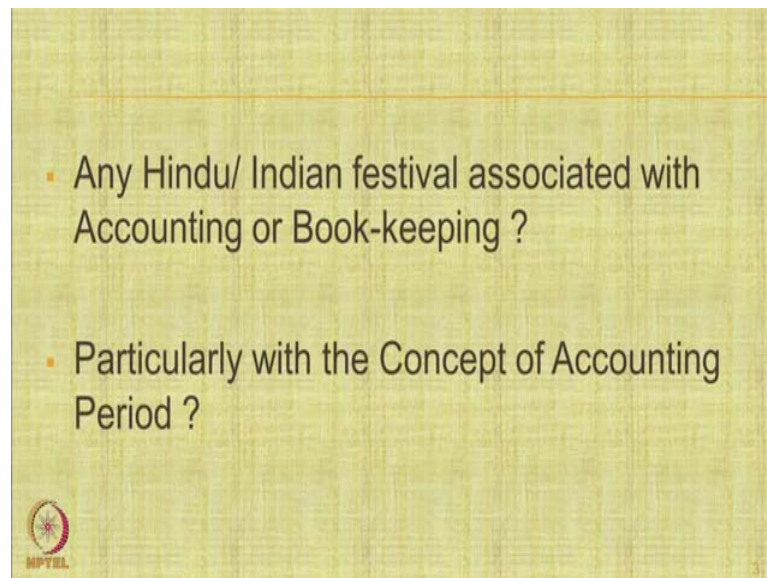


Financial Accounting
Prof. Varadraj Bapat
School of Management
Indian Institute of Technology, Bombay

Lecture – 23
Evolution of Accounting

Namaste. In today's session we will discuss about Evolution or history of Accounting, in the last session we have understood various concepts and principles of accounting which have been standardized as accounting standard. Today let us look at how the accounting evolved.

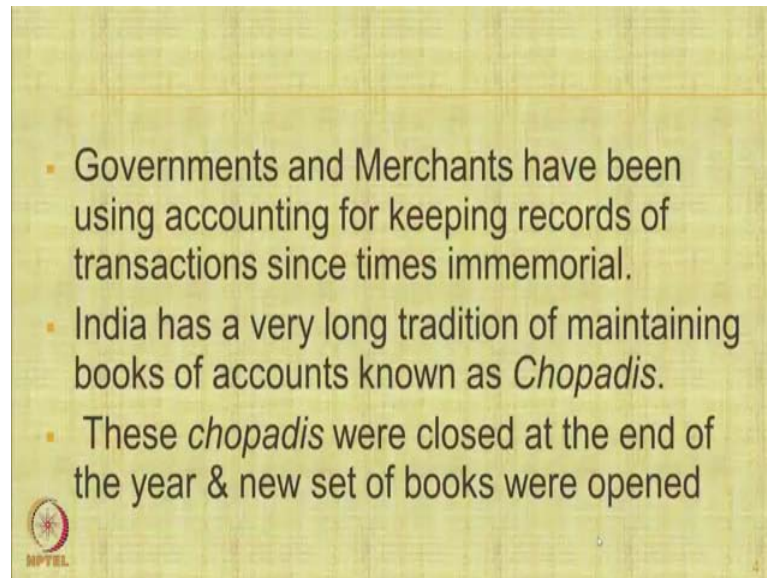
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Now, do you know any Hindu or Indian festival which is associated with accounting or bookkeeping? Are you able to recognize or remember any of festivals which you would be celebrating, but it has a very strong relationship with accounting anybody is able to guess? I will give you a hint, it is something to do with the concept of accounting period.

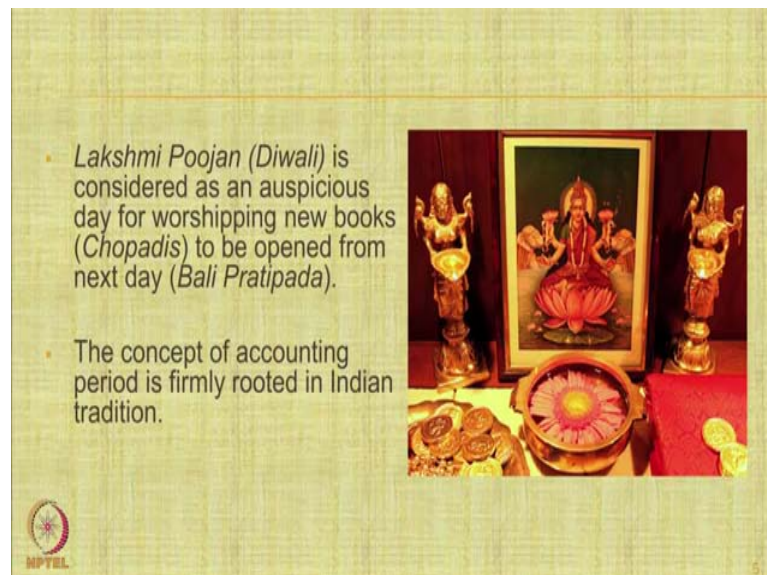
In the last session we have discussed accounting period concept, it means that infinite periods are divided into a specific one year period when we close the books we reopen new books and we prepare P and L and balance sheet at the end of the period that is the accounting period concept. Now, do you know or do you remember any festival which is associated with that period?

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Now, governments and merchants have been using the accounting for keeping records since almost time immemorial and India had a very long tradition of preparing chopadis. Chopadis refer to the books of accounts and every year the old chopadis were closed and new set of chopadis were opened.

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I think many of you have judged it or remember remembered it correctly that is called as Lakshmi pooja and that is very important reason why Diwali is celebrated.

Now, Lakshmi pooja is an auspicious day on which the old books are closed new books or chopadis are worshiped and then they are opened on the next day. Now, you can here understand how the concept of accounting period is very firmly rooted in Indian tradition.

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This is a traditional photo how the chopadis used to be worshiped and then the new chopadis will be started during Diwali.

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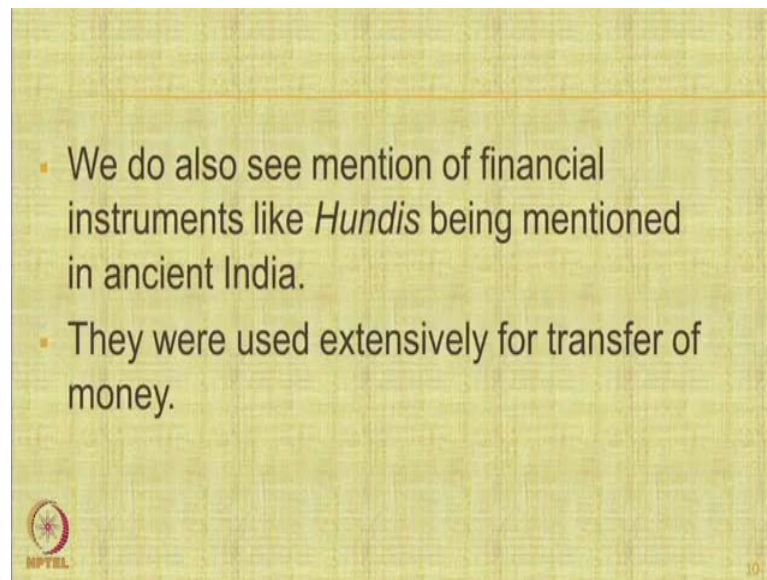


This is a photograph of some records of how the accounting was made in the old period.

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We also see mention of several financial instruments particularly hundis which are mentioned in many of the Indian scriptures and they were used extensively for transfer of money, here there are some photographs of some of the hundis.

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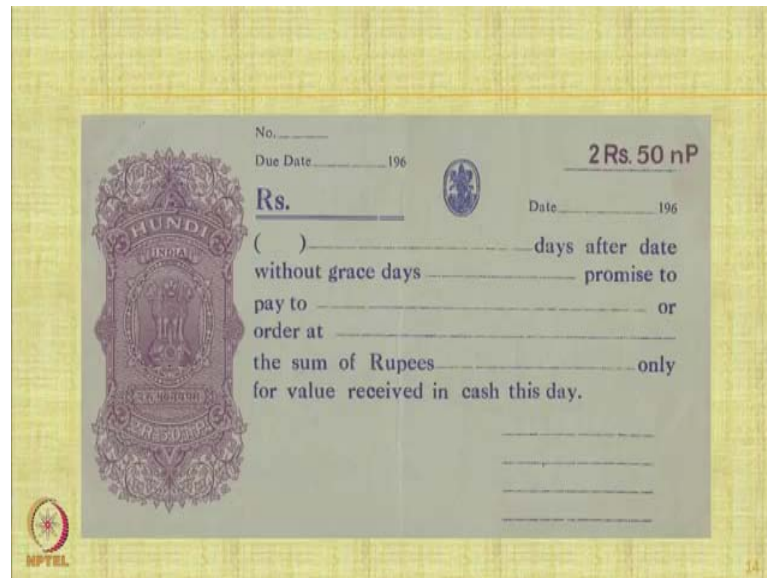
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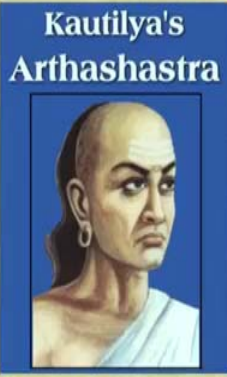
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KAUTILYA ARTHSHAstra

- Kautilya also known as Chanakya or Vishnugupta a well known statesmen, economist & spiritual guru wrote famous book *Arthshastra* in 4th century B.C.
- Kautilya prescribed the accounting theory that included bookkeeping, preparation of financial statements, auditing & fraud risk management. He considered accounting as an integral part of economics. Various kingdoms in India used his work until the 15th century AD i.e. before the colonial rule.



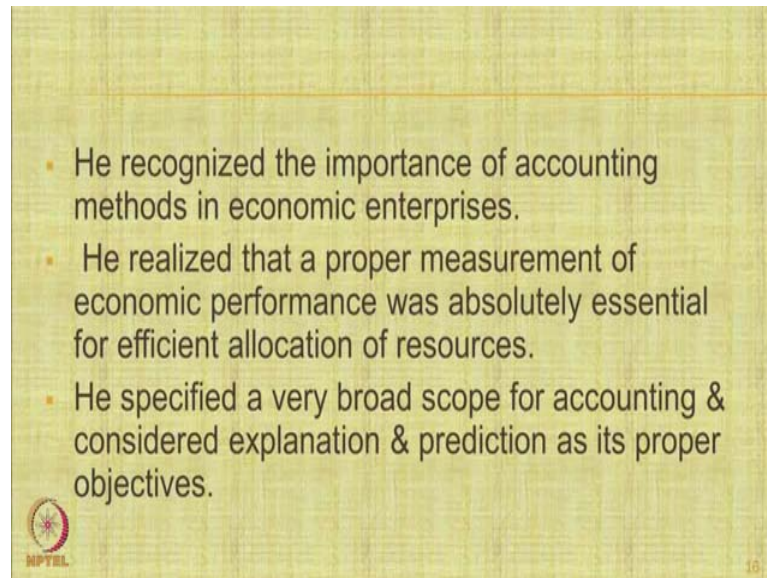
Kautilya's Arthashastra

The slide features a portrait of Kautilya, a man with a shaved head and a white shawl, looking slightly to the right. The portrait is set within a blue rectangular frame. Above the frame, the text 'Kautilya's Arthashastra' is written in white. The slide also includes a list of bullet points about Kautilya's life and work, and an NPTEL logo in the bottom left corner.

Many of you would have heard about Kautilya Arthshastra; Kautilya Arthshastra has well documented rules about accounting. Chanakya or Vishnugupta or Kautilya, he was a statesman, economist and also a spiritual guru his period is around 4th century BC. And Kautilya prescribed the accounting theory that included bookkeeping, preparation of financial statements, auditing, fraud risk management and so on.

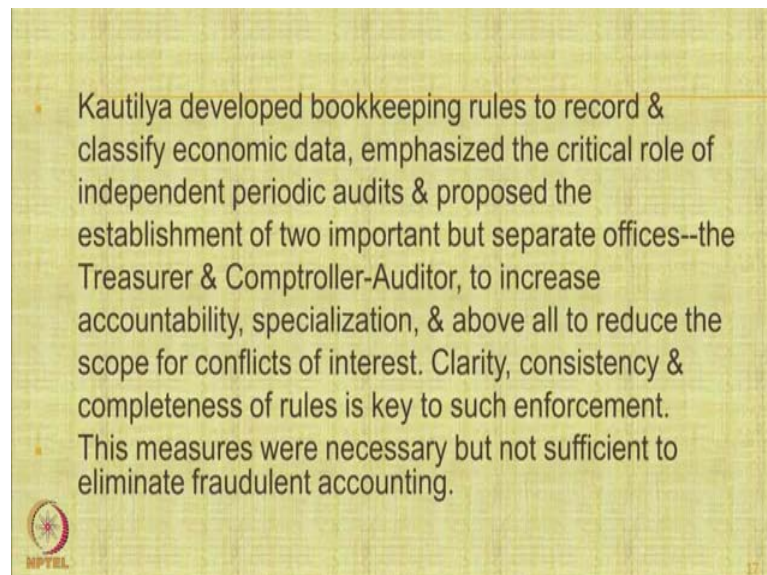
He considered accounting to be integral part of economics and various kingdoms in India used his work until the 15th century before the advent of colonial rule.

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He recognized the importance of accounting in economic enterprises and he realized that proper measurement of economic performance is extremely essential for efficient allocation of resources. Now, he has specified broad scope of accounting and considered the explanation and prediction at its proper objective.

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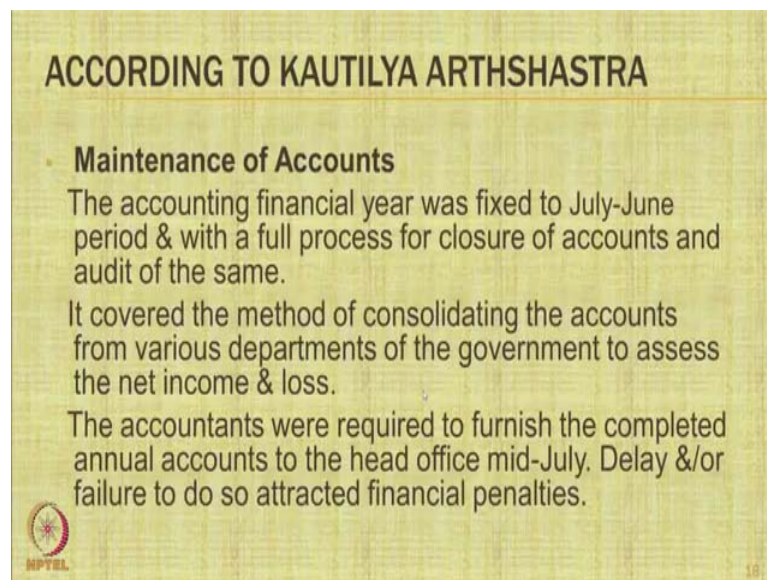


Now, the accounting rules are given for recording and classifying economic data also it was emphasized the critical role of audit which needs to be independent and should be carried out in a periodic manner, there were two important offices treasurer and

comptroller general they were deliberately separated to ensure that there is audit independence.


So, accounting the accountability was increased, specialization was brought in and the scope of conflict was reduced considerably because of separation of these two office. Clarity, consistency and completeness of rules is key to such enforcement, these measures were necessary, but not sufficient to eliminate fraudulent accounting.

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ACCORDING TO KAUTILYA ARTHSHAstra

- **Maintenance of Accounts**
The accounting financial year was fixed to July-June period & with a full process for closure of accounts and audit of the same.
It covered the method of consolidating the accounts from various departments of the government to assess the net income & loss.
The accountants were required to furnish the completed annual accounts to the head office mid-July. Delay &/or failure to do so attracted financial penalties.

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Now, according to Kautilya Arthshastra maintenance of accounts, now the financial year was fixed and a full process for closure of accounts and audit of the same was also mentioned. It covers the method of consolidation of accounts of various departments because under government you have got so many departments and to get a complete picture for the kingdom or for the state it is necessary to consolidate them properly. Now, accountants were required to furnish the completed accounts to the head office.

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Classification of Receipts

Kautilya states that "receipts may be (1) current, (2) last balance, & (3) accidental".

In it, he differentiates between cash receipts & debtors, current & accrued income, income from other sources, windfall gains, & recovery of bad debts.


He recognized the concept of risk & suggested different rate of interests for loans. Foreign trade loan attracted the highest interest, as the returns were uncertain.

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Now, Kautilya says that receipts maybe for the current period for the last period and accidental, so the receipts have been classified and the differentiation has been made between cash receipts, debtors, currents and accrued in current and accrued income, income from other sources, windfall gains and recovery of bad debts and so on.

He has recognized the concept of risk and suggested that different rate of interest for loans be charged. Foreign trade loan attracted the highest rate of interest because the returns are uncertain. So, to take care of risk; risk premium can be charged on such types of loans.

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Classification of Expenditure.


Expenditure classification was similar to receipts classification & included the differentiation between capital expenditure & revenue expenses.

Kautilya described it as – “Expenditure is of two kinds— daily expenditure & profitable expenditure.” The difference between income & expenditure was termed as “net balance”. He insisted on making long-term investments in construction & other works as these would generate profits over a period. It also entailed keeping track of work in progress.

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Now, the expenditure on classification the expenditure classification was also done similar to classification of receipts. So, differentiation of capital expenditure and revenue expenditure was made an expenditure is of two kinds; daily expenditure and profitable expenditure. The expenditure between income and the difference between income and expense was termed as a net balance. He insisted on making long term investments especially in construction that would generate profit over a period. It has also entailed keeping track of the work in progress.

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Role and responsibility of accountants

A hierarchical organization structure of senior to junior accountants existed within the king's treasury function.

The accountants maintained books of accounts on an annual basis according to prescribed standards. The same were furnished for audit at year-end.

Kautilya suggested good salaries to accountants & auditors as high income would keep them ethical.

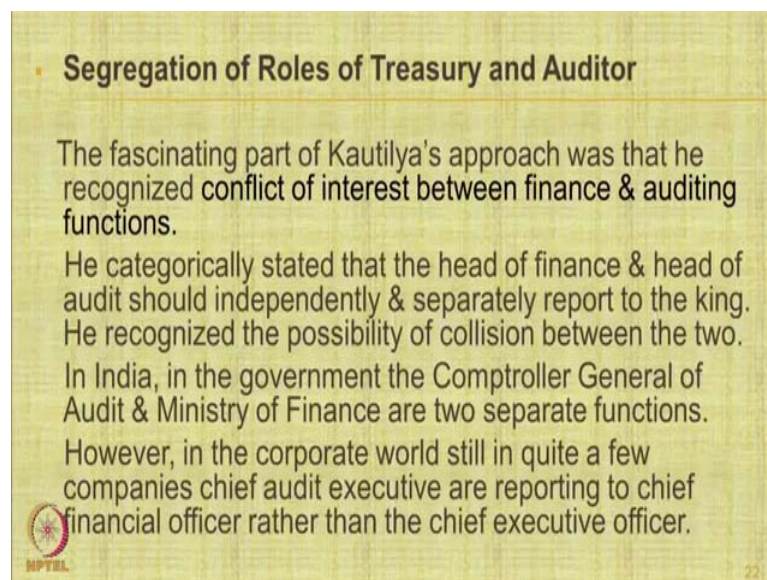
Accountants would be more prone to commit fraud if they earned very little.

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Now, the role and responsibility of an accountant has been quite well defined. In a hierarchical organization structure of senior to junior accountants existed in the kingdom's treasury function, the accountants maintain the books of accounts on an annual basis according to prescribed standards and the same were furnished for audit at the end of the year. Kautilya suggested good salaries be paid to accountants as well as auditors as higher income would keep them ethical.

Because if they are not given good salary there are more chances that they commit the fraud, I think most of you who are looking forward to be accountants would be very happy to know that salary of accountants were at a very high level accountants as well as auditors as per Kautilya's principles.

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Segregation of Roles of Treasury and Auditor

The fascinating part of Kautilya's approach was that he recognized conflict of interest between finance & auditing functions.

He categorically stated that the head of finance & head of audit should independently & separately report to the king. He recognized the possibility of collision between the two.

In India, in the government the Comptroller General of Audit & Ministry of Finance are two separate functions.

However, in the corporate world still in quite a few companies chief audit executive are reporting to chief financial officer rather than the chief executive officer.

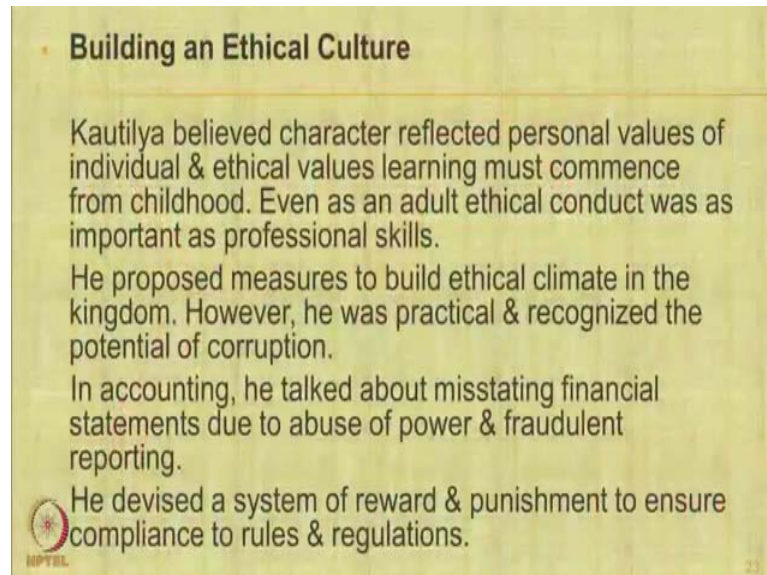
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Now, one very important and fascinating part was segregation of two offices treasury and audit, this is necessary for avoiding the conflict of interest between finance function and audit function. Kautilya's categorically stated that the head of finance and the head of audit should independently and separately report to the king, he considered recognized the possibility of collision between the two.

In India, the government has now current government has comptroller general of audit and ministry of finance these are two separate functions. However, in the corporate world many times these functions may not be that much separate because audit executives may still report to CFO rather than directly to CEO. But it is necessary

theoretically to have complete separation and have an independent position for auditors, so that they can directly report to CEO or to the board.

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Building an Ethical Culture

Kautilya believed character reflected personal values of individual & ethical values learning must commence from childhood. Even as an adult ethical conduct was as important as professional skills.

He proposed measures to build ethical climate in the kingdom. However, he was practical & recognized the potential of corruption.

In accounting, he talked about misstating financial statements due to abuse of power & fraudulent reporting.

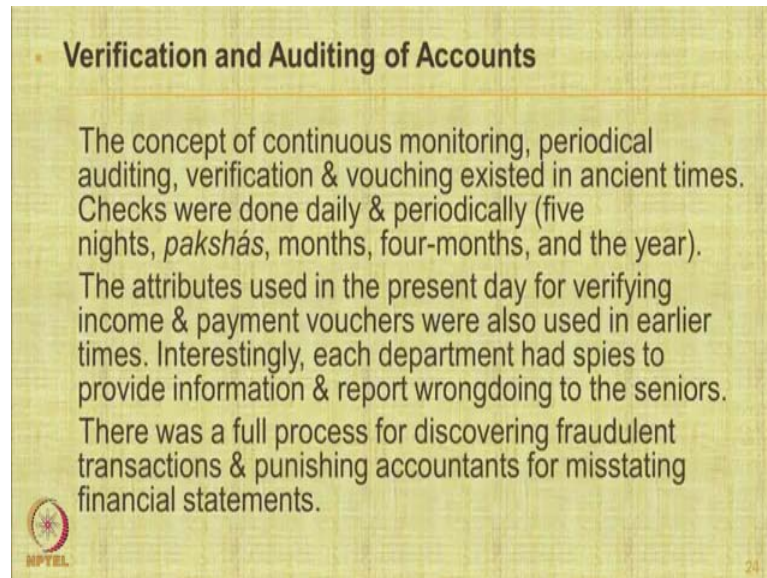
He devised a system of reward & punishment to ensure compliance to rules & regulations.

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Kautilya significantly emphasized building of ethical culture because whatever rules you may unless there is a morality within it is likely that people will find out ways and means to somehow do various types of frauds. Now, Kautilya believed that character reflected personal values of individuals and ethical value learning must commence right from childhood even as at as an adult ethical conduct was as important as professional skill. Because skill alone is not at all enough to ensure that frauds do not happen or improper conduct does not happen.


He proposed measures to build ethical climate in the kingdom. However, he was practical and recognized the potential of corruption. In accounting he talked about misstating financial statements due to abuse of power and fraudulent reporting. He devised a system of reward and punishment to ensure compliance of rules and regulations.

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Verification and Auditing of Accounts

The concept of continuous monitoring, periodical auditing, verification & vouching existed in ancient times. Checks were done daily & periodically (five nights, *pakshás*, months, four-months, and the year). The attributes used in the present day for verifying income & payment vouchers were also used in earlier times. Interestingly, each department had spies to provide information & report wrongdoing to the seniors. There was a full process for discovering fraudulent transactions & punishing accountants for misstating financial statements.


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Now, verification and auditing of accounts; now, a concept of continuous monitoring, periodical auditing, verification of vouching existed even in ancient times. Checks were done daily and periodically five nights, pakshas, months, four months and year these were the periods when the periodical checks were done.


Now, the attributes used in the present day for verifying income and payment vouchers were also used in those times. Interestingly, each department had species to pro had had spies to provide information and report wrongdoing to the seniors. So, what is happening at a lower level was to be directly reported to seniors through spies. There was a full process for discovering fraudulent transactions and punishing the accountants for misstating financial statements.

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- Luca Pacioli (1445-1515), claimed to be the father of modern accounting as he published first modern text on accounting.



A portrait of Luca Pacioli, an Italian mathematician, accountant, and philosopher. He is depicted from the chest up, wearing a dark, hooded garment. To his left, a large, multi-faceted crystal or gemstone is shown, possibly representing the 'Divina Proportione' or the 'De Divina Proportione' manuscript.




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This is about the ancient India, where the accounting was really well developed. Now, as far as the western countries are developed western countries are concerned the accounting developed much later. So, in 1445 we have Luca patchouli Pacioli who is considered as a father of modern accounting because he published the first modern textbook of accounting, he is from Italy.

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- Governments & merchants had been using a system of recoding transactions, recognizing the benefit & sacrifice aspects, for over three hundred years by the time Pacioli published his text.
- However, the system became a standard for merchants especially in Europe only after Pacioli structured & organized it in his book.



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Now, governments and merchants has been using the system of transactions, recording for a very long time. However, the system became a standard for merchants especially in Europe only after Pacioli structured and organized it in his book getting it.

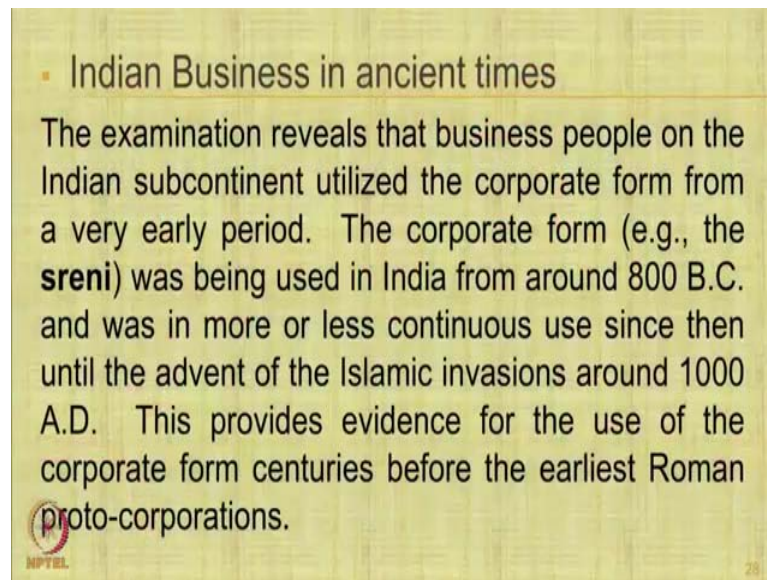
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So, now the question which may arise is in the ancient India is it possible that we have such a detailed system of accounting as you can see in Arthshastra because system of accounting should be supported by that must level of developed commerce. So, we do see that business, trade, commerce and industry all were highly developed in ancient India.

There was a very high BoP surplus that is Balance of Payments surplus which can be cross checked by the movement of gold because a lot of gold used to be transferred to India there are records available about that movement. And, there are also records available about navigation because trade was happening through sea routes, that is also available.

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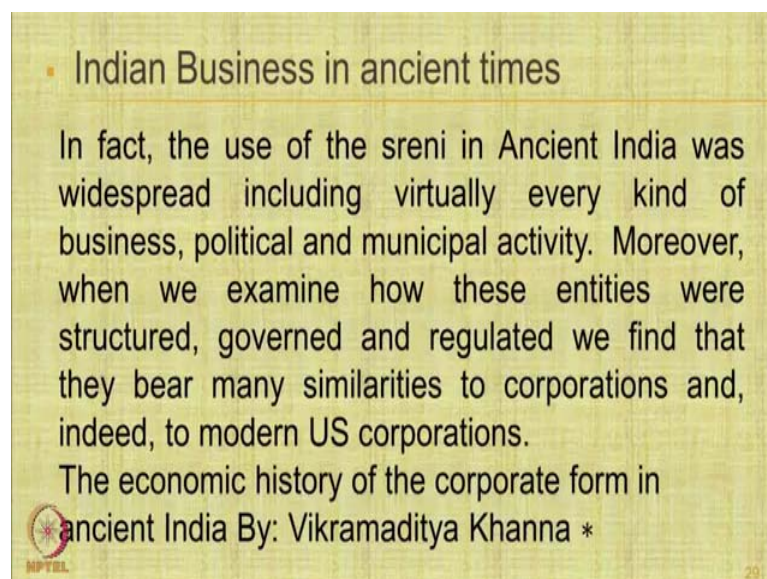
▪ Indian Business in ancient times

The examination reveals that business people on the Indian subcontinent utilized the corporate form from a very early period. The corporate form (e.g., the **sreni**) was being used in India from around 800 B.C. and was in more or less continuous use since then until the advent of the Islamic invasions around 1000 A.D. This provides evidence for the use of the corporate form centuries before the earliest Roman proto-corporations.

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Now, Indian business in the ancient time, the examination reveals that business people on the Indian subcontinent use the corporate form from a very ancient time and that corporate form used to be known as sreni. Now, the records are available around 800 BC and from there more or less continuously it was used until the advent of Islamic invasion in 1000 AD. Now, this provides the evidence for the use of corporate form for a very long time much before the roman proto corporations.

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▪ Indian Business in ancient times

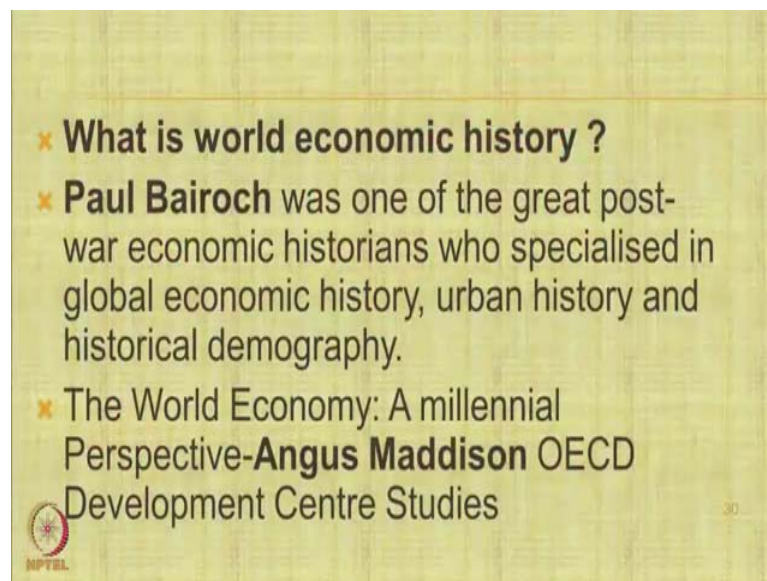
In fact, the use of the sreni in Ancient India was widespread including virtually every kind of business, political and municipal activity. Moreover, when we examine how these entities were structured, governed and regulated we find that they bear many similarities to corporations and, indeed, to modern US corporations.

The economic history of the corporate form in ancient India By: Vikramaditya Khanna *

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In fact, the use of sreni in ancient India was widespread including virtually every kind of business, political and municipal activity. Moreover, when we examine how these entities were structured, governed and regulated we find that they bear many similarities to modern day corporations. This has there has been a detailed book by Professor Vikramaditya Khanna on economic history of the corporate form in India, so we have taken this slides from that.

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We also have some other records particularly about world economic history. So, Paul Bairoch was a great post war economic historian, he has specifically documented the history of industry and also the urban history where a lot has been stated about the share of India because India was a highly industrialized country before the arrival of British and a more detailed record is available from the work of Angus Maddison.

So, Angus Maddison was in charge of one very important project about world economic history which was instituted by OECD development center studies.

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SHARE OF WORLD GDP FROM 0 TO 1998											
Year	0	1000	1500	1600	1700	1820	1870	1913	1950	1973	1998
W. Eur	10.8	8.7	17.9	19.9	22.5	23.6	33.6	33.5	26.3	25.7	20.6
USA	0	0	0.3	0.2	0.1	1.8	8.9	19.1	27.3	22.0	21.9
China	26.2	22.7	25.0	29.2	22.3	32.9	17.2	8.9	4.5	4.6	11.5
India	32.9	28.9	24.5	22.6	24.4	16.0	12.2	7.6	4.2	3.1	5.0
World	100	100	100	100	100	100	100	100	100	100	100

 Source: Table-B-20 Appendix B, pp263; The World Economy: A millennial Perspective—Angus Maddison OECD Development Centre Studies –2007

Now, the economic history as has been brought in is really very interesting if we look at the share of world GDP in the work of Angus Maddison it is documented from 00 to 1998, the same has been reproduced here in the slide. So, you can see here that India had a very high share in 00 it was as high as 32.9 percent up to year 1000 also it was 28.9 percent of the global GDP and as much as 1700 it was as high as 24 percent. So, you can easily see that India and China were the dominant economies in the world; other countries like Western Europe and US has have arrived much later.

So, the point I am trying to make is considering that a very high share of GDP for India there is every possibility that we had a good system of accounting. So, the accounting system which is documented by Kautilya and other authors do have support from other various others collaborative record. So, with this we will stop here you can see the details about this on internet, so I have given you the source as well.

Now, here you can also see it in the form of a graph and with this we will stop. Namaste.