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The Pre-kautilyan Period: a sustainable model
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The Pre-kautilyan Period: a sustainable model through ancient economic ideas and practices^{*}

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Abstract

A number of studies have been conducted in the recent past throwing light on Kautilya's contribution to economic policy much earlier than contributions from western scholars. In his treatise Arthashastra, Kautilya informs that his contribution was based on received knowledge and gives credit to his predecessors whose specialized works have been lost with the passage of time. Fortunately, however, this knowledge is interspersed in ancient Vedic and Puranic treatises. In this paper, we conceptualize a 5-pillar sustainable economic model through the lens of the ideas emanating in these ancient treatises. These include individual economic and social well-being through Dharma; collective strength through governance mechanisms; wealth creation through Artha; sustaining wealth through market facilitation, labor and private sector participation; and building institutional capacity through coinage, money creation and public finance. Cumulatively, the 5-pillar model resonates very well with some of the Kautilyan concepts as well as modern economic policy trends.

JEL Codes: B11, B15

Keywords: Ancient Indian Texts, Arthashastra, Ramayana, Mahabharata, Economic History, History of Economic Thought, India, Kautilya, Political Economy, Sanskrit, Vedas

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I. INTRODUCTION

Kautilya was the protagonist of the Sanskrit play *Mudrarakshasa* written circa 6th century A.D. by Vishakhadatta (Abhyanker and Abhyanker, 1916, pp. 8). In that play he was depicted as the prime minister of Emperor Chandragupta Maurya who had ruled India circa 300 BCE. Much later, from the book *Discovery of India* by Nehru (1946) one got to know that Kautilya was not just an imagined protagonist of the play but an important historical figure. This changed understanding was possible because only a few decades prior to the publication of Nehru's book concrete evidence that Kautilya was a historical figure had come to light. It was in the form of an old manuscript of Kautilya's *Arthashastra* that was discovered in Thanjavur, India. And, Kangle (1965) wrote a sequential three-volume critical edition of *Arthashastra* containing Sanskrit text, translation, and commentary which later became available to researchers the world over.

In his treatise, Kautilya devoted his attention to economic organization of the state, administrative set up, foreign relations, and the smooth continuity of a ruler. A number of studies have been conducted in the recent past which throw light on Kautilya's contribution to global economic thinking much earlier than likes of Adam Smith (1776)). For example, while Boesche (2003) has studied the *Arthashastra* from the perspective of a political scientist, Trautman (2012) has covered the same as an expert historian and anthropologist. Importantly, Waldauer *et al.* (1996), Skare (2013), Spengler (1971, 1980), Dasgupta (1993) and Sihag (2009, 2014) have also contributed to the literature from the perspective of an economist. These researches cover Kautilya's prescriptions on trade, taxation, coinage, budget deficit, provision of public goods, market facilitation, wages and labour relations, property rights, internal and external security and quite a few other topics.

In the very first book of his treatise, Kautilya makes reference to the four-fold classifications of individuals' life objectives, life stages, and life vocations. These are referred to as *purusharthas* (1.7.4), *ashramas* (1.3.9-12), and *varnas* (1.3.5-8)². *Purusharthas* refer to *dharma* (righteous conduct), *artha* (material prosperity), *kama* (pleasure & love), and *moksha* (salvation). Among the *purusharthas*, Kautilya states that while there should not be excessive indulgence in any of the objectives, *material prosperity is of foremost importance*, for other life objectives depend on it (1.7.6-7). Given the above backdrop to the economic life of an

² I have followed the notation (book.chapter.verse) to give a specific reference from any of the ancient treatises. The notation for *Arthashastra* is from Kangle (1965).

individual, he states that a ruler should ensure the welfare of the people, for in the happiness of the subjects lies the happiness of the ruler (1.4.16, 1.19.34).

A seminal treatise like Arthashastra could not have been penned circa 300 BCE as an abrupt one-off revelation. The contours of the Kautilyan worldview, by Kautilya's own admission, were based on the elements of economic notions that had appeared in sacred and secular texts prior to his times. Terming his treatise as a received knowledge, he gives due credit to his predecessors. For example, among others, Kautilya has made references to authors such as Brihaspati, and Ushanas at least five times each. The treatises titled Brihaspatya Shastra and Aushanasa Shastra attributed to these two predecessors have been lost with the passage of time, or at least not re-discovered yet. While one finds passing references to Brihaspati in *Rig-Veda* as the purohita (preceptor) to King Indra and to Ushanas in Mahabharata as the purohita of the Asuras (Kangle, 1965, Part III, pp. 8, 42), Olivelle (2011, p. 174) confirms that most of the pre-Kautilyan political economy treatises have been lost.

This paper attempts to scout and collate the economic notions in a coherent structural manner, which reflect the sustainable economic model thesis of those times. These ideas have appeared interspersed in the available Sanskrit treatises, both the sacred and the secular that predate the Arthashastra. Kautilya's Arthashastra must have got amalgamated and evolved from the crucible of this literature. We make an attempt in this paper to highlight the key tenets of the sustainable economic model. This model includes the focus on economic well-being through 5 key pillars in modern terminologies: Well-being; Sustainable wealth creation; market facilitation with private sector involvement; governance mechanisms through rule of law; and state capacity for financial and economic transactions. These can be paraphrased into Dharma, Artha/Kama ideas from the Purusharthas and the economic ideas of markets and governance from Vedic literature as well. These will be elaborated in the following sections below.

In this context, Section II covers references to the summary of the purusharthas and related dimensions with their attendant economic implications in the society then. In Section III we discuss the economic wellbeing through the prism of dharma or the righteous conduct and in Section IV we address the issue of economic governance of the state. Following these, aspects of wealth creation, namely artha and kama, and the market facilitation issues are

covered in Sections V and VI, respectively. Matter related to institutional capacity and financing of the state activities is discussed in Section VII. Finally, Section VII provides concluding observations.

II. THE PURUSHARTHAS

Standard neoclassical economics describes utility maximization as a unidimensional objective of life. The arguments of the utility function may be many, in terms of consumption of material goods and services, but the resultant maximized utility or satisfaction is unidimensional. Recent advances in behavioural economics literature, however, imply that human wellbeing, satisfaction or happiness may be a multidimensional construct. This has been highlighted in the World Happiness Report (Helliwell, et.al, 2016) and the recent policy literature within major multilateral institutions (Balasubramanian, 2017). In a multi-goal utility, deficiencies in or imbalance among different goals may lead to struggles and one may not live one's life to the fullest. There could be, in fact, negative linkages among different goals of life which Frank (1999) defines as 'internality'. In a Gallup study conducted in 150 countries representing diverse cultures and ethnicities, five elements emerged that were associated with overall human wellbeing. These elements were related to career, social relations, financials, health, and wellbeing of the community (Ghisellini and Chang, 2018, pp. 45-46). A proto-economic idea of this kind seems to have been expressed in the ancient Indian literature, where wellbeing was associated with four-fold classification of purusharthas or the life objectives – namely dharma, artha, kama, and moksha.

References to purusharthas appear in the two Sanskrit epics Ramayana and Mahabharata. These epics were written sequentially much after the Rig-Veda was composed circa 1500 BCE (Vinod, 2012) but appeared prior to circa 500 BCE (Brockington, 1998, pp. 2, 26, 379). Valmiki, the composer of Ramayana (IITK, 2020) informs the readers very early in the epic that he would like to convey the merits of purusharthas through his narration of the life story of King Rama (1.5.4). When Bharata goes to meet his brother Rama in the forest to give the news of their father's death, Rama advises Bharata not to overindulge in any one of the three purusharthas, namely dharma, artha, and kama (2.100.62-63, 73). At the fag-end of the same epic, Kumbhakarna, the brother of the main villain Ravana pleads to Ravana that one who follows the purusharthas appropriately would never face misfortunes in this world (6.63.9-

11). Similarly, in the other epic Mahabharata (Smith, 2020), which covers the history of two warring cousin families Kauravas and Pandawas, the composer Vyasa mentions in the very first book (1.56.33) and the last book (18.5.38) that in relation to the four purusharthas whatever is there in Mahabharata may be found elsewhere, but whatever is absent from there would not exist anywhere³. Given this historical context, among the Purusharthas, we assert next that Dharma constitutes an overarching principle for the sustainable economic model.

III. DHARMA: THE FOUNTAINHEAD OF WELFARE

The term dharma connotes moral values and ethical conduct. Earliest reference to dharma appears in Rig-Veda (Griffiths, 1886) in book 10, where the author invokes befriending Indra and requesting him to lead them unto righteous path (10.133.6). Later, both Ramayana and Mahabharata convey the dharmic choices protagonists of the epics have to make in their lives. Although dharma as a life objective cannot be captured fully by economic theory, its comprehension can be attempted by stretching economic arguments and its attendant vocabulary. Economic theory assumes a rational maximizing behaviour on the part of an individual. Guided by self-interest, one is expected to maximize satisfaction (utility) or profit. Self-interest may account for an individual's desires; however, not all desired things by default qualify as desirable. What is desired may be free from ethical and moral commitments. As one moves through different stages of life, one's responsibilities change, and, therefore, one has to condition one's desires accordingly. Dharma or righteous acts would be those that are desirable for different life stages which encompasses the fulfilment of responsibilities encompassing moral and ethical standards. Clearly, a student, a householder and a retired person would have different responsibilities. In fact, one's occupation also conditions one's righteous acts. For example, scientists from India's space research organization ISRO may be sending missions to mars; however, one will scarcely find them leading a flamboyant lifestyle. On the other hand, chief executive officer of United Breweries has always been in the limelight for his ostentatious way of life.

³ The 4th purushartha, moksha is not separately discussed in Ramayana, Mahabharata, or Arthashastra and is not the subject matter of this paper as well. It is a meta-physical concept where the objective is to free one's soul from the cycle of birth and death and unite with cosmic soul. A judicious conduct of the first three purusharthas may lead to moksha.

Economists have attempted to explain non-selfish interests as selfish ones. Boulding (1981, p. 6) pointed out that benevolence can be thought of as self-interest. One's utility can increase when someone else becomes better off. This may explain charity as self-interest. Similarly, bequest and religious acts can also be construed as acts of self-interest, for one may argue that utility is created out of welfare of the offspring and the perceived after-life enjoyment, respectively. But then, to paraphrase Amartya Sen (1977, p. 322), one can define an individual's intentions in any such way that whatever he/she does is seen as furthering his/her self-interest in every isolated act of choice. Bowie and Simon (1977, pp. 194-95) argue that if every act on the part of an individual can be explained as a maximizing behaviour out of self-interest, then the argument becomes tautological and perhaps trivial.

Beyond self-interest, however, there are moral values that an individual possesses. Sen (1977, p. 326-27) has used the term 'commitment' to identify the presence of such moral values in a person. To paraphrase him again, if one were to see another person being tortured and that makes one sick and reach out, he/she acts out of sympathy. However, if one thinks that such action is wrong and hence one reaches out, one acts out of 'commitment'. This commitment points to ethical values and preference arising out of principles rather than an act that increases one's utility. This is dharma or the righteous act. Shunning corruption only out of fear of law is not dharma. Shunning it as a matter of principle is dharma. Not voting on an election day is adharma. An individual vote perhaps may not change the results of an election; however, registering one's true preference is a democratic duty of a citizen, a dharmic act in itself.

Kane (1941, pp. 1-11) discusses various constituent elements of dharma in the ancient literature. Among other things such as truthfulness, forthrightness, and non-injury to other beings in thought, words, and action; he also writes about charity as an act of dharma that is mentioned in Mahabharata. Ancient Indian society seemed to have developed a mature worldview on charity. I paraphrase in short below, what the contributor of book 10 of Rig-Veda had to say about charity (10.117.1-5):

“Death comes in various ways even to a well-fed person and riches come to her like the rolling of a cartwheel; hence, the rich should give alms to the poor who become her friends in future troubles.”

Thus, not sheer accumulation of wealth but circulation of a part of it as a unilateral transfer within the society was considered important by Vedic society. The Bhagvadgita (Telang, 1882), or simply Gita, which forms part of book 6 of the Mahabharata, describes right and wrong forms of *daana* (charity) in hymns 17.20 through 17.22. If charity is done for good causes and comes without any expectation of return, it is defined as *saatvik* (pure/good). If the charity is ego-driven and given grudgingly with expectations, it is termed as *rajas* (given to passion), and the one given with contempt, to wrong causes, and at wrong times, is termed as *tamas* (ignorant, destructive).

In this context, there is a pertinent story in Katha Upanishad of the Shukla Yajur-Veda written circa 10th century BCE, regarding Sage Vajashravas giving all worldly possessions in alms (Müller, 1879). Vajashravas's son, Nachiketa, points out to his father that while he had promised to give everything in alms, he should not be giving worthless alms in the form of cows that are aged, which cannot even drink water or eat grass, which cannot give milk and are barren. To impress upon this point further, he asserts, "Father, I am also your wealth. Whom are you going to give me to?" The conceited father tells Nachiketa in anger that he will give him to the god of death, Yama. The story takes interesting turn later; however, this narration gives a perfect example of what a *rajas* and/or *tamas* form of charity could be.

While the above discussion about charity as a dharmic act does not formally convey provision of merit goods or goods with positive externalities, the innate understanding of the social responsibility towards the needy in ancient India is quite evident. These highlight the individuals' responsibilities to enhance social and economic well-being within society. In addition to the individual's dharmic behaviour, ancient sages had also proposed institutional framework for the collective good of the society; namely, the governance mechanisms for the state.

IV. SOVEREIGNTY, GOVERNANCE AND WELFARE

If India's Saraswati-Sindhu civilization dating back to 3rd millennia BCE has produced physical evidence of well-planned and fortified cities, use of trademarks, and commercial links with far-off regions (Spengler, 1971, p. 32; Moore and Reid, 2008), her Vedic literature

has also provided evidence of social organization, flourishing economy and well-established political systems of governance. For example, numerous janapadas (republics) existed in the Vedic period from about 1200 BCE concluding with the rise of sixteen mahajanapadas (great republics) by around 600 BCE (Singh, 2008, p. 261). The description of different forms of political governance among these republics during this long period is mentioned in the Sanskrit treatise Aitareya-Brahmana composed circa 800 BCE (Parpola, 2007, p. 158). The descriptions include forms such as state (rajyam), great state (maharajyam), independent state (swarajyam), universal sovereign state (samrajyam) and a few others such as vairajyam (kingless republic). Names of many of the great republics, including, but not limited to, Magadha, Kosala and Gandhara (present day Afghanistan), are extensively referred to in the epic Mahabharata.

In book 3 of the Atharva-Veda (Griffith, 1895) it is clearly mentioned that a king of a republic acquires the sublime power to govern by seeking cooperation from different sections of the society, chieftains and his own representatives (3.4). He derives the power to rule from his subjects who would support him and the tribesmen would elect him for kingship. Even in the post-Vedic period, the coronation of a king was in reality an offer of sovereignty by the people to the king. This was done by the representatives of the people called ratnis who played a very important part in the investiture of the king (Ambedkar, 1946, 1.6.4). One could call this arrangement in modern economic terminology as upholding the ‘social contract’ theory. Early Buddhist literature also seems to uphold this social contract theory, where the king is a chosen leader of the people, selected by them to ensure property rights and security (Dasgupta, 1993, p. 20). Since kings in these republics derived their power to rule from their subjects who would support them to become kings, the rulers were bound to have economic policies for the welfare of the subjects. Kautilya’s emphasis on material prosperity and his advice that the ruler’s happiness lies in ensuring the welfare of the people, seems to emanate from this very idea.

Emphasis on societal welfare had found expression in Vedic literature much earlier than that in the Arthashastra. Knapp (2006, p. 1) refers to the famous Vedic verse, ‘May all be happy, may all be free from disease, may all realize what is good, and may none be subject to misery.’ Specific examples of this ideal appear in the epics. In Ramayana (IITK, 2020), when Bharata, the brother of King Rama visits him in the forest, Rama advises Bharata to

follow policies which have maximum societal benefit and minimum cost and that policy implementation does not get delayed (2.100.19). He tells Bharata to appoint wise persons for policy formulation, for one wise person is of great help than soliciting 1000 fools (2.100.22-24). On Rama's return to Ayodhya after fourteen years of banishment and vanquishing of Ravana, Bharata informs Rama that he had taken good care of the kingdom in his absence and that the towns, treasury, granaries, and army had increased ten folds in fourteen years (6.127.55). And, in Mahabharata, Bhishma the grand old patriarch of Kuru clan as also the sage Narada give similar advice to King Udhishthira regarding features of their welfare state (Deodhar, 2019, pp. 43-50).

The role of Dharma for an individual and the role of governance mechanisms for the state served as the foundational elements to accelerate economic progress. Between these two lie the aspects of wealth creation, pleasure seeking, market facilitation, and creation of state capacity through money and public finance.

V. ARTHA AND KAMA: SEEKING WEALTH AND PLEASURE

Ancient Indian literature corroborates the fact that celebration of life in terms of acquiring wealth and pleasure and love was very much a part of an individual's purushartha. There are many hymns in Rig-Veda (Griffiths, 1886) which capture matters related to desires, material prosperity, wealth and interest rate. For example, in book 9 there is a narration on how we follow our desires and wealth (9.112.1-4). To paraphrase in short, it reads:

“We all have diverse hopes and plans. We strive for wealth in different ways. We follow our desires like cows follow one after the other. The male desires a female's approach. A frog looks forward to a flood, an arrow smith seeks someone who will pay him in gold, a craftsman seeks something that is to be restored and a priest seeks worshippers.”

That a priest also desires worshippers is a very witty observation indeed. Further, in book 2 the author requests Indra to provide the best of riches, capable minds, pleasant weather and sweet speech (2.21.6). Yet another Vedic prayer called '*Chamakam*' (i.e., This and That) repeatedly seeks in a rhythmic tone material objects, happiness, power, knowledge as also

spiritual well-being (Nadkarni, 2012). In Rig-Veda there are also descriptions of a young man wearing a high-quality robe (3.8.4) and the god Varuna wearing a shining golden robe (1.25.13). Rig-Veda also contains a devotional prayer sung in praise of Lakshmi, the goddess of wealth. Known as '*Shri Sukta*', this prayer seeks fertility and prosperity from Lakshmi. Similarly, in Atharva-Veda (Griffith, 1895), a householder seeks benediction on a newly built house that is teeming with family relations, delicious food preparations and cattle and horses (3.12). These hymns are the expressions of a strong desire for a prosperous life on earth for the people. They also show learnings from weak moments in one's life. For example, in the Dice Hymn of the Rig-Veda, the seer laments alienating his wife and property to gambling, and advises that one should take up farming to make money, for real enjoyment is in wealth acquired by toiling (10.34.1-14).

One also finds an example of bargaining between a buyer and a seller in Rig-Veda. In book 4, the concept of reservation prices gets referred to, though of course, modern formal economic terms are not used. It is interesting note that a devotee is shown trying to save cost even in a transaction for buying offerings for the gods (4.24.9-10). I paraphrase this bargaining below:

“A devotee is trying to buy wine (*soma*) and fried barley from a priest as sacrificial offerings to seek Indra's favour. The devotee (buyer) bids a low price and the offerings remain unsold, for the priest (seller) is not ready to accept the low price. The offerings just cannot be sold for a mere price of ten cows. The needy buyer and shrewd seller both milk out the udder (i.e., bargain hard for the price).”

This description tells us that the quotes of the buyer's bid price and seller's offer price are expressed in terms of the number of cows and that reservation price of the seller was higher than ten cows.

Furthermore, in book 2 of the epic Mahabharata (Smith, 2020) after the Great War has been won, Arjuna forcefully counsels Yudhishtira to occupy the throne and give up the thought of becoming a mendicant. Among other things he counsels him that religious acts, pleasures, joy, courage, wrath, learning and a sense of dignity all proceed from wealth. Moreover, he

tells him that wealth brings about accession of wealth, the way domesticated elephants are used to capture wild elephants (12.8.1-37). The expression that wealth brings about further accession of wealth seems to capture the importance of capital as an input to create more wealth. It is worth mentioning that Kautilya borrows the same example of elephants in his treatise Arthashastra to underscore the point that capital begets capital (9.4.27).

A reference to charging interest on capital will be quite appropriate here. In the Indian tradition, debt (*rna*) as well as its repayment have often been mentioned in the Rig-Veda, but whether or not interest was charged is not made clear (MacDonnell and Keith, 1912). However, by circa 700 BCE, Panini, the grammarian, had laid down rules and symbols for expressing interest in per cent terms (Datta, 1927). In fact, even the daily and monthly compounding of interest were thought through. A grammarian would only systematize what is in vogue in society. Hence, expressing interest as a per cent of debt must have been known to Indians circa 700 BCE. Dharmashastras written after Panini's grammar confirm that moneylending and charging interest was considered as a legitimate activity (Jain, 1929). It is no surprise then that Kautilya had gone a step further in Arthashastra (Kangle, 1965), prescribing varying interest rates that depended upon the risky situations characterising the loans (3.11.1, 5.3.43, 7.11.17, 7.12.20-27).

Apart from acquisition of material wealth, kama or pleasure and love was also a life objective sought after. According to Kane (1941, p.8) this included sexual, emotional, and artistic expressions of life. Panini, the grammarian referred in the earlier paragraph makes a mention of the treatises called *Nata Sutras* (Aphorisms for Actors) belonging to two schools of performing arts attributed to Vedic branches of Krashashwa and Shilalin (Mehta, 1999, p. xxiv). These developments had occurred at least a few centuries prior to Kautilya writing Arthashastra. And later, sometime between 200 BCE to 200 AD, Bharata Muni would go on to write Natyashastra (Science of Dramatics) and Vatsyanana would write Kama Sutra.

It is pertinent to mention that in Arthashastra, Kautilya gave details about the functioning of the superintendent of courtesans (2.27.1, 26, 28). The superintendent was expected to appoint a courtesan for 1000 panas at an entertainment establishment. Moreover, he was supposed to pay maintenance to the teacher who imparts knowledge of various performing arts such as singing, acting, dancing, writing, and playing musical instruments.

India has had a wide range of philosophical traditions, including the atheist schools of thought, which fall outside of Vedic traditions. Billington (1997, p. 43) affirms that in the sixth century BCE, a philosopher named Charvak founded and advocated the materialist school called *Lokayat*. The followers of this tradition are sometimes known as charvaks. Charvak is famously quoted as saying:

“As long as you live, live happily. Drink ghee [clarified butter] even if you may have to borrow money. For, once consigned to flames [after death], who can return [to enjoy life]?”

Clearly, he talked about enjoying material prosperity and pleasures in this very life and gave primacy to artha and kama over dharma and moksha. A few of his other maxims were, “Rather a pigeon today than a peacock tomorrow” and “A sure piece of shell is better than a doubtful coin of gold”. Mahadevan (1960, p. 66) summarizes these maxims as a repackaged idiom in modern English ‘a bird in hand is worth two in the bush’. Nagarjuna Rao (1970, p. 29), however, cautions saying that *svecchavihara* (licence) to do anything and everything is not the same as *swatantrya* (freedom), and that this common sense hedonism was an oversimplification and a unidirectional theory of ethics. All in all, however, the focus on the need to prosper materialistically is undeniable as shown above. The dynamics of the actual fulfilment of artha and kama was facilitated by government through infrastructure facilitation and provision of market mechanisms for labor, goods, and services in the private sector.

VI. INFRASTRUCTURE AND MARKETS

Both in Ramayana and Mahabharata, there are references to advise given to kings for provision of public goods. While Rama is leaving for the fourteen-year banishment from the kingdom, he advises Bharata to make sure that the kingdom has enough public places for citizens, potable water tanks for travellers and reservoirs for farmers so that they do not have to depend entirely on rains (2.100.43-45). The construction of such public works does not seem to be mere imaginary descriptions, for one also finds details of the process of road construction (2.80.1-22). Similarly, in book 2 of Mahabharata, sage Narada articulates his concern for public works when he asks whether or not large water tanks and lakes are

constructed at periodic distances to tackle water scarcity in the rain-fed areas of the country (2.5). He also reminds Yudhishtira regarding his fatherly duties of a king - taking care of the blind, the dumb, the lame, the deformed, the friendless and the ascetics that have no homes. Kautilya makes reference to all these issues in his treatise too (2.1.19-20, 26).

Moreover, Narada mentions that there are four commercial market activities (*vaarta*)—namely, agriculture, trade and commerce, animal husbandry and lending at interest that lead to economic welfare of the people. For carrying out these market activities unhindered, he asks Yudhishtira if he is alert to internal security by chasing robbers; ensuring coordination of officers looking after agriculture, city, citadels, merchants and law enforcement. Moreover, he asks whether or not the king helps farmers by extending loans for seedlings at a rate not exceeding one fourth of the produce. Narada also hopes that merchants coming from faraway places are treated fairly and only the just dues are collected from them. Thus, Narada alerts Yudhishtira about his important role in market facilitation. In book 2 of his treatise Arthashastra, Kautilya elaborates similar such activities and responsibilities of the state (2.4.9-16, 2.16.11, 2.21.31).

One of the ancient Sanskrit texts, written circa 1000 BCE, Shukla Yajur-Veda (Griffith, 1899) has given an exhaustive list of labour professions in chapters 16 and 30 (30.1-22, 16.1-147). They include vocations such as acrobats to astrologers, basket-makers to butchers, carpenters to charioteers, dyers to drummers, horse hostlers to hunters, physicians to priests, weavers to warriors, jewelers, goldsmiths, dancers, elephant keepers and many more. The hymns pay homage to these professionals (Pathak, 2018b, p. 117). In Ramayana too, a detailed list of professions is given in the context of road construction activity (2.80.1-22), which includes skilled vocations such as land surveyors, land plotters, diggers, mechanical operators, and many other. Rama advises Bharata that there should not be any delay in paying bread or wages to service providers, for otherwise they get incensed and corruption may set in (2.100.33). Similar advice appears in Mahabharata, where sage Narada advises King Yudhishtira that payments to artisans are never to be delayed beyond four months and there are no arrears to payments made to soldiers (2.5.).

The professions mentioned above had evolved into well-organized guilds that facilitated economic and trade related activities. The guilds were variously called shreni, sangha, nikaya

and nigama. The heads of the guilds and prominent professionals were given honorific titles such as Shreshtha or Jyesthaka (Pathak, 2018b, p. 121). Kings took their help in the management of finances, advising on trade related matters, and even sought finances for public buildings and army operations. Shreshthas would also be deputed by kings to exercise authority on their behalf (Mukerji, 1963, p. 229). Building on these developments, we observe that Kautilya wrote an entire chapter in Arthashastra detailing management of labour laws and labour unions by the judges (3.14.1-37).

In the Vedic and post-Vedic ages, while land was cultivated individually, it had acquired a sacred status, for land was considered a goddess (Kazanas, 2010; pp. 16–17). Various words suggestive of material prosperity or wealth are mentioned in the Vedic hymns, including gold, jewels, horses, kine and elephants. However, land is never mentioned as wealth. The Sanskrit names for earth, Vasudha and Vasundhara, means ‘wealth-producing’ and ‘wealth-holding’, indicating that land is a source of material wealth and not wealth in itself. Kazanas (2010, p.41) reports that as per Jaimini’s Purva Mimamsa, one of the treatises on the Indian philosophical systems written circa 4th century BCE, the earth belonged to all beings and right to property was not vested in the king. His kingly power was only to govern the realm. This was in contrast to the principle of eminent domain which thrusts the ownership of land upon God and the king as his representative on the earth. Since the king did not enjoy eminent domain on land, this facilitated emergence of the concept of private property over time. Over many generations, when families continued to hold and till specific parts of the land, vested private interests were created and the rights of alienation came to be recognized (Majumdar, 1922; Madan, 1981). By circa fourth century BCE, state had recognized movable and immovable property rights. Kautilya’s detailed writing on state’s laws on protecting land ownership, charging land revenue, and buying and selling of land in book 3 of the Arthashastra seem to be a continuation of the state’s policy of protection of private property including land (3.9.1-38).

VII. STATE CAPACITY THROUGH MONEY AND FINANCE

Provision of public goods, market facilitation, and state administration cannot continue unless the rulers can value goods and services in money terms and have a reasonable system of revenue generation and its judicious use. There are quite a few references that show that

punch-marked coins and unstamped metallic currency were used as money much prior to Kautilyan era. For example, in Rig-Veda, the poet praises the munificence of his patron king for paying him 100 nishkas or gold coins (1.126.2). That the nishkas were gold coins is affirmed by the definition of coins given by Panini (Bhandarkar, 1921). Besides this, Rig-Veda makes reference to unstamped metallic currency *hiranyapinda*—a bullion beaten into a definite shape (Das, 1925, p. 39). Bhandarkar (1921) also quotes from the Buddhist Jataka tales, where nishkas are referred to as gold coins, and that the other kinds of coins made of silver and copper were called *karshapana*. Later, Kautilya gives an elaborate list of wages and salaries for different professions which are expressed in terms of the panas, a punch-marked coin of his times (5.3.1). He also gives detailed directions in book 2 regarding mint master's responsibilities in minting coins such as panas, half pana, quarter pana etcetera with specified contents of metals such as silver, copper, lead, iron, tin, and antimony (2.12.24).

Mention of subjects paying taxes appears in Rig-Veda. Chitrav, (1998) points out that book 10 of Rig-Veda refers to subjects expected to pay taxes (*bali*) and tributes to the king (10.173.6). This idea is developed much further in Mahabharata. In book 12 of the Mahabharata, Bhishma, the grand-old patriarch of the Kuru clan, advises King Yudhishtira on taxation (12.88). Below, I report the translation given by Ganguli (1896):

“A king should milk his kingdom like a bee gathering honey from plants. He should act like the keeper of a cow who draws milk from her without boring her udders and without starving the calf. The king should (in the matter of taxes) act like the leech drawing blood mildly. He should conduct himself towards his subjects like a tigress in the matter of carrying her cubs, touching them with her teeth but never piercing them therewith. He should behave like a mouse which though possessed of sharp and pointed teeth still cuts the feet of sleeping animals in such a manner that they do not at all become conscious of it. A little by little should be taken from a growing subject and by this means should he be shorn. The demand should then be increased gradually till what is taken assumes a fair proportion. The king should enhance the burthens of his subjects gradually like a person gradually increasing the burthens of a young bullock. Acting with care and mildness, he should at last put the reins on them.”

This idea about taxation was later endorsed by Kautilya in Arthashastra. He opines in book 5 of his treatise that the taxes should be collected sustainably just as only the ripened fruits are picked from the orchards, with the un-ripened ones given time to mature (5.2.70). These advices from the ancient Indian thinkers reminds us of a similar view expressed by Jean-Baptiste Colbert (McKechnie, 1896; p. 77), albeit two millennia later—that the art of taxation consists in so plucking the goose as to procure the largest quantity of feathers with the least possible amount of hissing.

While tax and tax revenue are very generic terms here, sources of tax and the revenue were clearly identified in the epics. Land and commerce were the two main sources of revenue for the state then and seven types of taxes prevalent. One was the land tax, a fixed proportion of the produce demanded by the king. The second was a tax called gomis on animal husbandry, which was basically a charge on cattle-breeding and cattle used as a means of conveyance for commodity trade. Gomis was a term for Banjaras who kept large numbers of bullocks, donkeys and mules, and they were taxed lightly, knowing their importance in the movement of goods. The third was a shulka, which was equivalent to the customs duty of modern times. The fourth and fifth types were tax on salt mines and pans, and the tax on other mined materials. The sixth was the toll on river crossings, and the seventh a tax on elephants. The elephants belonged to the state and no one could capture and use them without permission (Gokhale, 2018, pp. 104–08). Later, Kautilya identified seven sources of revenue and more than ten types of taxes (Mahulikar, 2018, pp. 129-33).

Prudence in the use of tax revenue has been stated in the ancient texts. In book 2 of Mahabharata, Narada, the Vedic sage makes Yudhishtira aware of his various duties as a king (2.5.). Among many others, he alerts the king about financial prudence by asking whether or not his expenditures are about one-fourth, one-third or at worst, half of his income, and that whether his accountants appraise him on his income- and expenditure every forenoon. And, once again, Kautilya carries forward this idea. In book 5 of Arthashastra, Kautilya categorically mentions that wages and salaries of government servants should not exceed 25 per cent of the total revenue (5.3.1). These two advices remind one of the modern concept of state completely eschewing revenue deficit.

VIII. CONCLUDING COMMENTS

Quite a few researchers have delved on the contribution of Kautilya who wrote Arthashastra circa 300 BCE. By Kautilya's own admission, it was a received knowledge which he systematized and elaborated in detail. While Kautilya makes mention of at least two of his predecessors, Brihaspati and Ushanas, their works seem to have been lost with the passage of time. Though the works specific to these predecessors are not available, one does find threads of Kautilya's writings in many other ancient sacred and secular texts. The expressions of the pre-Kautilyan proto-economic thought, across many Sanskrit treatises, were grounded in the socio-cultural and material environment that existed then. Though disjoint and scattered in different texts, these thoughts were quite profound for their times. Arthashastra must be viewed, therefore, as an amalgamation of proto-economic thoughts that evolved in the crucible of the Vedic and post-Vedic Sanskrit literature.

In this paper, we attempt to structure these thoughts into a sustainable economic model with a 5 pillar approach. The importance of economic and social well-being of modern times has been characterized by the pillar of Dharma, and, citizens' collective responsibilities have been exemplified by the pillar of governance in the pre-Kautilyan texts. The idea of wealth creation and pleasure seeking, propounded by Kautilya as well as modern economic thinkers, has been highlighted in pre-Kautilyan texts by the pillar of Artha and Kama. Moreover, the pillar of market facilitation for land, labor and goods has been highlighted extensively in the pre-Kautilyan texts such as Ramayana, Mahabharata, and the Vedic literature. Furthermore, the last pillar of institutional capacity has been articulated through the lens of money creation, taxation and public finance in many of these relevant texts as shown in the paper. Suffice to say, the 5 pillar economic model has been highlighted in the Arthashastra in various places and has been conceptualized in modern economic thought as well. In this paper, we have highlighted that the origins of these ideas and their corresponding economic applications were thought through in ancient India.

The Pre-Kautilyan literature described in this paper can be considered as the preeminent, early pre-classical literature on economic thought. While otherworldly features of Indian tradition may be unique, this paper shows that broad proto-economic principles and its subsequent economic models were used as political economy tools in ancient India. Ingram

(1919) said, “Institutions must be judged in their proper setting of time and place, and men cannot be understood unless they are brought into connection with the life of their own country and their own age.” In this context, the similes on taxation in terms of flowers and honeybees, capital growth in terms of wild and domesticated elephants, uncertainty of riches in terms of a cartwheel, and desires in terms of a frog’s craving for rains seem extraordinary. Similarly, if the concept of purusharthas and other ancient Indian texts including Ramayana, Mahabharata, and the Vedic literature seems to resonate with the ideas mooted in modern day sustainable and behavioural economics theories.

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