WAGES IN THE INDIAN BUREAUCRACY: CAN KAUTILYA'S ARTHASHASTRA PROVIDE AN ANSWER

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Abstract : We compare the wage structure of the Indian bureaucracy with the wage structure recommended by the Arthashastra, a treatise on economics and politics written by Kautilya, the advisor to the Mauryan emperor Chandragupta during the fourth century B.C. As compared to Kautilya's recommendations, the wages in the Indian bureaucracy are highly egalitarian. It is likely that the existing wage structure creates a feeling of inequity in government employees and is likely to lead to inefficiency and corruption.

Keywords : *Wage structure, Kautilya, Chanakya, Arthashastra, Elliot Jaques, bureaucracy, corruption, India*

Corruption in public life is one of the most pressing issues in India today. One of the reasons for corruption in emerging democracies is the management of bureaucracy and specifically their incentives to perform in an ethical manner (Rose-Ackerman, 1986). Using scientific research on executive compensation, we analyze the existing wage structure of the Indian bureaucracy and show how its excessive egalitarianism is counterproductive to efficiency and ethics. We specifically compare the current wage structure with the wage structure recommended in the *Arthashastra*, an ancient Indian treatise on politics and economics (Trautman, 2012), to show that both the wage levels and the wage structure of the Indian bureaucracy needs to be substantially changed if it is to be conducive to a clean and efficient administration.

Indian Bureaucracy and Corruption

Indian Independence in 1947 brought a structural change in the role of the state. Prime Minister Jawaharlal Nehru wanted to modernize and humanize a traditional society through state intervention in all-important spheres of its activity. To meet these challenges the bureaucracy was expanded rapidly. Bureaucratic government institutions, rules and procedures from the British rule, however,

remained largely intact, producing a mismatch between obsolete instruments and modern tasks. Unprecedented amounts of money became available to official agencies for spending on various programs and projects. Because of this monopoly discretionary power of civil servants, there were numerous instances of the misuse of public office for private gains (Rose-Ackerman, 1996). As a result, corruption spread in the public services. The interaction with contractors and suppliers opened new avenues of making illicit gains. As the private sector grew side by side with the public sector, the scope for bribery enlarged. The complexities of export-import business and the temptation to evade taxes and manipulate duties were essential to the growth of corruption opportunities. The rise in disposable incomes of the business class increased their appetite for gold, luxury goods and imported items. This, in turn, stimulated smuggling and created new opportunities for mega corruption. Never before in India's modern history was the level of corruption so high. India scored 3.1 out of 10 on corruption and was ranked 95th out 183 countries in Transparency International's Corruption Perception Index (*Indian Express,* 2011) and India's bureaucracy was ranked the most corrupt among all Asian countries (*Political & Economic Risk Consultancy*, 2013). However, corruption is not an integral part of Indian business and political culture, which is illustrated by the fact that non-resident Indians abroad are usually considered very disciplined and honest.

The underlying cause of India's corruption is complex. What "*dharma*" or "righteousness" is to Hindus, "*deen*" or "moral conduct" is to Muslims. However, "without a uniting and coalescing ethical component, secularism tended to create a dispersed and amoral society as well as an amoral polity, adrift without an anchor, without any generally accepted or acknowledged moral or social or political code for everybody" (Srivastava, 2001, p. 35). Another reason for corruption in India, despite idealized values, is the social realities of India, more specifically a scarcity of resources, which led to a self-centered orientation for those in power (Sinha, 1997; 2008). The problem of bureaucratic corruption was exacerbated by the fact that Indian bureaucrats carried a colonial mindset including a distrust of natives which lead to highly centralized decision-making and a concentration in the power of a few (Sinha, 1997).

The size of the Indian government in terms of number of employees has been steadily increasing from 1.8 million employees in 1956 to 4.16 million employees in 1991 (Maheshwari, 2001). Within the Indian bureaucracy, the Indian Administrative Service (IAS) consisting of 4,377 officers (Ministry of Personnel, Public Grievances and Pensions 2012), is the most important in terms of social prestige and having access to the senior most positions in the administrative set up (Maheshwari, 2001, p. 316). In the year 2011 alone, IAS officers were

charged with corruption in 15 cases and 11 IAS officers were booked by the India's highest criminal investigation agency, the Central Bureau of Investigation for corruption (*India Today,* 2012). On 21 April 2013, which was celebrated as civil services day, a group of senior bureaucrats and politicians identified five key problems with India's bureaucracy viz. subjectivity in performance appraisals, lack of linkage between performance and compensation, short tenures, lack of innovation, and lack of inter-departmental collaboration (Sharma, 2013). In this paper, we argue that the low pay levels and highly egalitarian pay structure of India's bureaucracy may also have contributed to the rise of corruption. The relatively low salaries for public servants were an open invitation to create a political market instead of a transparent economic market. Clientelism became the rule actually enforcing communal identification. We also compare the existing pay structure of the Indian Administrative Services with Kautilya's recommendations for government officers' salaries in the *Arthashastra.* In the light of this comparison, we draw on theories of pay equity to recommend higher salaries for Indian bureaucrats and a more hierarchical wage structure.

Pay Policy in Organizations: Pay Level and Pay Structure

Any pay system is characterized by two important elements, viz. pay level and pay structure (Brown, Sturman, & Simmering, 2003). Pay level refers to the average compensation paid by an organization with respect to its competitors and is called external competitiveness (Milkovich, Newman, & Gerhart, 2010). Depending on pay levels, an organization may be characterized as either, leading the market (higher than average pay levels), at the market (average pay levels), or lagging the market (less than average pay levels). The practice of paying workers above market wages in order to get higher performance is called "efficiency wages" (Stiglitz, 1984). Numerous mechanisms can explain how higher-than-market wages lead to superior performance. Paying higher-than-market wages attracts a large number of candidates and thereby enables better selectivity. Gains from enhanced selection can be especially high for jobs in which a small change in individual performance has a large impact on organizational outcomes (Schmidt & Hunter, 1983). Paying higher-than-market wages imposes higher switching costs on employees and reduces attrition and likelihood of workplace indiscipline (Stiglitz, 1984). When people perceive that they are paid fairly or overpaid, they are likely to feel more satisfied with pay and their job (Miceli, Jung, Near, & Greenberger, 1991). Finally, as per the norm of reciprocity, an individual who receives higher-than-market wages is likely to feel a sense of obligation towards the employer and thereby put in greater efforts on the job (Akerlof, 1984).

The pay structure refers to the relative amount of pay given to different members of an organization within a hierarchy is known as internal alignment or internal equity and the collection of pay rates for various members in the organizational hierarchy is referred to as the pay structure (Milkovich, Newman, & Gerhart, 2010). Organizations which have relatively large pay differentials as one moves from the least paid to the highest paid employee are said to be hierarchical while organizations which have relatively small pay differentials as one moves from the least paid to the highest paid employee are said to be egalitarian. There are various ways to measure the extent of hierarchy in a particular organizational structure, such as the ratio of the wages of the highest paid member in the hierarchy to that of least paid member of the hierarchy, or the coefficient of variation, or the Gini index (also known as Gini coefficient; Allison, 1978).

Extremely hierarchical structures where individuals are paid disproportionately higher than their relative output simply by virtue of their position in the hierarchy are called tournaments (Lazear & Rosen, 1981). Studies on tournament theory have shown that the extent of inequality in the pay structure as measured by the Gini coefficient has important implications on organizational outcomes such as individual effort, individual performance (Becker & Huselid, 1992; Ehrenberg & Bognanno, 1990), risk-taking (Becker & Huselid, 1992), employee turnover (Bloom & Michel, 2002) and organizational performance (Brown, Sturman, & Simmering, 2003).

Pay Levels and Pay Structure in Indian Bureaucracy

The Indian bureaucracy consists of an elite cadre called as the Indian Administrative Service (IAS). The salaries of IAS officers are determined based on the recommendations of the Sixth Central Pay Commission as adopted by the Department of Personnel and Training in the Ministry of Personnel, Public Grievances and Pensions, of the Government of India. The pay of IAS officers has four components. The first component of salary is the basic pay, which is expressed as a range from minimum to maximum. As an officer spends more time in a particular grade, his or her basic pay increases each year until the maximum pay in the range is reached or the officer is promoted. The ranges of basic pay are expressed in the form of pay bands. The next component of salary is grade pay, within a pay band there may be up to three levels of grade pay. The purpose of the grade pay is to indicate an officer's status or level within the pay band. The entire IAS cadre is accommodated into four pay-bands comprising of eight levels each having a different grade pay. For calculation of allowances and benefits, the grade pay is added to the basic salary. The third component of salary is allowances and benefits such as dearness allowance (cost of living adjustment),

house rent allowance, and transportation allowance. Finally, there are long-term benefits such as gratuity and pension for which the officer is eligible, but which do not appear on the pay slip, for example, medical benefits, meals, refreshments, and other facilities provided by the employer.

The concept of "cost to company" (CTC) has become popular in India since the 1990s and it includes the total cost incurred by an organization for an employee such as salary, variable pay, benefits, retrials, and training costs. Similar to the concept of CTC, Premarajan, Rao, and Gurunathan (2008) have defined a concept called "cost to government" (CTG) to indicate the total costs incurred by the government in employing a person such as basic pay, grade pay, dearness allowance, house rent allowance, city compensatory allowance, transportation allowance, other special allowances, reimbursement of tuition fees of children's education, advances, pension, gratuity, leave encashment, group insurance benefit, bonus and incentives, medical benefit, and training costs. While a media report (Sinha, 2008) indicates that the actual cost to government can be up to four times the figure on the salary slip, the average multiplier to the basic salary to arrive at the CTG for general government employees is 3.56 (Premarajan, Rao, & Gurunathan, 2008, p. 135). Based on this we have calculated the range of the CTG for each of the levels. The details of the basic salary, grade pay, and CTG calculated for IAS officers are shown in Table 1. The Table contains the range of the cumulative number of years of experience a typical officer would have in a particular grade based on the IAS officers promotion rules (Ministry of Personnel, 2000).

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Insert Table 1 here

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Using the procedure suggested by Bloom (1999) and used by Brown, Sturman, and Simmering (2003) we calculated the Gini coefficient for the IAS officer cadre as 0.1961. Since the Gini coefficient can range from 0 to 1, this seems to be rather low indicating an egalitarian wage distribution. A better understanding of how egalitarian the wage structure is could be got from knowing the Gini coefficients of other comparable organizations. Since data on Indian organizations is not available to us, we used the average Gini coefficient of 333 hospitals in the state of California, USA over nine years reported by Brown, Sturman, and Simmering (2003). They found that the average Gini coefficient was 0.22 and the standard deviation of the sample of Gini coefficients was 0.04. Hence, using these statistics, the pay structure of the IAS officers' cadre would

have a Z value of -0.5971 standard deviations or be at 27.52 percentile of the distribution of the California hospitals. The fact that the government strives to maintain an egalitarian wage structure is clearly mentioned in the Sixth Pay Commission Report, which has fixed the ratio of the maximum to the minimum salaries to 1:12 (Government of India, 2008, p. 43).

While there are theories such as tournament and equity theory, which suggest the economic and psychological factors determining an individual's reaction to the pay structure, there are hardly any studies which suggest the actual level of hierarchy in a pay structure. There have been some attempts at empirically arriving at the level of hierarchy. For example, Mahoney (1979) and Elliot Jaques (cited by Kleiner, 2001) recommend salaries for individuals in a hierarchy based on employees' perceptions of a fair wage for all the jobs in the hierarchy. In this paper, we consider the views of an ancient Indian economist and scholar, Kautilya and extrapolate his recommendations to the Indian bureaucracy of today.

Kautilya and the Arthashastra

The issue of compensation for bureaucrats is discussed in Kautilya's *Arthashastra*, India's classic text on the art of politics and government. Kautilya was the first classical philosopher who explicitly tackled economic issues. He was the brilliant and unscrupulous Brahmin adviser of the first Maurya emperor, Chandragupta Maurya who ruled India from 324 to 301 BC. Chandragupta had overthrown the reigning king of the prosperous kingdom of Magadha, in Northern India, and had seized its capital, Pataliputra (the modern city of Patna, in the state of Bihar). The Maurya dynasty was to weld the diverse cultures of India into an empire lasting almost 140 years.

What makes a classical scholar like Kautilya relevant for today's issues on compensation and corruption? Many scholars have argued that Kautilya was a pioneer economist also from a world history perspective. Jha and Jha (1998) conclude that *Arthashastra* is a monumental treatise of the ancient world that possesses great importance in the history of economics. Research on *Arthashastra* started when a complete manuscript of the work was discovered and published by R. Shama Sastry in 1908. Ghoshal and Basak (2006) further analyzed *Arthashastra* for the 1937 first edition of the Cultural Heritage of India, published by the Ramakrishna Mission in Calcutta. These were general surveys which regarded the text as "the branch of knowledge which deals with the acquisition and preservation of dominion" (Ghoshal and Basak, 2006, p. 451).

The traditional focus of analysis of *Arthashastra* was on the role of the state and the organisation of society (Deva, 1984), mostly concluding that the Mauryan economy can only be interpreted in a Marxist way. Scholars have emphasized that Kautilya categorically reaffirms the sanctity of the *varna* (or caste) hierarchy which Buddhist thought had called in doubt. But the caste system only exists within a system to create "wealth". *Arthashastra* literally means "the science of wealth". Despite its title, it was not an enquiry into the causes of the wealth of nations, but rather a work on polity offering advice to the ruler on how to increase and preserve his wealth and power. However, Kautilya has been identified by some Indian scholars as the inventor of "economics" as a separate discipline. They usually refer to the terms he used in his treatise. The concept of *artha* (wealth) as one of the important goals in life sets the background of his economic thinking. The concept of *vartha* reflects the national economy, including agriculture, husbandry and commerce, while the concept of *arthashastra* combined economics, politics, ethics, war and law. This may be described as "human sciences" in the twenty-first century. Another important feature of *Arthashastra* is that it contains a revolutionary theory of value: it results from the utility and the scarcity of the product.

According to Dasgupta (1993), Kautilya's approach had something in common with that of writers belonging to the "Cameralist" school in seventeenth century Germany, also confirming the present approach of the Norvegian economist Erik S. Reinert (Jomo & Reinert, 2005). They too were concerned with "administrative and policy studies", the so-called "*Kameral-wissenschaft*", rather than economic policy as such, regarding themselves as consultant administrators. Both of them favoured strengthening unification and centralisation of the state, within its own relatively limited territory. They emphasized the vital importance of social cohesion and believed that a major objective of economic policy was the raising of tax revenue for the state.

The role of the state includes a labour code (it is debatable whether this was like introducing a welfare state), a proper taxation system which should not oppress people, while government revenues should be derived from economic participation in selected economic sectors (like diamond, gold, silver and heavy metals), and finally a regulating role in production, distribution, trade, and consumption. This also involved building roads along which goods to be traded could be carried, as well as measures for providing security to traders while travelling. To promote trade, considerable attention was given to textiles which were partly in private hands. However, the state was expected to engage in production of textiles on an extensive scale, and to maintain strict control and supervision of that part of the industry which was in private hands (Jhingan, Girija, Manimekalai, & Sasikala, 2006).

In many ways these characteristics were comparable to those of Ancient Greece. However, there were also striking differences. First, interest had no negative connotation in Kautilya's thinking. He actually considered 15 % to be ideal. Second, Ancient Greece was based on slaves for cheap labour, while Ancient India was based on a joint family system and caste system, which were, however, still relatively flexible. We may conclude that Kautilya was already more advanced as far as capital formation and social protection are concerned. This confirms Dasgupta's conclusions that he may be compared to fifteenth to eighteenth century West-European as described by Reinert (Jomo & Reinert, 2005).

Some Marxist scholars in India (see Dasgupta, 1993) also interpreted Kautilya's thinking as advocating a new and radical agrarian policy. Kautilya was described as being against landlordism and in favour of cultivation by owner-farmers. However, these interpretations can be debatable. In general *Arthashastra* recognises the existence of both state-owned and privately owned agricultural land. What can be observed is that, as a result of economic growth during the Maurya-period, trade and commerce began weaning away a large number of *Vaisyas* (castes involved in commerce and manufacture) from agriculture to trade, and more and more *Sudras* (outcasts) were required to replace them. Kautilya recognized these tendencies by extending the duties of the *Sudras* and by expressing a favourable opinion about the lower *varnas*.

At the same time it should be noted that, unlike some Buddhist and Tamil sources, Kautilya did not directly refer to ethics. His statements are of an instrumental rather than a normative nature. Here again, there is no contradiction with the eighteenth century Mercantilist and Cameralist traditions in Western Europe. Kautilya considered economic activities as an essential need for which both the state and the individual had to play an important part. He is not bothered by the *Bagavad Gita*'s quest for ethical activities but his ideas also do not contradict the *Gita*. His proposal for a wage scale reflects his insistence on a stable government.

Arthashastra's View on Compensation of Government Officials

Scholars have already referred to Kautilya's approach to compensation from two angles. First, the issue became relevant when the state visualized in *Arthashastra* was compared to present day India. Avari (2007) concludes that the hierarchy of officers controlling the bureaucracy must have been extremely elaborate and finely graded, and that one can see in it the antecedents of the hierarchy at the court of the great Mogul or the British viceroy. Thapar (2006)

focuses more specifically on Kautilya's recommendation that senior officers receive forty-eight times the salary of a clerk, and ministers double that. The ratio of the clerk's salary to that of the chief minister or of the humble soldier to the commander was approximately 1:96. According to Avari (2007) these figures and the severe punishments for misdeeds and corruption, as described in *Arthashastra*, suggest that it was most unlikely that the Mauryan state could be defrauded by the people or its officials. This is in striking contrast to the taxation and other regimes prevalent since the second half of the twentieth century in South Asian countries.

Rangarajan's (1987) translation and commentary on the *Arthasharstra* provides details on the principles of salary fixation and actual salaries of government servants during the time of Kautilya (pp. 288-293). Totally twelve grades of government servants are listed ranging from the servants who tend the animals to senior-most advisors in the King's court. Of the twelve grades described by Rangarajan, we have selected only the top eight grades since they deal with the salaries of officers. The ninth grade consists of accountants and clerks which are out of the purview of this study. The details of the salaries of the first eight grades are shown in Table 2.

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The salaries mentioned by Kaultilya are in the currency of his days, i.e., panas. Fortunately, Kautilya also provides us with a mechanism to derive the current equivalent of the salary in Mauryan times. In the *Arthashastra,* {5.3.34} it is mentioned that "an annual salary of 60 panas is equal to one *adhaka* of grain per day (Rangarajan, 1987, p. 288). Elsewhere, in the *Arthashastra* {2.15.43} it is mentioned that one *adhaka* is "enough for four meals for one Arya male" (Rangarajan, 1987, p. 750). According to the Government of India Planning Commission (2012) individuals in urban areas earning less than Rs. 10,314.20 per annum are considered to be "below the poverty line." By equating a sum of 60 panas per annum to the poverty line estimate of Rs. 10,314.20 per annum, we can estimate the value of one pana as Rs. 171.90 in today's prices.

Since there was a considerable controversy about the level of this poverty line (*Economic Times,* 2012), we can assume that this would understate the actual value of the panna in today's terms. The value of the salaries of government officials in Rupees as suggested by Kautilya compared to the actual salaries of

IAS officers in India today is shown in Table 3. In the table, the values suggested by Kautilya have been converted into CTG equivalents using the same conversion factor, i.e., 3.56. This assumes that the ratio of allowances and benefits to the basic wages was the same in Kautilya's time as it is now.

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When we compare the salaries recommended by Kautilya with the existing salaries earned by IAS officers, we find that in the first two years of the government official's career, the salaries earned are higher than or almost at par compared to those recommended by Kautilya. However, at the senior levels in the bureaucracy, the salaries earned by IAS officers in India today are a small fraction of those recommended by Kautilya for government officials.

Using the procedure suggested by Bloom (1999) and used by Brown, Sturman, and Simmering (2003) we calculated the Gini coefficient for the CTG salaries recommended by Kautilya in the *Arthashastra* as 0.5759. This is a rather high Gini coefficient indicating an extremely hierarchical wage distribution. Once more using the value of the Gini coefficients in the sample of 333 Californian hospitals studied by Brown, Sturman, and Simmering (2003), the recommended pay structure of Kautilya would have a *Z*value of 8.89 standard deviations or be at 100th percentile.

Effects of the Discrepancy between Kautilya's Recommendations and the Current Pay Policy in the IAS

The pay levels of senior IAS officers (beyond 15 years of work experience) are a fraction of those recommended by Kautilya in his *Arthashastra*. In addition, the increase in salary is an IAS officer rises in the work levels within the IAS is much more egalitarian (a Gini coefficient of 0.19) as compared to the pay structure recommended by Kautilya in the *Arthashastra* (Gini coefficient = 0.57).

The compensation system communicates the organization's values and hence has ethical implications (Bloom, 2004). According to Adams's (1963) equity theory, individuals compare the ratio of their outputs to their inputs with the ratio of others' outputs to others' inputs. When employees perceive an inequity in the ratio of outputs to inputs of self and others, they take steps to correct it. Job inputs can be in the form of qualifications, work experience, and performance and

job outputs can be the form of tangible rewards such as compensation and benefits or intangible returns such as respect and recognition. If an individual feels that with respect to job inputs, the organization does not provide adequate outputs, he or she will take either work lesser, or seek to improve the outputs through other means (such as politicking or stealing) or will quit the job. Conversely, when employees perceive overpayment (as when they are paid efficiency wages), they work harder to correct the inequity. The tendency of humans to avoid inequity can explain the apparently contradictory findings of selfish and altruistic behavior (Fehr & Schmidt, 1999). In a laboratory experiment, even monkeys have shown an aversion for inequity (Brosnan & de Waal, 2003) which leads us to conclude that this inherent aversion to inequity was necessary for the development of cooperation amongst members of our species during evolution.

Extending these insights to the organizational context, Greenberg (1990) described a field experiment where he compared the rate of employee theft at two plants during the period when wages were temporarily reduced by 15%. The plants where wages were reduced had significantly higher levels of employee theft as compared to the control plant, thereby illustrating that employees' respond to underpayment inequity by increasing their outcomes. Another example of the damaging effects of pay inequity can be seen in the case of two large retailers in the USA- Walmart's Sam's Club and Costco. Costco pays substantially more compensation as well as medical and retirement benefits to its employees. Specifically, Costco pays an average wage of $17/hour while Sam's Club pays the minimum wage of $10/hour. Costco's generosity extends not just to cash wages but also to its health plan and retirement plan- 85% of Costco employees get a health plan worth $5735 per annum while only 47% of Sam's Club employees get a health plan worth only $3500 per annum. Similarly, 91% of Costco employees get a retirement plan worth $1330/annum while only 64% of Sam's Club employees get a retirement plan worth only $747/annum. Given the extremely low wages at Sam's club, it is not surprising that their shrinkage costs (wastage or losses due to negligence and neglect) are a staggering 1.7% of sales as compared to Costco's 0.2% (Cascio, 2006).

The need to link compensation of bureaucrats to their performance is suggested in the Sixth Pay Commission Report (Government of India, 2008) and supported by Government of India's personnel secretary, P. K. Mishra, who at a recent conference to discuss ways of improving India's bureaucracy, said-

> *In Brazil, 60% of a government servant's pay depends on competency and only 40% is fixed…The concept is that if you do not measure up to a performance standard, you are paid*

less. Unless we accept these modern concepts wholeheartedly, the impact of Indian civil services is unlikely to improve (cited by Sharma, 2013).

Since liberalization of the Indian economy in 1990, there has been a steep rise in managerial salaries driven by the increasing demand for managerial talent and a change in the Companies Act that drastically increased the limit on CEO compensation (Kakani & Ray, 2002). Hence, opportunities in the private sector have become increasingly attractive and the main reason for bureaucrats leaving the civil services (Sharma, 2013).

Given the low salaries and poor opportunities for economic growth, it is no wonder that the overall satisfaction of government servants with their pay and benefits is very low and even though they were quite satisfied with their job and were proud of being government servants, it did not compensate for their dissatisfaction with the poor pay and benefits. In fact, most of the government servants felt that their pay and promotion opportunities were not equitable and did not compensate them adequately for their contribution to their work (Premarajan, Rao, & Gurunathan, 2008).

Relevance of the Arthashastra to Salaries of Indian Bureaucrats

To what extent is there historical evidence that Mauryan economy and state can be compared to 21stcentury India?The extremely high level of remuneration recommended in *Arthashastra* suggests that the highest officials of the administration were required to meticulously oversee a large number of civil and economic tasks and a variety of public works, similar to the modern nation-state. The large scale collection of taxes was scrupulously organized and must have been spent on maintaining the royal family and replenishing its treasury, the military establishment and administrative services. It supported a mixed world of state enterprise and private capitalism that was highly regulated. The Mauryan desire to control the economy implied great expenses in the staffing of a bloated civil service, even though the state control over all sectors did not last for more than a century (Sharma, 2011). Consequently, the Mauryan state system may be compared to Jawaharlal Nehru's socialism. Also during the post-liberalization era since 1990 India remains a relatively bureaucratized economy. However, post-independence India completely lacked an efficient administration with huge differences in remuneration, as described in *Arthashastra*.

On the other hand, the content of *Arthashastra* itself may also suggest the existence of corruption by the Mauryan state administration. Possibly Kautilya's recommendations on compensation themselves may have been influenced by the

need to counter this corruption. It was a major aspect of Kautilya's strategy to ensure that officials remain loyal supporters of the King. From this perspective, the Mauryan state becomes an illustration of how centralization spawns a large bureaucracy and how bureaucracy leads to large-scale corruption.

Second, the issue of compensation also becomes relevant when *Arthashastra* is considered from an ethical angle. Sihag (2005) and many others suggested that underlying every aspect of *Arthashastra* is an ethical dimension. However, this emphasis contradicts some earlier arguments that Kautilya only has pragmatic motivations. Kautilya basically warns the King about various possible deceptions practiced by his state functionaries. He actually lists about forty ways of embezzlement, including forgery, counterfeiting, adulteration, smuggling, hoarding and profiteering. In Book I Kautilya discusses a test to determine the honesty and loyalty of ministers by a method called *upadha* (allurement).In Book II the functions of nineteen superintendants of nineteen department are described in a detailed way so as to exclude corruption. In addition *Arthashastra* envisages an extensive network of spies in order to report all deviance. In Book IV it is mentioned that measures are to be taken for the protection of the people from the oppressions of government servants. Kautilya did not limit corruption to government officials. Book IV relates to public protection against deceitful and fraudulent artisans and merchants. Kautilya suggests a penalty for manufacturing counterfeit coins, for disturbing the currency, and for fraud in respect of weight and measures. Consequently, Kautilya's emphasis on corruptions by civil servants may be simply because he was writing from a government point of view.

Avari (2007) also points out that the Mauryan state completely missed the notion that the state had social responsibilities such as public health, education, social security or pensions and that *Arthashastra* does not contradict this. However, whether these were or are priorities for post-independence India is likewise debatable.

It is a matter of interpretation whether Kautilya's detailed analysis of how the state may abuse or may be abused was ethically motivated. In Kautilya's words his suggestions are " enough to prevent them from succumbing to the temptations [of the enemy] or rising up in revolt... enough to make them efficient in their work... enough to ensure that they remain loyal and powerful supporters of the King" (Rangarajan, 1987, p. 288-293).

Nevertheless, *Arthashastra* may be used to convert ethical values into the real functioning of a state economy. Sihag (2005a) applies this to all aspects of business studies and economics discussed by Kautilya and argues that the level of integration between economics and ethics is significantly higher in Kautilya's *Arthashastra* than that in Adam Smith's *Wealth of Nations* or for

that matter in the writings of Plato and Aristotle. According to Sihag (2007a, b & c), Kautilya believed that institutions are a prerequisite to economic growth and good governance, knowledge, ethical conduct and economic growth are interdependent. Sihag identifies this as a virtuous cycle of economic growth, in which Kautilya believed. As far as accountancy was concerned, Sihag (2005b) argues that Kautilya links the successful enforcement of rules and regulations to their clarity, consistency and completeness.

Another perspective was suggested by Jain and Mukherjee (2009) who demonstrate how Kautilya approached all aspects of business studies and economics and how value-based and ethical considerations provided him with a holistic and synthesizing perspective. In this way Jain and Mukherjee conclude that Kautilya was a precursor to certain contemporary leadership theories which were thought to be of "Western" origin.

It is interesting to note that Kautilya's solutions to corruption are not shared by other ancient Indian classics. Among them was Thiruvalluvar, Kautilya's South Indian counterpart, who was a poet and philosopher, born in Mylapore, near present-day Chennai, in the year 31 BC. Possibly he was a weaver but when he took his great work, *Turukkural*, to the assembly of Tamil scholars at Madurai for their approval, his fame immediately eclipsed that of other scholars in ancient South India. Whereas *Arthashastra* was pragmatic, *Turukkural* seeks truth in religion and is consequently much more ethically oriented in a spiritual sense. Thiruvalluvar agrees with Kautilya in emphasizing that government officials should not abuse their position. However, he believed that only individual transformation could solve the problem: "The enlightened and unblemished in positions of power dare not misuse their privileges to baser ends" (Narayanasamy, 2010; 203). In comparison Kautilya's emphasis on higher compensation is much more pragmatic than Thiruvalluvar's spiritual and purely ethical approach.

From our analysis, we conclude that Kautilya illustrates that a large bureaucracy does not necessarily leads to more corruption if a proper pay structure is implemented. However, by increasing wages in such a way one can argue that the medicine Kautilya was describing was also part of the disease: higher wages for state officials imply a large bureaucracy.

Tanzi (1998) refers to *Arthashastra* while discussing bribes paid to public officials whose salaries may be very low and whose "temptation price" may be far less than the value of the potential bribes. Benguigui (2002) confirms that low salaries force public servants to supplement their incomes illicitly while high salaries impose higher losses when getting caught.

A more contemporary example of using high salaries of government officials to curb corruption is Singapore. The Prime Minister of Singapore, Lee Hsien Loong is the world's highest paid head of government. Even after a 36% pay cut in January 2012, his salary was USD 1.7 million a year. The other highly paid heads of government are Hong Kong's Donald Tsang who earns USD 550,000 a year and the Austrailian Prime Minister who earns USD 498,200 a year (*DNA*, 2012). In comparison, the Indian Prime Minister's salary is approximately USD 26,260 a year (PM's office, 2011). In fact, in terms of the ratio of the country's leader's salary to the country's GDP per person (measured on a purchasing-power parity basis), India ranks the lowest at 4,106 (*Economist,* 2010).

The relative lower pay for Indian bureaucrats seems to be a post-independence phenomenon. Comparative salary figures of 1935 reported by Potter (1986) showed that Indian bureaucrats were relatively better paid with respect to comparative posts in other countries. For example, the governor of Bihar was paid Rs. 8,333 per month while the governor of New York State was paid just 5,687. Similarly, the secretary to the Delhi government was paid Rs. 4,000 per month while the secretary to the treasury in UK was paid Rs. 3,333 per month. Some comparisons reported by Potter (1986) are particularly stark. For example, while the commissioner of Bombay was paid Rs. 3,500 per month, the president of Poland was paid just Rs. 1,560 per month and while the secretary of Madras was paid Rs. 2,750 per month, the prime minister of Japan was paid just Rs. 622 per month.

Another support for the relevance of Kautilya's thinking on contemporary compensation is its striking relationship with Elliot Jaques's suggestions. According to Jaques, executives in organizations can be classified into eight strata depending on the time span of discretion (Jaques, 1979). The salaries of each of these seven strata when referenced to the lowest paid strata are 1.5, 3, 6, 12, 24, 48, and 96 (Kleiner, 2001). Similarly, the salaries of all government employees as recommended by the Arthashastra fall into 10 levels starting at 250 panas and increasing in multiples of 2, 4, 8, 12, 16, 32, 48, 96, and 192 up to the highest paid government official (Rangarajan, 1987, p. 288-293). A comparison of the salaries recommended by Kautilya and Jaques with respect to the existing salaries for Indian bureaucrats is shown in Figure 1.

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Insert Figure 1 here

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Conclusions

We compared the wage structure of the Indian bureaucracy, as it exists today, with the wage structure recommended by Kautilya's *Arthashastra* and found a number of areas of disagreement between the two. First, the existing wage structure of Indian bureaucrary is highly egalitarian while the wage structure recommended by Kautilya's *Arthashastra* is quite hierarchical. Specifically the ratio of the most lowly paid government servant to the most highly paid government servant is fixed at 1:12 while Kautilya recommends a ratio of 1:96. Second, we find that the salaries being paid to Indian bureaucrats are significantly lesser than those recommended by Kautilya on a purchasing power parity basis. At the highest level of Indian bureaucracy, the salaries being paid to officials are less than one fourth of those recommended by Kautilya. Research on pay structures and pay levels have consistently shown that when individuals perceive inequity in their payment, they are likely to be less productive and even deviant. Given the conditions of pay in the Indian bureaucracy, we propose that one of the reasons of the inefficiency and corruption in public service in India could be the wage structure.

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Table 1: Grades and Pay Bands and Cost to Government (CTG) for IAS Officers

Sr. No.	Pay Band (minimum and maximum basic salary in Rs. per month)	Grade Pay (in Rs. per month)	Cost to Government[1] (minimum and maximum CTG in Rs. per month)	Cost to Government (mid-point of CTG range in Rs. per annum)	Cumulative number of years in the grade
1	Junior Scale, Pay Band 3, (15,600-39,100)	5,400	74,760 – 158,420	13,99,080	0 - 3
2	Senior Time Scale, Pay Band 3, (15,600-39,100)	6,600	79,032 – 162,692	14,50,344	4 – 8
3	Junior Administrative Grade, Pay Band 3, (15,600-39,100)	7,600	82,592 – 166,252	14,93,064	9 – 12
4	Selection Grade, Pay Band 4, (37,400-67,000)	8,700	164,116 – 269,492	26,01,648	13 – 15
5	Super Time Scale, Pay Band 4, (37,400-67,000)	10,000	168,744 – 274,120	26,57,184	16 – 24
6	Above Super Time Scale, Pay Band 4, (37,400-67,000)	12,000	175,864 – 281,240	27,42,624	25 – 30
7	Apex Scale, (80,000 [Fixed])	-	284,800	34,17,600	> 30
8	Cabinet Secretary Grade, (90,000 [Fixed])	-	320,400	38,44,800	-

Source: (i) Ministry of Personnel, Public Grievances, and Pensions (September 19, 2008); (ii) Ministry of Personnel, Public Grievances, and Pensions (March 28, 2000); and (iii) Premarajan, Rao, and Gurunathan (2008).

[1.] The CTG calculation uses the average multiplier for general government employees calculated by Premarajan, Rao, and Gurunathan (n.d.). In the report, the multiplier was calculated based on existing salaries prior to their revision by the sixth pay commission. After implementing the recommendations of the sixth pay commission, the multiplier may have changed. Additionally, the concept of grade pay was introduced in the sixth pay commission. For the purposes of CTG calculation, we have added the grade pay to the base pay and then multiplied with the multiplier. Finally, in the report, the multiplier was different for different levels, but for this paper, we have taken the average across levels.

Table 2: Salaries of Government Officials in Kautilya's Arthashastra

Grade	Annual Salary (in panas)	Representative Positions within Civil Services
1	1,000	Heads of departments of civil service
2	2,000	King's physician, Chief Engineer
3	3,000	Nil
4	4,000	Forester, Chief Superintendent of Productive Forests
5	8,000	Magistrates
6	12,000	Ministers, Governor General of the City, Head of manufacturing establishment, Provincial Governors, Governors of frontier regions, City commandant
7	24,000	The Chancellor, The Treasurer
8	48,000	Officiating priest, King's guru, Councilors

Source: Rangarajan (1987, pp. 288-293)

Table 3: Comparing Salaries of Government Officials Suggested by Kautilya with Actual Salaries of IAS Officers

Level	Annual salary of government servants as recommended by Kautilya in terms of 2012 values (in Rs. Per annum)	Annual salary of government servants as recommended by Kautilya in terms of 2012 values (in Rs. Per annum) CTG Equivalent	Actual Salaries of IAS officers CTG equivalent	Ratio of actual salaries of IAS officers to salaries recommended by Kautilya
1	171,900	611,964	1,399,080	2.28
2	343,800	1,223,928	1,450,344	1.18
3	515,700	1,835,892	1,493,064	0.81
4	687,600	2,447,856	2,601,648	1.06
5	1,375,200	4,895,712	2,657,184	0.54
6	2,062,800	7,343,568	2,742,624	0.37
7	4,125,600	14,687,136	3,417,600	0.23
8	8,251,200	29,374,272	3,844,800	0.13

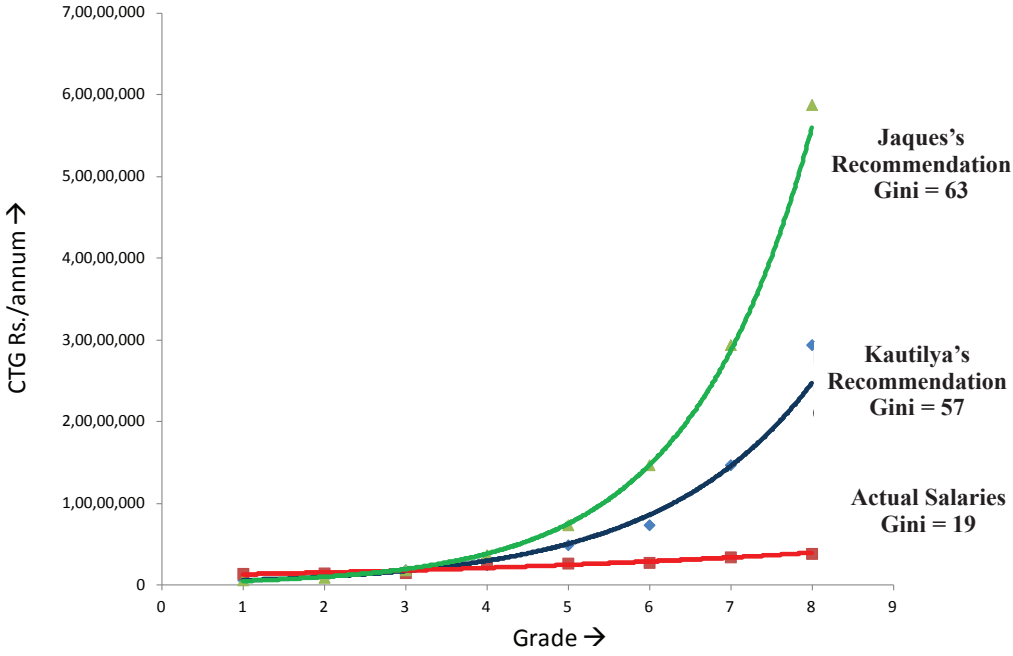

Figure 1: Comparing the Actual Salaries of Indian Bureaucrats with Kautilya's and Jaques's Recommendations.