Structure Theory-A Strange Parallelism**

The development of the past one and a quarter of a century has made the discussion an analogy of the market structure theory. In the imperfect form of the market competition, we may classify or see the market may pass through the following forms: (i) Monopoly: No competition at all. So, the monopolist can determine both the supply and price of the product: (ii) Duopoly: Two competitors are in the market, and (iii) Oligopoly: few product or service producers exist in the market simultaneously.

The world was multipolar from the beginning of the 20th century, though all powers were not equal. After WW2, that transformed into a bipolar world. In 1991, the unipolar scenario was established. From that phase of one power predominance, the world has now moved to the stages of bipolarity and multipolarity.

### **2.4 What Does the Post-Ukraine Period Hold for Us?**

Based on the present trend, it may be assumed that the march of multipolarity in the world will not end with only the three powers. There are clear indications that more powers are likely to join the race to create further great power centers in the World. Top among them is India, and soon, it is expected to emerge as the 3<sup>rd</sup> largest economy in the world. Mr. Mukesh Ambani, the Chairman of Reliance Industries and one of the wealthiest Indians, predicted that India will become a \$35 trillion economy by 2047 (Business Standard, 2024).

A few other countries, like Indonesia, the Middle East combined, Brazil, and Poland, have the potential to emerge as great powers by the middle of the 21st century. One may need help finding the place of Japan and some European powers, which are still quite visible in the international power structure. This is based on their present decline, which will likely continue to make them less and less powerful in the future. Any eventual emergence of the EU as a single political entity may hold some semblance of great power.

### **2.5 What is IKS?**

India is home to a vast pool of knowledge systems and technologies, as well as skilled artisans and academics with expertise in various conventional Indian sciences and technology. These include broad and diverse fields, including astronomy, mathematics, astronomy, architecture, metallurgy, metalworking, healthcare systems, and textiles; they also cover a variety of theoretical fields like grammar, logic, and linguistics. It is also a fact that knowledge exists in many of these fields at different levels. From the classical scholars who might be familiar with texts and manuscripts written in Indian languages to the folk practitioners who receive their

training and expertise from living traditions of knowledge and skill transmission, knowledge exists in many of these fields (Centre for Indian Knowledge System, 2024).

### **3. METHODOLOGY**

This research is primarily exploratory in nature. But it has reached the descriptive level to some extent, whereby it has tried to answer questions of what, where, when, and how in India's economic progress and pertinent questions related to its Knowledge System that can benefit its march toward a great power. In the IKS, the discussion has been based on 3 well-covered research works and what they argued about the knowledge system itself, how relevant they are, and how a level of integration can help India's development process.

### **4. INDIA'S ELEVATION TO A GREAT ECONOMIC POWER**

The calculations that Maddison made in his landmark study in 2003 are presented in Table 1, which illustrates the worldwide contribution to the GDP of the globe by the main economies of the world. The table provides a picture of the shifting equilibrium that existed in the global economy. Two Asian giants, such as India and China, were the dazzling crowns of the world economy throughout the economic history of the last two millennia of humanity, except the timeline of the 19th and 20th centuries. Japan has maintained its status as a unique economic entity with global importance during the whole era, even though it is physically smaller than other countries and has been relatively isolated for hundreds of years. However, the progressive ascent of Western powers beginning in the nineteenth century and continuing ahead, led by Imperial Europe, Germany, and the United States of America, changed the world's economic dynamics. During the 20th century, they attained the pinnacle of their growth (Banik and Barai, 2017).

The Maddison research, which indicates that Asia was the center-stage of the balance of wealth of the globe throughout the period between 1 and 1820 AD, might be referred to in order to provide support for the economic chronology discussed here. On the other hand, there was a significant shift in the economic fortunes of the globe between the years 1870 and 2000 AD, and the Western powers gained a larger part of the global gross domestic product. Unsurprisingly, two important agents have significantly contributed to this development (Banik and Barai, 2017). To begin with, they were the first to initiate an industrial revolution by using technological invention and innovation, which provided them with a competitive advantage over their Asian competitors. Second, and perhaps more crucially, the enormous imperial reach of the West European powers to all of the hemispheres on Earth ensured access to the accumulation of resources and the exploitation of the labor force of the colonial people (Maddison, 2001). The colonies played a synergistic role in the Industrial Revolution by helping them achieve economic domination by expanding their market area, resources, and labor force. Nevertheless, their overwhelming military force was a significant factor that contributed to the success of the entire

incident. Table 1, constructed using the data from the Madison research, illustrates the shifting dynamics and shifts in economic equilibrium that have previously been observed.

Table 1: Share of World GDP (percent of world total)

	China	India	Japan	The UK, France and Germany	USA
1AD	25.4	32	1.1	3.7	0.3
1000AD	22.7	27.8	2.6	4.1	0.4
1500AD	24.9	24.4	3.1	8.9	0.3
1700AD	22.3	24.5	4.1	11.8	0.1
1820AD	33.0	16.1	3.0	14.2	1.8
1870AD	17.1	12.2	2.3	22.0	8.9
1913AD	8.8	7.5	2.6	22.2	18.9
1950AD	4.6	4.2	3.0	15.6	27.3
1980AD	5.2	3.2	7.8	13.2	21.1
2008AD	17.5	6.7	5.7	9.0	18.6

Source: Compiled. Data from Maddison (2003), *The World Economy: A Millennial Perspective*. Also, in Banik and Barai (2017).

Note: Figures for 2008 have been taken from the International Monetary Fund's publication.

At the turn of the 21st century, there are indications that the economy of Asia is beginning to return to previous levels. It was only in the last quarter of the 20th century that the realization of the potential for that resurrection became apparent. It was in 1968 when Japan became the second-biggest economy in the world, and in the 1990s, it achieved its economic pinnacle. This marked the beginning of the race. During the same time, the Asian tiger economies, also known as NICs, which include Singapore, South Korea, Chinese Taipei, and Hong Kong, made their economic debut. On the other hand, China's tremendous economic rise was the factor that brought about the shift in view regarding the economic future of Asia. Over more than twenty years, beginning in 1990, the Chinese economy has consistently demonstrated growth in the double digits, eventually surpassing Japan to become the world's second-largest economy in 2010. The magnitude of its GDP is now putting pressure on the United States of America. China's GDP has already overtaken the volume of the United States' economy when measured in purchasing power parity (PPP). In a related development, Vietnam, Indonesia, Myanmar, Bangladesh, Cambodia, and the Philippines have all jumped on the growth wagon to boost Asia's proportion of the global economy. Additionally, the 'Resurgent Asia' is witnessing rapid expansion in several other smaller economies, which ought to contribute to the region's

economic weight being increased even further. In general, these trends are altering Asia's status once more (Banik and Barai, 2017).

Similarly, India's resurgence of economic growth has contributed to an even greater expansion of Asia's economic potential. According to the purchasing power parity (PPP) metric, India is already the third largest economy in the world, behind only China and the United States of America. India's elevation will be cemented further if it becomes the third-largest economy in nominal GDP terms in 2027, as indicated in Figure 1.

Presently, India holds one of the top five positions in some major economic areas worldwide. It is the 3<sup>rd</sup> largest manufacturer of pharmaceuticals (Verma, 2023), the second-largest manufacturer of smartphones (The Economic Times, 2023), the fourth-largest manufacturer of automobiles (OICA, 2023), and the 3<sup>rd</sup> largest receiver of foreign direct investments (FDI) in 2021-22 according to the World Investment Report 2023. The preferred sectors of foreign investors were information and technology, telecommunication, and automobiles (Embassy of India in Athens, 2024). India is also one of the top producers of cement, solar energy, and electricity. Overall, India is currently the fifth-largest manufacturer in the world (Safeguard Global, 2023). There are more startups and unicorns in India than in any other country, and they are still prospering. The population of India, which is likewise steadily increasing in wealth, is the cause of all of this. Their technical and military capabilities are advancing at a fast pace. Moreover, India has emerged as the largest remittance recipient country, homing \$125 billion in remittances in 2023, 2.5 times larger than China (The World Bank, 2023). As a result of the conflict in Ukraine, it is now becoming the voice of the Global South.

A parallel may be drawn between the growth of India on the international scene and the emergence of China in the 1990s, a period commonly referred to as the "China Phenomenon." The phrase "Indian Moment" might describe this phenomenon, which is either already present or on the verge of occurring. The current tendencies in development in India place the country at the forefront of the globe in information technology, digitalization, pharmaceuticals, aerospace, and education. As the level and growth of remittances are signaling, India can potentially become a country of 'Brown Gold.' With the largest population in the world, a lively diaspora, and a young demographic, when societies in the northern hemisphere are aging, its attraction as a source of rich human resources is growing rapidly.

While some of the economic statistics are certainly excellent and show India's rising economic power, there are areas of concern that, if not addressed with due diligence, could bog down India's path to global prominence. According to the World Poverty Clock figure, 34.4 million, or 2.4 percent of the population, still live in extreme poverty (Sinha, 2024). Though some of the recent national highways and airports are world-class, and India has been investing a lot of funds to create or upgrade them, they are insufficient for India's growth requirement. The growth of



India's Gross Domestic Product (GDP) is estimated to be slowed by between one and two percent annually due to inadequate infrastructure. (Natraj, 2015). India still ranks 47<sup>th</sup> in the World Bank's rank of world infrastructure. Along with many inadequacies, the insufficiency of health facilities, educational institutions, social protection for the elderly population, and non-generation of enough employment opportunities for the population joining the workforce every year are some of the issues holding back India from achieving its growth potential. Though it is not totally disappointing, and India has been giving many of the great corporate and academic minds to the West, one may mention the human development situation in India. The newest Human Development Report of the UNDP 2023-2024 ranks India in medium human development with an HDI of 0.644. The country's Human Development Index (HDI) rose 48.4% from 0.434 in 1990 to 0.644 in 2022. India now ranks 134 out of 193 nations and territories, even though India improved all HDI indicators—life expectancy, education, and GNI per capita—in 2022 (UNDP, 2024). The major question arises here - how can this situation be addressed? Can India's KS be a remedy in this regard?

## **5 . INDIAN KNOWLEDGE SYSTEM TO SUPPORT THE RISE**

It may be reasonable to begin this section with Albert Einstein's proverbial quote: “The ancient Indians taught us how to count, and we owe them a lot without which it would not have been practical to make most recent scientific discoveries” (HT School, 2023). In support of this opinion of the great mind, this section will delve into the profound significance of the Indian Knowledge System by discussing and summarizing two articles and one book chapter. These resources provide an extensive exploration of the IKS, structured and presented in the following orders: Background of the IKS, practical application of IKS, and integration of IKS with the rest.

### **5.1 Brief Background of the IKS**

(Reference: Singh, A. P. (2022, March 2). Ancient Indian Knowledge Systems and their Relevance Today – With an Emphasis on Arthaśāstra, *India Foundation*/)

Singh's paper argues that IKS has amassed an incredibly huge corpus of intellectual writings, the greatest manuscript collection in the world, and an established tradition of writers, scholars, and institutions in a wide range of knowledge areas that are split between jnana (knowledge) and vijnana (science). People from many walks of life, including rishis, munis, acharyas, and renowned and unknown gurus, contributed to the creation of this corpus of knowledge. It's interesting to note that they developed the Core of Knowledge and Values in a comprehensive manner, mostly using a bottom-up methodology.

However, it is impossible to overlook the constructivist aspect of Indian philosophy. The Indian mind seems to have been fully engrossed in the construction of empires, both *terra firma* and *terra incognita*, during intellectual history from 1000 BCE to almost 600 CE. Few societies can exhibit the broad, well-organized conceptual frameworks found in nearly every aspect of human

existence as India did then. As a result, a huge library of ideas was produced, which shaped the Indian mind and made it inherently contemplative and ideational.

Even after being extensively destroyed knowledge of India's many domains has endured. It has been formalized into crafts, called *kala*, and disciplines, called *vidya*. These Indian disciplinary formations cover a wide range of subjects, including military science, weaponry, agriculture, mining, trade and commerce, metallurgy, mining, shipbuilding, medicine, poetics, biology, and veterinary science; sociology (*dharmasastra*), economy and polity (*arthaśāstra*), mathematics, astronomy, metrics, geography, logic, and military science (Singh, India Foundation, 2022). A never-ending and cumulative set of texts remains accessible in each of them, demonstrating the tenacity and durability of our knowledge systems.

As per Singh (2022), 18 main *vidyas*, or theoretical disciplines, and 64 *kalas*, or applied or vocational disciplines, or crafts, are mentioned in tradition. The eighteen disciplines are known as *vidyas*. These include the four Vedas, the four subsidiary Vedas (*Ayurveda* - medicine, *Dhanurveda* - weapons, *Gandharvaveda* - music, and *Silpa* - architecture), the six auxiliary sciences (phonetics, grammar, metre, astronomy, ritual, and philology) (Singh, India Foundation, 2022), *Purana*, *Nyaya*, *Mimamsa*, *Dharmasastra*, and *Vedanga*), and the eighteen subsidiary Vedas. Regarding the applied sciences, there are conflicting counts of sixty-four (Kapil, 2005).

Any nation might benefit greatly from studying the ancient literature of the Vedas, *Ramayana*, *Mahabharata*, *Arthaśāstras* and so on. The particular branch of Indian knowledge systems, or *vidya*, is devoted to discussing such ideas, principles, and experience-based recommendations. For instance, the fourfold classification of *vidyas*, or knowledge, is referenced in Kautilya's *Arthaśāstra*. By creating several schools of thought and deriving from one or more lineages of masters, each *vidya* has contributed to the preservation, dissemination, and growth of Indian knowledge systems.

Science and technology have had a long history in Indian culture. Studies have revealed that India made significant contributions to science and technology centuries before the establishment of modern laboratories, from producing the greatest steel in the world to imparting counting skills to the whole world (Orient Views, 2013). The foundations of contemporary science and technology have been established and reinforced by several theories and methods that the ancient Indians discovered. Though the British conquerors could never accept the reality that Indians were highly civilized even in the third millennium BCE, when the British were still in a primitive stage, the massive and substantial contributions made by the Indian sub-continent have been disregarded. Such recognition would undermine Europe's civilizing mission, which served as the theoretical foundation for colonialism.

## **5.2 Practical Applications of IKS Today**

(Reference: Khanna, Pragya. (2020, July 6). Traditional Indian knowledge systems: A National Treasure!! Early Times.)

The history of India reveals its contributions to global science in forests, agricultural biodiversity, inland waters, coastal and marine ecosystems, rangelands and eco-tourism, mathematics, linguistics, astronomy, metallurgy, civil engineering, and medicine (Khanna, 2020).

Indus-Sarasvati Civilization built the first planned settlements with subterranean drainage, civic sanitation, hydraulic engineering, and air-cooling architecture, making it the finest example of civic Engineering. India created oven-baked bricks around 4,000 BC. From elaborate Harappan communities to Delhi's Qutub Minar and other huge projects, India's indigenous technologies were advanced in design, planning, water supply, traffic flow, natural air conditioning, stonework, and construction engineering (Orient Views, 2013). Indians invented various building equipment, including the needle with a hole opposite the pointed end, hollow drill, and true saw. Centuries later, Romans utilized several of these crucial instruments worldwide. India pioneered rust-free iron (Khanna, 2020).

India engaged in the first ocean-based trade. A Gujarati sailor, led Vasco da Gama's ships and much of Europe's 'discovery' of navigation was an appropriation of the Indian Ocean's centuries-old commerce system and navigation. India and China developed some of the most advanced ships.

Indeed, compass and other navigation equipment were already in use. ('Nav' is the Sanskrit word for boat and the root word in 'navigation' and 'navy', although etymology is unreliable.) Indian mathematicians invented zero, the base-ten decimal system, and numerous trigonometry and algebra formulas, among other disciplines. Many astronomical discoveries were made. Different logic and philosophy schools arose. Panini, India's linguistics pioneer, wrote the world's most extensive and advanced Sanskrit grammar.

Uttarakhand, in the middle of the Himalayas, is a biodiversity hotspot. The hill state had amazing architecture, hydraulics, ethnomedicine, ethnobotany, metallurgy, and agriculture. Despite earthquakes, numerous 1,000-year-old multi-story structures remain. Koti Banal architecture avoids inflexible joints to diffuse seismic energy, including these marvels. For generations, they have created effective water-gathering devices to fill subsurface aquifers. Rajasthan has the most appealing examples. Major pharma companies are patenting historic medicinal plants without sharing revenues with local people.

India's philosophical, cultural, and scientific heritage must be comprehended. Chauvinism is not the goal; it's to recognize Indian civilization's greatness. The present appraisal of India's potential

would change. To rectify science, ideas, mainstream world history, anthropology, and culture portrayals. This involves convincing researchers and educators to integrate Traditional Knowledge Systems, notably India's enormous but underappreciated contributions to world science.

Khanna (2020) mentions that scientists believe India has 1.3 million man-made lakes and ponds, some 250 square miles. Satellite imaging is recapturing these. These allowed most rainwater to be caught and utilized for irrigation, drinking, etc., till next year. Many intriguing discoveries have been published regarding how each village managed woods and trees and harvested medicines, firewood, and building materials according to natural renewal rates. The locals managed their ecology well until they were disempowered. India's agricultural productivity traditionally supported a large population compared to other countries. Surpluses were saved for droughts.

As per Khanna (2020), traditional medicine has gained recognition. Many Western labs and scientists have re-legitimized Indian medicine. Multinationals no longer criticize traditional medicine and are seeking to patent Indian medicine without saying so. He identifies that, like most traditional knowledge systems, IKS is eco-friendly and allows sustainable growth without affecting the environment. Thus, they must be preserved and revived holistically for global economic improvement. Finally, Khanna (2020) concludes that India's traditional KS are eco-friendly, sustainable, labor-intensive, and more accessible. Thus, economic planning should embrace them. This should coexist with top-down 'modern' scientific advancement employing westernized 'globalization' and be used on its merits. Traditional Knowledge Systems are essential for mankind to reduce dependency on inequitable and resource-draining "advanced" knowledge systems. Thus, educating the world about India's scientific past is crucial.

### **5.3 Integration of the System with the World for Development**

(Reference: Kapoor, Kapil (2005). Indian Knowledge Systems Nature, Philosophy and Character, Chapter 1 in Kapil Kapoor and Avadhesh Kumar Singh, 2005. Indian Knowledge Systems Volume 1, 2005, D.K. Print World Ltd, Delhi. Pp.11-32.)

Many fields of knowledge have long-standing Indian intellectual traditions. The Rigveda, the first Indo-European text, started this legacy, which continues in Indian life, customs, and learning. This tradition's knowledge systems are powerful and relevant since many works and philosophers are still studied at major institutions worldwide. Few now know about this rich-thinking heritage. Consequently, the Academy develops rootless young minds that either ignore or disrespect their intellectual traditions.

The Indian tradition has continuously reflected on philosophy, nature, and knowledge. The concept of knowledge is not unified. Subsets of knowledge are based on their purpose and impact.

The IKS has extraordinary tolerance for the other, the *purva paksa*, which is always expressed in

the tradition of disputation, *vada parampara*, with great truth and correctness before being argued (Kapoor, 2005). This tolerance includes appreciation for previous and opposing philosophers. This explains why all Indian intellectuals, including the most unique, deny originality. It is also evident that they all seek happiness, not comfort, and promote human and environmental balance.

Indians have sought a singular explanation for reality and experience, including Brahman in philosophy, *Sabda-Brahman* in language, and *rasa* in aesthetics (Kapoor, 2005). Indian Knowledge Systems system Advaita, rooted in European structuralism via Ferdinand de Saussure, has dominated its study. A longstanding dispute history has also validated knowledge systems. Further, Indian systems are empirical and *loka-based*.

Kapoor (2005) argues that Indian philosophy is constructivist. Few societies have as broad, systematic beliefs in practically all aspects of life as India did throughout this extended period. This system development left a lot of thoughts and made the Indian mind naturally contemplative and ideational. We can also extract its drivers, or foundational beliefs. Indian thinking systems promote pagan diversity and make intellectual plurality a reality. This contrasts with Hebraic monotheism and monism. Pagan pluralism helps synthesize universalism. Unlike nineteenth-century European individualism, it implies inclusive individualism that includes all. This also explains why Indian thinking views *bheda buddhi* (difference) as ignorance, *avidya*, and an epistemic rather than ontological term. Indian thinking emphasizes cyclicity over Western linearity (Kapoor, 2005). This indicates that Indian thinking does not believe in evolution or advancement throughout time. The path of human change is decay, not development, demonstrating the need to strive for perfection or righteousness. This also explains Indians' development skepticism. The configurational model, not pre-X-post equipment, guides the Indian intellect. Kapoor (2005) further discusses how the Indian knowledge systems were passed down orally for generations, frequently using stories and myths. Thus, these systems must be documented and patented. One must prohibit powerful businesses from exploiting and abusing others. More significantly, methods must emerge to benefit the community.

Finally, Indian mind has gone from concrete to abstract, materialism to idealism, Carvaka to Vedanta, *preksaka to sahrdaya* in literature, and *dhvani to Sabda-Brahman* in grammar, opposite Western thought (Kapoor, 2005). The Sanatani mind is eclectic, as interacting with various traditions develops critical thinking.

## 6. CONCLUSION

The present trend is highly favorable for India to emerge as a great power shortly. It has many factors for becoming an all-round power with the potential to challenge the US in every great power indicator. So, when can the world move into a tripolar phase from that multipolarity phase again? Indeed, this may happen as soon as 2050. Now, we can foresee three powers,

namely the US, China, and India, that will emerge as the most dominant power in the world. But there is a possibility that by 2075, the world may again head into a bipolar moment. One may bait his/her intuition on one country for the most dominant position at that point, and that is India.

How can IKS aid Indian dominance? China's contributions to world knowledge are well recognized. Arab intellectuals have ensured everyone knows how important those Islamic countries were in delivering ideas and discoveries to Europe. Many archeological artifacts from ancient India are credited to Arabs, even though the Arabs transferred their expertise from India to Europe. India's biggest problem is KS preservation and expression. Since the Indus civilization, many external damaging invasions and protracted colonial rulers have built a layer over the IKS.

Unfortunately, factual misrepresentation persisted after independence, hurting traditional Indian knowledge. Even today, a large number of India's intellectual elite believe pre-colonial India was irrational, superstitious, feudalistic, and unscientific. This concept has instilled a prejudice against indigenous knowledge systems in contemporary civilization. India's poor educational system has distorted the curriculum's presentation of scientific advances and ancient Indian knowledge, leading to this widely believed notion. Few Westerners or affluent Indians believe this because of their deep-seated preconceptions against India. However, it is becoming clear that non-Western criteria may evaluate other knowledge systems. Moreover, many old sciences and technologies were advanced even by today's standards and more suited to local needs than "modern" ones.

India has the oldest recorded literature relevant to traditional knowledge systems. It is intellectually rich and is leading the revival of its knowledge system. Indian economists, social workers, and academics are working to revive old knowledge systems necessary for Earth and all life. Hopefully, these treasures of the past will lead to many social, environmental, and scientific discoveries that will help India's march toward an overall development, which will take India to the Great Power League and secure its position there for a longer period.

#### Note

1. Angus Maddison's book "*The World Economy: A Millennium Perspective*" provides more information. It gives a rare view of the economic importance and dominance of the two Asian economies, India and China, over centuries before the rise of the West.
2. The Arthaśāstra is a vast compendium comprising 15 books, divided into 150 chapters, 180 sections, and 6000 shlokas.

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