

# **ECONOMIC THEORY, APPLICATIONS AND ISSUES**

**Working Paper No. 18**

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'Arthashastra': Does it Provide a Basis for  
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## **A Western Perspective on Kautilya's 'Arthashastra': Does It Provide a Basis for Economic Science?**

### **ABSTRACT**

In *Arthashastra*, Kautilya shows a knowledge of basic economics that had no parallels in Western economic thought until the publication of Adam Smith's *Wealth of Nations* in 1776. Although the king was at the centre of the body politic in Kautilya's time, Kautilya makes it clear that the king is bound by an implicit social contract and that the ultimate objective of the king, in economic and other affairs, should be to benefit his subjects. Their happiness or welfare should be the prime objective of State policy. As pointed out here, Kautilya's conception of economics was superior to that of the Mercantilists and the Physiocrats. Given the central position of the Mauryan State in directing economic activity and providing security, the importance of adequate receipts for the Treasury was stressed. In doing so, Kautilya develops principles of taxation that are to be found in modern texts. His discussion of public economics and finance is extensive. However, he was keenly aware that the fortunes of the Treasury and the prosperity of the nation depended on its development of agriculture, industry, trade and commerce and the efficient functioning of these economic sectors. He suggests various policies that the State should follow to foster their development.

Many modern concepts of economics underlie much of Kautilya's discussion in *Arthashastra*. Good governance is one of his central concerns and he gives much attention to agent-and-principal problems and asymmetry of information in relation to public administration. Other modern issues that can be identified in *Arthashastra* include urban-bias, the importance for State revenue of 'market-making' and the significance of adequate transport infrastructure for exchanging produce, as well as for defence purposes.

At the heart of Kautilyan economics is the obligation of the State to provide for the social security and welfare of the people. The State was required to help the poor and helpless and to be proactive in contributing to the welfare of its citizens. This basic social principle appears to have appealed to many Indians over the centuries.

*Arthashastra* provides much basic knowledge about economics, and several of its conceptions are still relevant. Overall, however, the political economy emphasized in it, or the economic system described, is one relevant to Mauryan period. Kautilya did not believe that it would be applicable for all times nor to all social settings. In that, as in many other respects, he displayed great wisdom.

## **A Western Perspective on Kautilya's 'Arthashastra': Does It Provide a Basis for Economic Science?**

### **1. Introduction**

It is remarkable that a book such as *Arthashastra* should have been written more than 2000 years ago in northern India. It is by any substantial a book of substantial size. Its coverage includes economics, political science, public administration, law and statecraft. It is intended to provide practical advice for the management of the state and thereby enhance the wealth of the nation. Essentially, *Arthashastra* is a treatise on political economy interpreted in its broadest sense. While the exact date of its completion is unclear, the available evidence suggests that it was written somewhere between 321 and 286 BC (Fleet, 1914, p.v)

A contemporary of Aristotle, Kautilya, a Brahmin, was also known as Vishnugupta and by the name Chanakya, his place of birth (Jha and Jha, 1997, pp. 1-2). According to Jha and Jha (1997, pp.3-4), "Chanakya was a great statesman as well as a great scholar. He played a dominating role in the formation and functioning of the Maurya empire. Subsequently under his guidance, growth with stability was attained in the empire with the help of strong administration and efficient fiscal management. His attainment in the sphere of scholarship is undoubtedly laudable. The 'Arthashastra' consists of detailed analysis of different aspects of ancient Indian economy."

Nevertheless, the contribution of Kautilya to political economy has been neglected by Western scholars despite the fact that his coverage of this subject was probably the most sophisticated and broadly based one globally until Adam Smith published his *Wealth of Nations* in 1776.

My purpose here is to make some brief comparisons between the coverage of *Arthashastra* and Western thought on political economy and economics and then to consider Kautilya's view of the purpose of economics and the function of the king before examining his views about the Treasury and taxation. Then there is discussion of the role Kautilya sees for the state in relation to industry, commerce and agriculture, as well as his prescriptions about the use and conservation of natural resources. Chanakya's work can also be used to illustrate several aspects of economics emphasized in modern economics, such as the principal-and-agent

problem, information asymmetry, urban-bias, principles of taxation, the importance of national economic accounting and census data, the importance of property rights for economic activity and so on. Such aspects are outlined and, before concluding, further attention is given to Kautilya's views about the role of the state in contributing to the social security and welfare of its citizens.

## **2. Kautilya's Coverage and Early Western Thought on Political Economy**

*Arthashastra* literally translates from Sanskrit as 'the science of wealth'. Artha corresponds to the work 'wealth' in Sanskrit, and sastra to 'science' (Thanawala, 1997, p.41). Just as Adam Smith was concerned with the wealth of nations, not individuals as such, so was Kautilya. Also like Adam Smith, he recognized that the wealth of nations does not depend purely on narrow economic factors but on a broad array of factors. His treatise, therefore, takes into account economic, political, diplomatic, social, military, and other aspects that may affect the wealth of a nation.

Although his work has a strong focus on the wealth, effectiveness and wellbeing of the king, as Sarkar (1999/2000, p.62) points out, "His ultimate objective, however, was not to benefit the king but to benefit the people. He thought a strong and wealthy monarchy would be in a position to protect the interests of the people against the invasion of other kings. He has repeatedly mentioned that the king must keep his subjects happy and should not impose any repressive rule except during emergency". Kautilya makes it quite clear that the power of the king is not unlimited but he has implicit contractual duties to fulfil as part of his office – an implicit social contract is present between the king and his subjects.

Of course, many of the ideas in *Arthashastra* did not originate in the Mauryan period nor with Kautilya. As Rao (1958, p.194) states "..... the factors and forces that determined the policy of State-interference in the life of the people of the Mauryan period were being shaped and made operative during the centuries preceding the Mauryans. The other aspects of economic life that received attention and were cultivated and promoted in the Age of the Mauryans, refer to what the [Hindu] Epics describe as *Trivarga*, *Dharma*, *Artha*, and *Kama* comprising all human events and desires underlying all human effort".

Possibly the following quotation from Ambirajan (1997) helps even more to explain why the coverage of Kautilya's *Arthashastra* is so wide and includes not only economics as perceived

today. To some extent all the four ends of human life, as traditionally identified by Indian thinkers, require a degree of simultaneous attention even if a writer concentrates on one, such as *Artha* (wealth) as an end. Ambirajan (1997, p.35) states:

“The traditional ends of human life, *Dharma* (righteous living), *Artha* (material well-being), *Kama* (enjoyment of sensual and artistic things), and *Moksha* (freedom from the birth-death cycle) all go together, and enjoyment of a full life was thought to be impossible without any one of the above ends. Of these, *Artha* occupies a key position in human life. Like Aristotle, Kautilya, the foremost economic thinker of ancient India, treated economic topics along with political matters in his *Arthashastra*. Another source of ideas on economic matters was Santi Parva of the *Mahabharata*, the epic wherein advice concerning the accumulation and distribution of wealth was interspersed with advice on how to run a country.”

Aristotle and Kautilya were contemporaries and significant contact between Greece and India was evident in the Mauryan period. There probably was direct contact between the Greek ambassador, Megasthenes, to the Mauryan court and Kautilya. In any case, a number of ideas of this period were common to the Greeks and Indians. Rao (1958) does, in fact, compare the political thought of Kautilya and Aristotle “to show how much there is in common between the two greatest political thinkers of Classical Antiquity” (Rao, 1958, p.ii). Nevertheless, it should be emphasized that there are major differences also. For example, unlike Aristotle, Kautilya did not consider the charging of interest on loans to be unjust (Sarkar, 1999-2000, p.64).

Although several of the ideas on political economy expressed in *Arthashastra* are also evident in European thought before Adam Smith (and after), many of Kautilya’s conceptions of factors contributing to the wealth of nations seem to have been superior. For example, while he stressed the importance of the development of agriculture for the economic prosperity of the nations, he by no means considered agriculture to be the sole basis of wealth, as some French Physiocrats appeared to argue. He also stressed the importance of developing industry and commerce as step towards securing the wealth of the nation. He knew that the wealth of the nation and the security of the state depended on the development and efficient operation of several sectors of the economy and he was able to envisage their economic interdependence as in inter-industry analysis.

While there are strong parallels between Mercantilist economic theory and Kautilyan economics, Kautilyan economics is much more sophisticated. It seems likely that many Mercantilists believed that treasures ('money'), such as gold and precious metals, were the basis of wealth. The king or prince was, therefore, generally advised to build up his Treasury. This could be done by several means. For example, by taxes on subjects and by the use of state monopolies. But in particular, the Mercantilists stressed the importance of sustaining a surplus in foreign trade as a means to accumulate national treasure.

For example, Thomas Mun, in his book published in 1664 (Hutchison, 1988, p.21), writing in relation to England, recommends as follows: "The ordinary means therefore to increase our wealth and treasure is by Foreign Trade, wherein we must ever observe this rule; to sell more to strangers yearly than we consume of theirs in value" (Mun, 1949, p.5).

Although Mun (1949) stresses the importance of the Prince having much treasure, he also suggests in Chapter 18 that the Prince may lay up too much treasure in his treasure chests and that this could impoverish his subjects. Also, national defence may require the Prince to outlay treasures. It could be unwise for the Prince to accumulate treasures at the expense of expenditure on defence at home.

Nevertheless, Mun (and other Mercantilists) equated treasures with economic wealth and did not have a clear conception of the role of the Treasury in relation to the defence and wealth of the realm. There is no evidence that Kautilya fell into such a trap. In fact, he did not believe that national wealth consisted of money or 'treasures', and while he thought that the Treasury should be well provided for, he had a clear conception of the purposes for which Treasury finances should be used. For Kautilya, treasures were only a means to an end, not economic ends in themselves.

According to Hutchison (1988, p.23), Mun (and some other Mercantilists) envisaged international trade as involving a strictly zero-sum – a nation obtaining a surplus in trade with an exporting country was seen as gaining at the expense of the exporting country. This contrasted with Kautilya's position. He thought that foreign trade should be encouraged and believed that it could benefit an exporting and importing country. He saw foreign trade as advantageous and suggested measures for its expansion. According to Sarkar (1999-2000, p.63) "He encouraged imports but understood that it could not be a one way trade; hence, in



the long term, he suggested a balance between import and export be maintained. He does not display any of the fears of foreign trade that the mercantilists after him had displayed. He stated that before a successful trade contract can be established, it must be beneficial to all countries concerned.” Therefore, he recognizes mutual gains from trade.

There is also considerable overlap between the theory of statecraft, as outlined by Machiavelli in *The Prince* and the views expressed by Kautilya. The similarities will not be pursued here since they are well outlined by Rao (1958) and mostly involve non-economic aspects of political strategy.

### **3. The Purpose of Economics and the Duties of the King**

Kautilya is strongly of the view that the ultimate purpose of economics is to increase the welfare of the king’s subjects. In outlining the duties of the king, he states:

“In the happiness of his subjects lies his happiness; in their welfare his welfare; whatever pleases himself he shall not consider good, but whatever pleases his subjects he shall consider as good.

Hence, the king shall ever be active and discharge his duties; the root of wealth is activity, and of evil its reverse.

In the absence of activity acquisitions present and to come will finish; by activity he can achieve both his desired ends and abundance of wealth” (Shamasastri, 1961, pp. 38-39).

While concepts of happiness and welfare are complicated in Indian thought (Ambirajan, 1997), there are undoubtedly similarities between the Kautilya’s objective of economics and that expounded by mainstream economists from the time of Adam Smith onwards. This is so even though most of these mainstream economists favoured liberal market systems as a stepping stone towards the maximisation of social welfare, rather royal or state activity as a means to achieve this goal.

Early Indian thought emphasizes that the duty of the king (State) is to protect the people, maintain peace and justice and be active in providing economic assistance to individuals and groups. Those services provided the rationale for taxation. Thus an implicit social contract existed between the king and the nation’s citizens. If the king did not keep to this ‘contract’, he did so at his own peril. For example, in areas where he failed to protect his citizens, they might even ask for remission of taxes paid. While Kautilya supported absolute monarchy, it

was necessary for the king to be a benevolent despot to have a legitimate place as head of State.

#### **4. The Treasury and Taxation**

As pointed out by Jha and Jha (1997, p.298), “Chanakya paid supreme importance to the maintenance of a rich treasury, which favourably affected entire activities of the administration. It was pointed out that the augmentation of the treasury depends mainly on the abundance of harvest (Sasya-Sampat), opulence of industrial production (Prachara-Samirddhi), prosperity of trade and commerce (Panyabatulya) as well as good fiscal management”. Therefore, Kautilya paid much attention to good fiscal management and methods to develop all the sectors of economic activity just mentioned. It was both in the interests of the king and of his subjects to develop all avenues of economic activity. Public finances were, amongst other things, to be used to defend the realm, ensure peace at home and to dispense justice and to provide support for the development of economic activity.

At the same time, Kautilya advised the king to limit his expenditure on servants. This should be kept to less than a quarter of his total revenue. Kautilya (Shamasastri, 1961, p.276) says: “In accordance with the requirements of his parts and country parts, the king should fix under one-fourth of the total revenue the charges of maintaining his servants ..... He should not violate the course of righteousness and wealth”. In essence, the treasury does not exist for the pleasure of the king but as a fund to be wisely utilized to increase the wealth of the nation.

Many sources of public revenue are considered by Kautilya. As Sarkar (1999-2000) points out, Kautilya’s systems of taxation is very comprehensive but some of the ideas expressed about taxation in *Arthashastra* predate it. Many of the principles of taxation that he outlined are still in favour today, as a perusal of standard texts on public finance, such as Musgrave and Musgrave (1989) indicates. Rao (1958, pp. 206-210) lists the many sources of state revenue identified and discussed by Kautilya and concludes that the State was “zealous in the collection of revenue from all possible sources so that the wealth so accumulated might be spent on the protection of the State from external and internal changes, and on social services and productive enterprises, as building of forts, roads, plantation of colonies, of villages, asylums, orphanage and educational institutions” (Rao, 1958, p.210).

## **5. Agriculture Industry, Commerce and the State**

As mentioned above Kautilya is keenly aware that Treasury's fortunes depend on the development and economic productivity of the nation's industries. He, therefore, outlines measures for the development and improved management of mines and forests, agriculture and livestock, manufacturing, and commerce. Although he sees traders as relatively unproductive, he is very aware of the importance of commerce and trade as a contributor to economic welfare and as a source of government revenue, and proposes several measures for regulating commerce, often with a view to extracting increased taxes. He urged the sovereign to invest in transport infrastructure, particularly roads, possibly because this would foster trade and commerce thereby raising state revenues, facilitate internal administration of the nation, and assist in defence of the realm. Furthermore, commerce was promoted by the use of money, and standard weights and measures, and these in turn, also assisted efficient public administration and finance.

In the economic systems of Kautilya's time, the king (the State) is to a large extent involved in production. Agriculture involved both state-owned and managed farms as well as private farms. The king was advised to (and did) "carry on mining operations and manufactures, exploit timber and elephant forests, offer facilities for cattle-breeding and commerce, construct roads for traffic both by land and water and set up market towns (panyapattana).

He shall also construct reservoirs (setu), filled with water either perennial or drawn from some other source" (Shamasastry, 1961, p.46).

The role of the State in relation to industry, as seen by Kautilya, is summarised to some extent by Jha and Jha (1998). While the State is dominant in the economic system described by Kautilya and was often in the position of a privileged monopolist, cooperation between the State and the private sector was also encouraged. Kautilya was of the opinion that "a strong private sector is a course of strength to the state" (Sarkar, 1999-2000, p.65).

It might be noted that the king had property rights, as in Europe, in all natural resources such as minerals, forests, wild animals and fish. Whether this was conducive to their conservation is unknown. However, Kautilya did recommend practices for the conservation of natural resources, especially living resources. He was aware that the future productivity of natural

resources is linked to their appropriate conservation. Also, in line with Hindu traditions, he recommends kindness towards animals.

## **6. Elements of Modern Economics Evident in *Arthashastra***

There are many elements of modern economics that can be illustrated by the coverage in *Arthashastra* but only a few aspects can be mentioned here.

Kautilya is deeply aware of the principal-and-agent problem and the presence of asymmetry of information between the principal (in this case, the king) and his agents (his servants).

Kautilya recommends the use of spies, proper accounting methods and scrutiny as well as other measures to deal with such a problem. This is dealt well in two chapters: one entitled “Detection of What is Embezzled by Government Servants out of State Revenue” and the other entitled “Examination of the Conduct of Government Servants”. However, being a realist, he concludes that because of asymmetric information it is virtually impossible to wipe out all embezzlement. He states, “Just as it is impossible not to taste the honey or the poison that finds itself on the tip of the tongue, so it is impossible for a government servant not to eat up, at least, a bit of the king’s revenue. Just as fish moving under water cannot possibly be found out either as drinking or not drinking water, so government servants employed in government work cannot be found out (while) taking money (for themselves)” (Shamasastri, 1961, p.70).

As much of the coverage of *Arthashastra* illustrates, Kautilya was well aware of the importance for the efficient operation of the State and economic development of what is described today as good governance. Furthermore, it can be inferred that he was well aware of the value of capacity-building amongst public servants, a ‘catch-phrase’ commonly used today as a rationale for many foreign aid projects to less developed countries. To some extent, *Arthashastra* can be regarded as a manual for capacity building in the public service in the Mauryan period.

It is interesting to note that Kautilya points out that public prosperity can sometimes be increased by dispensing with too many government servants (Shamasastri, 1961, p.65). While his economics is inconsistent with structural adjustment policies that currently hold centre stage, he was clearly aware that the public sector could be inefficiently large.

Consumer protection is strongly emphasized in *Arthashastra*. This may have been regarded as a benefit to citizens of the sovereign's control of all trade and commerce. The sale of products at the place of production was forbidden and they could only be sold at designated official urban market places. While on the one hand this may have strengthened consumer protection as government officials could verify the quality of wares for sale, on the other hand, it was also, in all likelihood, a means to more efficient taxation of produce. Produce was taxed often on the way to market and at the market place. Furthermore, this procedure probably imparted urban-bias to the economic system.

The State had a financial interest in ensuring that as much production as possible was marketed. Hence, the king was urged to maintain and improve transport systems and to ensure safety from robbers and vagabonds for those transporting goods. The importance of a good transport infrastructure to facilitate trade and commerce was stressed by Kautilya. A further benefit was that it facilitated the defence and administration of the realm. The importance of such infrastructure for economic development is again being stressed today by bodies, such as the World Bank, but probably with a slightly different agenda in mind.

Other aspects, for example, raised by *Arthashastra* include taxable capacity and the importance of the collection of census data and the keeping of other national accounts.

## **7. Social Security and Welfare**

There is major emphasis in *Arthashastra* on the duty of the king to assist in ensuring the social security of his subjects and a requirement that the king help the handicapped and the unfortunate.

For example, it is stated:

“The king shall provide the orphans (bāla), the aged, the infirm, the afflicted, and the helpless with maintenance. He shall also provide subsistence to helpless women when they are carrying and also to the children they give birth to” (Shamasastri, 1961, p.47).

Furthermore, during Kautilya's time, the king had responsibility for food security. Agricultural stocks “were kept in the Royal granaries to ward off public distress, and the king

directed the retention of half the annual produce for the relief of distress; and provided poor persons with food and seed corn to enable them to start farming” (Rao, 1958, p.192).

In addition, various public activities, such as the building of water reservoirs and the construction of irrigation works, were a part of policy to avert famines. Where the State did not directly undertake such works, it provided subsidies to those who did.

Policies that, in general, advanced the economic development of the nation and, therefore, the nation’s wealth, also provided the people with increased economic security. Furthermore, security was provided by the king’s effective defence of the realm and the enforcement of just legal system at home, that is just from the perspective of the times.

## **8. Concluding Observations**

By any standards, Kautilya’s *Arthashastra* represents a remarkable scholarly achievement. Although containing some inconsistencies, and some peculiarities from a modern perspective, it was a valuable guide to political economy in its time and provides us with privileged insights into the Mauryan economic system and society. Its close association with a long Hindu tradition is clear, such as its emphasis on the social responsibility of the State towards its citizens. With sympathetic and careful reading, one can glean from it some economic wisdom of relevance to our times, and it certainly can be used to illustrate several modern economic ideas, as was shown.

In his conception of the factors that influence the wealth of nations, Kautilya was well ahead of Western thinkers, as is clearly demonstrated by Rao (1958, pp. 201-202). It took around 2000 years for Western economic thought to reach and then possibly surpass the level of economic sophistication apparent in *Arthashastra*. Possibly Adam Smith’s *Wealth of Nations* represents the watershed. While Adam Smith’s advocacy of a liberal market-based economy differed from Kautilya’s support of a centrally planned (mixed) economic system secured by the monarchy, both had the same conception of what constitutes the wealth of a nation and what the economic goal of a nation should be. Both agreed that money *per se* does not constitute a nation’s wealth. Both agreed that the nations’ resources had to be developed by investments and other means to add to wealth.

The fact that Adam Smith and Kautilya did not propose the same social mechanisms for expanding the wealth of nations is not surprising. For one thing, they lived in very different times and in different social and cultural contexts. To a large extent, appropriate social and economic systems depend upon historical circumstances. In that respect, the position of Kautilya is interesting. According to Rao (1958, p.202), Kautilya “anticipated the teachers of the Historical School, when he rejected the absoluteness or cosmopolitanism of Economic Theory. He did not believe that there was One Universal Law which is applicable to all conditions and all times. He held that economic laws should be adopted to changing conditions of time and place”. Therefore, we can conclude that Kautilya would have accepted the proposition that appropriate social mechanisms for the efficient creation of national wealth could vary with the passage of time and could differ between nations.

Kautilya’s *Arthashastra* did provide a valuable basis for economic science, a basis long neglected. It contains useful insights about economics. These insights were only independently discovered by Western thinkers in the eighteenth century. As for the specific social and economic system that Kautilya outlines and provides advice about, he would be the first to agree that his advice is relative to his time. Therefore, *Arthashastra* should be assessed in its historical context. Nevertheless, it contains many points of relevance to modern economic conditions.

## References

- Ambirajan, S. (1997) “The Concepts of Happiness, Ethics, and Economic Values in Ancient Economic Thought”. Pp. 19-42 in B. B. Price (ed.) *Ancient Economic Thought*, Vol. 1, Routledge, London and New York.
- Fleet, J. F. (1914) “Introductory Note”. Pp.v-vi in R. Shamasastri, translator, *Kautilya’s Arthashastra*, 7<sup>th</sup> edition, 1961, Mysore Printing and Publishing House, Mysore.
- Hutchinson, T. (1988) *Before Adam Smith: The Emergence of Political Economy 1662-1776*, Basil Blackwell, Oxford.
- Jha, K. N. and Jha, L. K. (1998) “Chanakya: The Pioneer Economist of the World”, *International Journal of Social Economics* **25**, 267-282.
- Jha, K. N. and Jha, L. K. (1997) *Chanakya: The Pioneer Economist*, APH Publishing Corporation, New Delhi.
- Mun, T. (1949) *England’s Treasure by Foreign Trade*, Basil Blackwell, London. First published in 1664.
- Musgrave, R. A. and Musgrave, P. R. (1989) *Public Finance in Theory and Practice*, McGraw-Hill, New York.
- Rao, M. V. K. (1958) *Studies in Kautilya*, 2<sup>nd</sup> edn., Munshi Ram Manohar Lal, Delhi.

- Sarkar, S. (1999-2000) "Kautilyan Economics: An Analysis and Interpretation", *Indian Economic Journal* **47**(4), 62-67.
- Shamasastry, R. (1961) Translator. *Kautilya's Arthashastra*, Mysore Printing and Publishing House, Mysore.
- Thanawala, K. (1997) "Kautilya's Arthashastra: A Neglected Work in the History of Economic Thought". Pp. 43-58 in B. B. Price (ed.) *Ancient Economic Thought*, Vol.1, Routledge, London and New York.



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