

**PRODUCTION, TRADE AND URBANIZATION :  
ASPECTS OF ECONOMY IN BIHAR  
IN SEVENTEENTH CENTURY**

Dissertation submitted to the Jawaharlal Nehru University  
in partial fulfilment of the requirements  
for the award of the Degree of  
**MASTER OF PHILOSOPHY**

**MAHESH KUMAR SINGH**

CENTRE FOR HISTORICAL STUDIES  
SCHOOL OF SOCIAL SCIENCES  
JAWAHARLAL NEHRU UNIVERSITY  
NEW DELHI - 110067, INDIA

**1993**



# JAWAHARLAL NEHRU UNIVERSITY

NEW DELHI-110067

Centre for Historical Studies

## CERTIFICATE

Certified that the dissertation entitled "PRODUCTION, TRADE AND URBANIZATION : ASPECTS OF ECONOMY IN BIHAR IN SEVENTEENTH CENTURY" submitted by Mahesh Kumar Singh is in partial fulfilment of MASTER OF PHILOSOPHY Degree of this University. This is an original work and has not been submitted for any other Degree to this or any other University to the best of our knowledge.

We recommend that this dissertation be placed before the examiners for evaluation.

Prof. SATISH SABERWAL  
(Chairperson)

DR. K. K. TRIVEDI  
(Supervisor)

## ACKNOWLEDGEMENTS

I would like to record my gratitude to my supervisor Dr. K.K. Trivedi for introducing me to the niceties of economic history. I am deeply indebted for his kind guidance in the course of my research.

I am grateful to Prof. Muzaffar Alam also for his suggestions and encouragement in the initial stages of this work.

I would like to take the opportunity to thank my friends Ajay, Anwarul, Govind, Niraj, Ranjan, Sanjay, Rahul, Rakesh and many more, for their help and advice. I am also grateful to Rajuji and Ravi for their help in preparing the maps.

Thanks are also due to the staff of School of Social Sciences specially Mrs. Kakkar for her encouragement during the course of my study.

I am also indebted to the authorities and staff of the J.N.U. Library, ICHR Library, New Delhi, Teen Murti Library, New Delhi, Central Library, Delhi University, National Archives of India, New Delhi, Central Secretariat Library, New Delhi, Ratan Tata Library, New Delhi, Archaeological

Survey of India Library, New Delhi, DSA Library of Centre for Historical Studies, JNU, Khuda Baksh Oriental Library, Patna.

I am thankful to Om Prakash for undergoing the pain of typing my dissertation.

And finally, I owe my debt to Babuji & Mai and my elder brother Umesh Bhaiya and elder sisters Shakuntala didi, Usha didi and Manju didi for providing me with inspiration and necessary strength.

*Mahesh Kumar Singh*

MAHESH KUMAR SINGH

## C O N T E N T S

		PAGES
	ACKNOWLEDGEMENT	I
	ABBREVIATIONS	IV
	INTRODUCTION	1 - 7
CHAPTER I	PRODUCTION: AGRICULTURAL AND NON-AGRICULTURAL	8 - 47
CHAPTER II	TRADE	48 - 101
CHAPTER III	URBANISATION	102 - 131
	MAPS:	
	I - Saltpetre Production Regions	
	II - Trade Route, Urban Centres and Production Centres	
	III - Urban Centres on the Trade Route along the Ganges, from Patna to Paini	
	BIBLIOGRAPHY	132 - 141

## ABBREVIATIONS

IESHR	-	Indian Economic and Social History Review
PIHC	-	Proceedings of Indian History Congress
IA	-	Indian Antiquary
EIC	-	East India Company
EFI	-	English Factories in India
IHR	-	Indian Historical Review

## INTRODUCTION

The present work aims at examining the economic conditions in the suba Bihar of the seventeenth century Mughal India. An attempt has been made here to understand the economy of the area through production, trade and urbanization. Attempt has also been made to analyse resource generation capabilities of the region and its ability to make significant changes in the nature of economy, leading to its commercialization, in which production of cash crops, growing network of trade and commodity production led to the growth of several urban centres in the region during the period of our study. The growth of economy and its commercialization in the period also integrated the economy of the region with the larger economic network of the sub-continent and, in certain cases, with areas beyond the frontiers of the sub-continent.

A major factor which has prompted us to take up the study of a region in the seventeenth century is the recent trend in historiography<sup>1</sup> of Mughal India, wherein, a highly

---

1. For example, see Muzaffar Alam, Crisis of Empire in Mughal North India, Delhi, 1986; Richard Barnett, North India Between Empires, Berkeley, 1980; C.A. Bayly, Rulers, Townsmen and Bazaars, Cambridge, 1983; and J.F. Richards, Mughal Administration in Golconda, Oxford, 1975.

Mughal-centric approach has been discarded in favour of the study of regions and localities. Although most of these studies are concerned with the early half of eighteenth century, many of their findings have qualified some of the old assumptions pertaining to Mughal imperial system. Because of the nature of our present work and the limitation imposed by the nature of source materials, we shall not go into a detailed analysis of these issues. For the present, however, we modestly aim to disentangle the study of Bihar region from a Mughal-centric framework, and study it in terms of its own resource generation capacity.

The importance of the period of our study lies in the fact that this period acted as a sort of transitional phase for the region of Bihar, when the economy of the area witnessed intensive economic growth and got integrated into a wider economic network. The importance of the region in terms of its economic viability is manifest from the fact that throughout this period the revenue generation index of the region shows a consistent sign of increase. This, more than anything else, reflects upon the tremendous resource generation potentiality of the region.

Notwithstanding, the economic importance of the area



under study, a detailed analysis of it still remains a desideratum. There are, however, a few works which touch upon themes under discussion. For example, H.K. Naqvi's Urban Centres and Industries in Upper India.<sup>2</sup> In this work, the author has provided many insights on urban centres and industries, yet the geographical focus of the work remains on the upper India. As to the Suba of Bihar, she mainly concentrates on Patna in the process of making generalization about the whole of upper India. Other notable studies which make passing reference to Bihar are Om Prakash's Dutch East India Company and the Economy of Bengal<sup>3</sup> and Sushil Chaudhury's Trade and Commercialization in Bengal<sup>4</sup>. Once again, the focus of their study remain on Bengal only and the discussion on the Suba of Bihar remains incidental to their central thesis.

Works which confine the spatial focus of their study to the region of Bihar are also not of much help. The compre-

- 
2. H.K. Naqvi, Urban Centres and Industries in Upper India, 1556-1803, Bombay, 1968.
  3. Om Prakash, The Dutch East India Company and the Economy of Bengal, Delhi, 1988.
  4. Sushil Chaudhury, Trade and Commercial Organization in Bengal, 1650-1720, Calcutta, 1974.

hensive History of Bihar (ed.) Q. Ahmad and Askari<sup>5</sup>, Bihar Through the Ages by R.R. Diwakar<sup>6</sup> may be cited as examples. Diwakar's book deals with the history of Bihar right from ancient to the modern period. Apart from resorting to wide generalization, it concentrates mainly on political history and, hence, do not provide much information in our content. The work edited by Q.A. Ahmad and Askari is no doubt a better work. It contains mainly articles which can be useful for further researches. However, it suffers from the problems of proper integration. It is to fill up this gap *that* we have attempted <sup>a</sup> comprehensive analyses of the economy of Bihar in the seventeenth century.

The study is divided into three sections. The first section deals with the physical geography and delineation of the area of study, followed by a discussion on agricultural and non-agricultural production and other related issues. The main idea behind this exercise has been to construct a picture of the resource potential of the Suba.

The second chapter deals with the trade and trading

- 
5. S.Askari and Q. Ahmad (eds.), Comprehensive History of Bihar, Vol.II, Part I & II, 1987, Patna.
  6. R.R. Diwakar, Bihar Through the Ages, Calcutta, 1959.

network. An attempt has been made to understand mechanism of the integration of the suba with larger economic network. The discussion in this chapter revolves around commodities of trade, the main trading routes, both inland and water means of transport, the organization of trade and financial institutions like the credit institutions, and the growing activities of European trading companies.

The third chapter concentrates on the study of urbanization. We have tried to examine whether there was any possible co-relation between the resource potential of the growing trading network and the urban centres of this area.

The main sources which we have utilised for the present work can broadly be divided into two categories, indigenous and foreign. The indigenous sources are mainly Persian sources. The foreign sources consist of factory records, traveller's accounts, diaries, notes and observations of Europeans.

The indigenous Persian sources, like *Ain-in-Akbari*, *Khulasatut Tawarikh*, *Chahar-Gulshan*, *Tuzuk-i Jahangiri* and *Babar Nama* give us an idea about revenue figures, area under cultivation, lists of parganas and sarkars, certain agricultural and non-agricultural produces, etc. On the basis of

these informations we can visualize some trends in the field of agrarian economy. However, they do not give precise information on all the agricultural produces and the *dastur* rates of the suba. The Persian sources tend to ignore trade and urban phenomenon and are not very useful in these respects except for the supplementation of few information. So we have to depend heavily upon source material of European origin. The European writers had their own limitation of being alien to this land. They were concerned directly or indirectly with commercial matters. They observed towns more carefully than countryside as their interest laid in manufacturing and commercial activities.

Due to a long and continuous stay of English factors at Patna, their correspondences are very useful for our purpose. These records provide information regarding manufacturing centres, marketing organisation, trade and commerce. But these foreign accounts suffer from certain qualitative limitations. For example, we have information regarding trade in such items only which entered the pattern of European trade. The factory records are available in edited form and consist of selected excerpts by editors. This is another limitation of the source material.

In identifying urban settlements we have to lean upon

European sources. However one needs to be cautious as they termed every non-rural settlement as town. For them town became a generic term. They did not differentiate between settlements like *qasbas*, *ganj*s etc. The geographical focus of travellers' account is also scattered in the sense that they cover extensive areas. Despite that, they give us useful information about trade routes, *Sarais*, *Chaukis* (custom houses) etc.

Both the indigenous and the European accounts do not give much information about demography, the volume of inland and export trade, prices, condition of artisans etc. We do not have the information of precise share of agriculture, manufacture and trade in the economy of urban centres as well.

The information on seventeenth century Bihar also suffers from the lack of proper documentation. They are all scattered in different sources and we have to piece together bits of information from these diverse sources. This also makes the task of systematisation and analysis rather arduous.

## CHAPTER I

### PRODUCTION: AGRICULTURAL AND NON-AGRICULTURAL

In the 1570s Akbar had initiated various measures for the reorganisation of the administration. One major step was the resumption of all the Jagirs and collection of information related with the revenue paying capacity of the Mughal territories through the appointment of Karories. As a result reorganisation of territorial divisions of the earlier period<sup>1</sup> was also undertaken, and in 1580 the Empire was divided into twelve major units called subas.<sup>2</sup> One such suba was Bihar. The *Ain-i Akbari* states that the boundary of suba Bihar extended from Gadhi to Rohtas and from Tirhut to the lower hills in the north.<sup>3</sup> Irfan Habib has, on the basis of

- 
1. Babur, Baburnama (tr.), A.S. Beveridge, (reprint) 1970, p.521.
  2. Abul Fazl, Ain-i Akbari, vol.II (tr.), H.S. Jarret, corrected and annotated by Jadunath Sarkar, Delhi (reprint), 1978, p.129. (Here after Ain);  
P. Saran, Provincial Government of the Mughals (1526-1658), Bombay (reprint) 1973, p.58.
  3. The distance from Tirhut to the northern mountains is given as 110 kos. Ain, vol.II, p.162. This appears to be a mistake as Tirhut region is located in the northern parts of the suba and 110 kos in its north would go beyond Kathmandu. See Irfan Habib, An Atlas of the Mughal Empire, Delhi, 1982, Sheet. 10A.

information available mainly in the *Ain-i Akbari*, has shown that the suba Bihar was located between 83 and 88 degrees longitude and between 22 and 28 degree latitude.<sup>4</sup> The region thus covered an area of approximately 143,688 square kilometers. Bihar, thus, was territorially largest Mughal suba, located in the Ganga Valley. At the time of demarcation, it appears that Mughal administration was guided by physiographic conditions of the region as this territory has been found to be "transitional between the relatively dry, mainly bhangar, doabs of the upper Gangetic Plain, and humid, largely khadar, Bengal... Spatially the rainfall shows a steady decrease from 70 inches or more on the eastern to a little over 40 on the western margins..."<sup>5</sup>

In a pre-modern economy agricultural production occupied the prime position. And for agricultural production, availability of water resources in any region becomes important. The Bihar suba was located in such a region where natural water resources were in abundance. The Ganga, Gandak, Son, Kosi, Burhi-Gandak are some of the major rivers,

---

4. Irfan Habib, An Atlas..., Sheet, 10 A&B.

5. O.H.K. Spate and A.T.A. Learmonth, India and Pakistan: A General and Regional Geography, London 1967, p.564.

which were joined by a large number of tributaries. However, sometimes these also became source of devastation. Another important resource of water was number of large and small lakes, which could supply water throughout the year.<sup>6</sup>

While the central and northern parts of the suba was rich in agriculture, the south Bihar is a part of Chhotanagpur plateau and most of this area was covered with very dense forest and could not contribute much to the economy of the suba. More than fifty percent of the area of the suba was under the forests.<sup>7</sup>

The suba was divided into seven sarkars at the time of suba formation: Bihar, Champaran, Hajipur, Saran, Tirhut, Munger and Rohtas.<sup>8</sup> By the time of Shah Jahan another sarkar was carved out from sarkar Rohtas. Town of Bhojpur was rechristened as Shahabad and was made the headquarters of the northern part, while Rohtas continued to be the

---

6. Ibid., p.565.

7. This understanding is based on the coverage shown by Irfan Habib, An Atlas..., sheet 10 B.

8. Ain, vol.II, pp.165-168.



headquarters of the residual sarkar.<sup>9</sup> Similar adjustments and redemarcations were carried out at lower administrative levels.

Records of the seventeenth century do not provide any information on these demarcations. However, *Chahar Gulshan*,<sup>10</sup> an early eighteenth century chronicle based on the records of the later years of Aurangzeb's reign, shows that there was an increase of about 25 percent parganas over that of *Ain-i Akbari*. While Sarkar of Bihar, Monghyr, Saran and Tirhut show an increase in the number of their parganas, Champaran Hajipur and Rohtas don't do so (See Table 1.).

---

9. Irfan Habib, An Atlas..., p.39, The map on sheet 10 A does not show the new sarkar, even though Irfan Habib notices it in the Notes for his maps

10. Chahar Gulshan, As translated in Sir Jadunath Sarkar, India of Aurangzeb, Madras, (n.d.), pp.134-135.

Table I

<i>Ain-i Akbari</i> Sarkar	<i>Ain-i Akbari</i> Mahal	<i>Chahar Gulshan</i> Sarkar (1720)	Mahal
Bihar	46	Bihar	58
Monghyr	31	Monghyr	40
Champaran	3	Champaran	3
Hajipur	11	Hajipur	11
Saran	17	Saran	27
Tirhut	74	Tirhut	102
Rohtas	18	Rohtas	7
		Shahabad	12
Total 7	200	8	260

On the basis of statistical information contained in the *Ain-i Akbari* it is not possible to work out extent of cultivation. The *Ain-i Akbari* gives the estimated revenue for the entire suba, thereafter it separately provides revenue figures belonging to zabti area; also the sarkar Monghyr is not provided with any measured area statistics. Due to this lack of information one can not work out the average rate of assessment for the suba. Apart from that, the *Ain-i Akbari* has not provided *dastur* rates for crops grown in the suba Bihar; nor the division of sarkar, including those for which measured area statistics have been given, into *dastur* circles. It is possible that the politics of confrontation by a section of nobility posted in the

eastern parts of the Mughal empire in the 1570s, did not allow the land survey and related works. However what stopped the Mughal administration from conducting the survey and finalising rates of assessment and measurement of cultivable area after all opposition by sections in nobility were finally crushed in 1581-82 is any body's guess.<sup>11</sup> It is possible that Mughal officials could not succeed in obtaining the cooperation of zamindars and chieftains of Bihar region as elsewhere in the survey work. The above suggestion is strengthened when we look at the information available in the *Chahar Gulshan*, written more than 100 years after *Ain-i Akbari*. In the *Chahar Gulshan* we find that out of 8 sarkars measured area figures are available for 5 sarkars. For the remaining 3 sarkars, namely Tirhut, Champaran and Hajipur, only expected revenue figures are given.<sup>12</sup>

---

11. Iqtidar Alam Khan, "The Nobility under Akbar and the Development of his Religions Policy 1560-80", Journal of the Royal Asiatic Society, 1968, p.35

12. Chahar Gulshan in Sir Jadunath Sarkar, op. cit., pp.134-35.

Table II  
(biqha-i Ilahi)<sup>13</sup>

Sl. No.	Sarkar	Measured Area		Percentage of increase/decrease over c.1595
		<i>Ain-i Akbari</i> c.1595	<i>Chahar Gulshan</i> c.1720	
1	2	3	4	5
1.	Bihar	952,598	4,473,098	469.57
2.	Monghyr	-	852,465	-
3.	Champaran	85,711	-	-
4.	Hajipur	436,952	-	-
5.	Saran	229,052	1,491,904	650.17
6.	Tirhut	266,464	-	-
7.	Rohtas	47,334	696,850	1472.20
8.	Shahabad	-	1,254,245	-

The above table does not make the picture clear.

We can compare the measured area of only 3 sarkars out of 8. These show a minimum of 400 per cent or 4-fold increase. The area under sarkar Rohtas shows an unbelievable increase in 100 years time. Sarkar of Rohtas and Shahabad taken together show an increase of more than 4000 percent. This magnitude can only be explained if we accept that *Ain-i*

---

13. Chahar Gulshan Statistics are given in biqha-i daftari which was 2/3 in size of biqha-i-Ilahi, Irfan Habib, Agrarian System of Mughal India, Bombay, 1963, pp.4, 364). I have accordingly converted Chahar Gulshan's figures into biqha-i daftari.

Akbari's figures were not based on measurement of entire cultivable as well as un-cultivable waste area of a sarkar. The same could be true for other sarkars.<sup>14</sup> This is also borne out when we calculate per *bigha* revenue estimates. It has been shown that average per *bigha* estimate in the zabti provinces varied between 20 and 50 dams/*bigha*. For suba Bihar it stood at 72 dams/*bigha*.<sup>15</sup> We know that highest assessment rates for a food-crop was 69 dams/*bigha* (wheat). So even if wheat was the exclusive crop cultivated for the entire suba this could not have made it possible to bring the average to 72 dams/*bigha*. When we examine it with other set of evidence, we find that the measured area included a very large proportion of cultivable waste, around 100 per-cent,<sup>16</sup> with this the average dam/*arazi* ratio would be doubled, i.e., 144, which would mean removal of some of the

---

14. For a discussion on constituents of *arazi* (measured area) of the *Ain* see Irfan Habib, *Agrarian System...*, pp.5-6; Dr. K.K. Trivedi, 'Area Statistics of the Agra Suba in the *Ain-i Akbari*', *Proceedings, Indian History Congress*, 1972, pp.270-75; S.P. Gupta, *The Agrarian System of Eastern Rajasthan*, Delhi, 1986, pp.41-2; Shireen Moosvi, *The Economy of the Mughal Empire, c. 1595*, Delhi, 1987, pp.39-49.

15. Shireen Moosvi, *op.cit.*, pp.187-88.

16. *Ibid.*, pp.44-46.

commercial crops from cultivation in the Suba Bihar as their rates are less than 140 dams/bigha. Or the cultivation of a select number of high grade commercial crops, like poppy, both varieties of sugar cane, indigo and pan only. We know from the *Ain-i Akbari* it was not so.

In spite of the fact that more than 50 percent of the map area of the suba Bihar has been shown as covered by the forests, both on its north as well as on its south, the total assessed revenue was substantial, about 4000/dams per square miles. In the adjoining suba of Allahabad it was 6137 dams/square mile and in Awadh 7624 dams/square miles; while for Bengal and Orissa it comes to 4707 dams/square miles, C.1595.<sup>17</sup> In the subas of Awadh and Allahabad measurement of land was completed by c.1595; and An Atlas of the Mughal Empire sheets 8B & 10B suggest that forest cover in these two subas was not as extensive as in suba Bihar, still the estimated revenue per square mile in Bihar does not appear to be very inferior to them. As compared to subas of Bengal and Orissa, the suba Bihar showed higher returns per square mile. This again suggests that measured area statistics are not based on proper survey.

---

17. Irfan Habib, An Atlas..., p.vii.

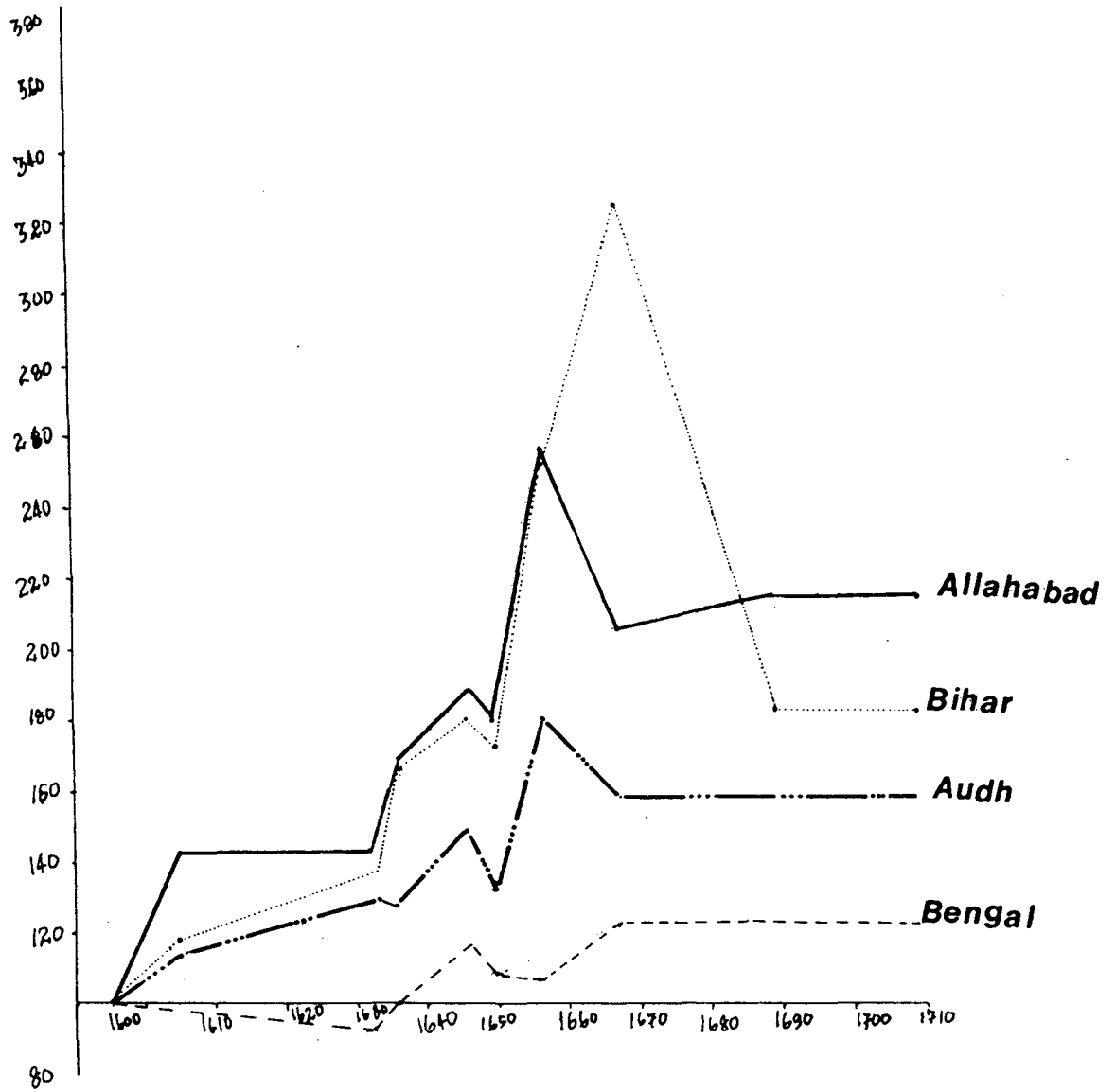
In view of <sup>the</sup> above discussions it would not be far fetched to suggest that Suba Bihar, around 1600, was as rich in agricultural production as any other suba located in the Ganga valley. And in the next, or seventeenth century, the suba Bihar registered progress in resource generation comparable to adjoining subas. (See the Jamadami graph also.)

Table III  
Jama-dami

1	2	3	4	5	6
Sl.No.	Year	Bihar	Bengal	Awadh	Allahabad
1.	1595-6	100	100	100	100
2.	1605	118		114	143
3.	Pre 1627	141	-	115	145
4.	1628-36	137	94	129	143
5.	1633-38	166	100	128	170
6.	1646-47	169	105	131	176
7.	"	180	117	149	188
8.	"	117	117	496	188
9.	1638-56	173	-	106	178
10.	"	325	-	132	178
11.	"	166	100	128	170
12.	"	173	100(?)	128	178
13.	"	392	100	128	221
14.	"	172	108	131	177
15.	"	219	94	143	144
16.	"	166	110	128	-
17.	"	172	103	135	178
18.	1646-56	173	-	135	178
19.	1646	246	107	180	248
20.	1667	325	122	159	206
21.	1687-1691	183	123	159	215
22.	1687-1695	183	123	159	215
23.	1687-?	183	123	159	215
24.	1709	183	123	159	215

Source : on the basis of the Jama figures given in Irfan Habib, *The Agrarian System of Mughal India*, Bombay, 1963, PP. 400-402.

# JAMADAMI GRAPH





The above table is based on the expected revenue statistics presented in a tabular form, by Irfan Habib, for different subas of the Mughal Empire.<sup>18</sup> I have only taken the figures for the adjoining subas of Bengal, Allahabad and Awadh. Figures belonging to Awadh and Allahabad should be more representative of the revenue generation as in these subas collection of revenue was made according to the dastur rates applicable to the measured area. Therefore, these should be closer to the prevailing conditions. In suba Bihar where measurement was not complete till the last years of the seventeenth century, assessment would have followed different procedure including the procedure where the government and the assessed agreed to a figure. In such agreements the total figures would normally not follow the same pattern as in a *zabti* suba, and should show wide fluctuations. However, the above table, in which the *jama* statistics have been presented in indexed form, with *Ain-i Akbari* as the base and equal to 100, we notice that estimates of suba Bihar closely follow the pattern of the suba Allahabad.

---

18. Irfan Habib, Agrarian System..., pp.401-402. Also see Ahmad Reza Khan, "Revenue Statistics of Bihar (1526-1707)" in S.H. Askari and Q.Ahmad (eds.), Comprehensive History of Bihar, vol.II, Part II, Patna, 1987, p.528.

The assessment in Bihar, moved at a higher level than subas of Bengal and Awadh. It can, therefore, be suggested that resource generation in suba Bihar, in the seventeenth century, moved at a greater pace than the subas of Bengal and Awadh; its pace was, in the main, very close to that of suba Allahabad. In other words, the economy of the Bihar suba kept pace with the progress seen in adjoining areas.

It is noteworthy here that during seventeenth century there was an extension of cultivation. A report on the historical discourse on the origin of zamindaris with an account of sarkar Bhojpur says - "most of the zaminadaris during the reign of Shahjahan originated in *bankatai* or populating land after clearing forests. Those who did so became zamindars and obtained *nankars* (part of the revenue as zamindari right) for their lifetime. After the death of such zamindars their sons obtained sanads for the rights held by them on condition of continued services."<sup>19</sup> This development was not limited to sarkar Shahabad alone. The same report has a section Haqiqat Suba Bihar and notes the detailed arrangements and incentives to zamindars and

---

19. S. Nurul Hasan, 'Three Studies of Zamindari System', in Medieval India: A Miscellany, vol.1, Delhi, 1969, p.235.

riayas to come from other regions and subas to undertake cultivation of waste land and land under forest.<sup>20</sup>

## II

We have already mentioned that suba Bihar was well covered by a number of large rivers and their tributaries. These rivers received their water from the monsoon rains, which was substantial and averaged between 40 and 70 inches per annum. Having their sources in the snow-clad Himalayas, these rivers received water, during the lean periods or summers, from the melting of snow (specially in the north of Ganga). These perennial rivers should have also raised the table of sub-soil waters facilitating the digging of low-depth wells for irrigation purposes. The well spread network of natural water resources should perhaps explain the reason for the absence of canals in the medieval period.

Like other provinces of north India *Ain-i Akbari* has not provided any information about the dastur circles and names of crops raised in the suba Bihar. The reason could be located in the fact that in suba Bihar measurement of land

---

20. Ibid., pp.237-238.

was not complete till the *Ain-i Akbari* was compiled. However, in areas where measurement was over, crops were assessed according to dastur-rates.<sup>21</sup> It is nowhere mentioned, what these rates were. However, a look at the dastur-rates for different subas shows that there was not much difference in these rates for a crop. It would not far fetched to suggest that wherever measurement was completed crops were assessed by rates similar to those applicable in Zabti Subas. We can also suggest that productivity or yield of crops was of same standard as found in other Subas located in the Ganga valley.<sup>22</sup>

---

21. Jarrett's translation is found faulty here; see *Ain*, vol.II, (tr), Jarrett, p.165. The Persian text, after giving the total jama for 199 parganas of the Suba, states that "Out of these 138 (pargana) are Zabti", that is in these parganas Zabti rates/destur rates were applicable. Jarrett traslates it special rates. Similarly in case of sarkar Bihar so many "dams in cash from special crops" for jama assessed over measured land, see, *Ain-i Akbari*, (ed.), Blochmann, *Bib. Ind.*, pp.417-18. [Bebliothic Indica, Asiatic Society of Bengal, 1972].

22. *Ain*, vol.II, pp.68-72, for yeild of various crops raised over different categories of land. For a comparison of C. 1600 yield with late 19th century, see Shireen Moosvi, *op.cit.*, pp.73-86.

TH-4737

DISS  
330.954123032  
Si645 Pr



TH4737



## The Crops and other Agricultural Produce

Crops were classified in Mughal India into two categories: (i) *Jins-i-ghalla* (food grains) or low grade crops (crops fetching low prices) and *jins-ala* or *jins-kamil* (cash crops) or high grade crops, chiefly grown for the market. Cotton and sugarcane were the two major crops belonging to this category. Betel leaf was also included in the high grade crops.<sup>23</sup> An abundance of Agricultural produce - food grains as well as cash crops - is noticed in Bihar during our period of study.

Among food grains, rice, pulses and millets were the chief staples. We do not have direct evidence for the production of wheat in Bihar during 17th C. Abul Fazl says that agriculture flourished in a high degree, especially the cultivation of rice which, for its quality and quantity is rarely to be equaled.<sup>24</sup> This fact is corroborated by the *Khulasatut Tawarikh* (1695), which describes 'shali' rice as being unparalleled for goodness and excellence.<sup>25</sup> Thevenot

---

23. I. Habib, Agrarian System..., p.39 & fn.35.

24. Ain II, p.164.

25. Khulasat-ut Tawarikh (tr.) in Jadunath Sarkar, India of Aurangzeb, Madras, p.38. (Here after KI).

and Peter Mundy also noted the plentiful cultivation of rice around Patna.<sup>26</sup> Bowrey mentions rice to be the plentifullest grain in the country.<sup>27</sup>

We do not have direct evidence for the production of wheat in Bihar during seventeenth century although Moreland considered<sup>that</sup> the Bengal wheat, which was supplied to the rest of India, included Bihar wheat.<sup>28</sup>

Barley was grown not much in the bengal and Bihar region. J. Marshall has noted cultivation of barley at Patna in 1670 when it was very scarce (Probably due to famine time). A local hindu brought to him some barley which had grown 11 inches during 10 days and he distributed it after sacrificing it in accordance with the local custom, in the

---

26. Indian Travels of Thevenot and Careri (ed.), Surendra-nath Sen, New Delhi, 1949, p.96 (Hereafter Therenot); The Travels of Peter Mundy in Europe and Asia, 1608-1667, vol.II, (ed.), R.C. Temple, London, 1914, p.134 (Here after Mundy).

27. Thomas Bowrey, A Geographical Account of Countries Round the Bay of Bengal, 1669-1679, (ed.), R.C. Temple, Cambridge, 1903, pp.225-226 (Hereafter Bowrey).

28. W.H. Moreland, India at the Death of Akbar, London 1920, p.119-20.

hope that the harvest would be plentiful.<sup>29</sup>

Among pulses *Khesari* (*Lathyrus sativus*) 'pea like grain' was cultivated and was largely consumed by the poor, but it was unwholesome.<sup>30</sup>

In the sarkar of Champaran the seed of vetch 'Mash' (*Phaseolus radiatus*) or 'urd' was cast on unploughed soil where it grew without labour of cultivation.<sup>31</sup> Ginger was cultivated around Patna.<sup>32</sup>

Fruits were grown in plenty in sarkar Hajipur like jack fruit (Kathal) and Barhal.<sup>33</sup> The jackfruit grew so large that it was difficult to carry. Grape was also grown in Hajipur.<sup>34</sup> Groves of orange trees extended to a distance of thirty kos as in sarkar Tirhut.<sup>35</sup> The areas around

---

29. S.A. Khan (ed.), John Marshall in India, Oxford, 1927, p.83 (Hereafter, Marshall).

30. Ain, II, p.164; KI, in Jadunath Sarkar, op.cit., p.38.

31. Ain, II, p.164; KI, in Jadunath Sarkar, op.cit., p.37.

32. Thevenot, p.96.

33. Ain, II, p.164; KI, in Jadunath Sarkar, op. cit. p.38, Barhal is a small round fruit.

34. Marshall, p.142.

35. Ain, vol.II, p.165. The climatic conditions of this area is not conducive to the orange tree plantation. This is borne out of the fact that the present day climatic conditions do not suit orange tree plantation and it would not have been much different in the 17th Century. Hence, this statement of Abul Fazl does not seem to be true.

Bhagalpur, Dariapur and Patna were noted for Mango groves/trees.<sup>36</sup> Peter Mundy found cocotrees (coconut) between Naubatpur and Patna.<sup>37</sup>

Environs of Patna produced Ananas, resembling pineapple.<sup>38</sup> This fruit was introduced by the Portuguese from America which became common in different parts of India including Bihar and Bengal by the end of 16th century.<sup>39</sup>

Among high grade crops (cash crops) cotton, sugarcane, betel leaf, opium and indigo were produced in Bihar. Cotton cultivation in medieval India was duly noticed in what at present is known as the Bombay Cotton Tract and Khandesh. Apart from these areas cotton was cultivated throughout Northern India and it was an important crop in Bengal.<sup>40</sup> The importance of cotton cultivation can be easily understood in

---

36. Marshall, p.121, 125. Dariapur is between Munger and Patna; Mundy, II, p.134.

37. Marshall, p.77, 121.

38. Thevenot, p.96.

39. Jagadish Narayan Sarkar, "Economic life in Bihar", (1526-1557), in Comprehensive History of Bihar, op.cit, vol.2, part 2, p.413.

40. Irfan Habib, Agrarian System..., p.39.



the context of flourishing trade in cotton textile during Mughal period. Cotton was produced in Bihar around Patna<sup>41</sup> (between Patna and Naubatpur) and Dariapur.<sup>42</sup>

Sugarcane cultivation was more widespread than cotton in Mughal India.<sup>43</sup> The province of Bengal produced high quality sugarcane in abundance.<sup>44</sup> Bihar also produced excellent sugarcane in large quantity.<sup>45</sup> Sugarcane production around Patna was responsible for the great trade in sugar which was sent out of Patna.<sup>46</sup>

Bihar produced betel leaf (pan) which was very much delicate. *Ain-i Akbari* and *khulasatut Tawarikh* comment on the delicacy and fineness of 'Magahi' variety of betel

---

41. EFI, (1618-21), pp.192-193; Mundy, II, p.134.

42. Marshall, pp.76-77.

43. Irfan Habib, Agrarian System..., p.39.

44. Ibid.; EFI (1630-33), p.323; (1646-50), p.225; Francois Bernier, Travels in the Mughal Empire, 1656-68, (tr.), A. Constable, revised, V.A. Smith, London, 1916 437, 442 (Here after Bernier)

45. Ain, II, p.164; KI, in Jadunath Sarkar, op. cit., p.38, Mundy, II, p.134.

46. Ralph Fitch, Early Travels in India (ed.), W. Foster, New Delhi, 1985, p.24; EFI (1655-60), p.224.

leaf.<sup>47</sup>

Large scale indigo cultivation in Bihar was taken up by the Europeans.<sup>48</sup> in the later half of the 18th century although, it was grown on small scale earlier also as noticed by Peter Mundy.<sup>49</sup> According to Irfan Habib coarser sorts of indigo were grown during the seventeenth century in the entire area from Bengal to westward and the crop was listed in the dasturs of the zabti provinces in the *Ain-i-Akbari*.<sup>50</sup>

Opium was cultivated almost every where during Mughal period but especially in Malva and Bihar.<sup>51</sup> The cultivation of opium in Bihar was noticed in the later half of the 16th century and continued in 17th century.<sup>52</sup> The opium was

---

47. Jean-Baptiste Tavernier, Travels in India, (tr.), V. Ball, (ed.), William Crooke, New Delhi, 1977, vol.II, p.23 (Hereafter Tavernier). Ain II, p.164, KI. in Jadunath Sarkar, p.38.

48. Prabhat Kumar Shukla, Indigo and the Raj, Peasant Protest in Bihar, 1780-1917, Delhi, 1993, p.7.

49. Mundy, II p.151.

50. Irfan Habib, Agrarian system..., p.42.

51. Ibid., p.44 & n.

52. Ralph Fitch, Englands Pioneer to India and Burma (ed.), J. Hoton Ryley, London, 1089, p.110; also see Early Travels..., p.24.

cultivated around Patna and Munger, and Patna opium was of far more better quality than that of Munger.<sup>53</sup>

#### Opium (production)

Opium was obtained from the immature fruits of the opium poppy (*papaver somniferum*). When incised, the fruit exuded a thick juice that was later dried and cut into cakes. The quality of the dried opium was judged by its colour. The best grade was brown, whereas the worst would have turned nearly red. There was an extensive range in between. Fresh opium could easily be adulterated with sand or other impurities without risk of immediate detection.<sup>54</sup>

The production process was described by John Marshall in 1670 as follows -

"Tis, a large white flower, about 1, 1/4 yard from [the] ground. They sow the seed in October, and tis ripe in February. The flower closeth, and after a few days they cut 2 or 3 slits in the sid[e]s of it out of which cometh -

---

53. Marshall, p.414.

54. Om Prakash, The Dutch East India Company and Economy of Bengal, Delhi, 1988, pp.57.

white juice which they let dry, then wipe or scrape it, of which is opium. Then they again slit it, till any juice will come out, which they preserve for seed, they cut not!"<sup>55</sup> According to John Marshall an acre of land would produce approximately 40 to 50 ser and some time it was worth 70 to 80 rupees.<sup>56</sup>

According to a Dutch account's estimate pertaining to the year 1688, the annual output of opium in Bihar was at 8,700 mounds. This amount was produced in 48 parganas, half of which were held in jagirs. The remaining parganas, accounting for nearly 61 percent of the total output were in *Khalisa* of the king. 62% of the total output was considered very good in quality. The remaining 38 percent was distributed among various grades.<sup>57</sup>

---

55. Marshall, p.414.

56. Ibid.,

57. Om Prakash, op. cit., pp.57-58.

## Non-Agricultural Produce

Forest produce - Lingam Aloe,<sup>58</sup> Gumlac<sup>59</sup>. Long Pepper<sup>60</sup> and Elephant tusk,<sup>61</sup> were important forest produces of Bihar. Long pepper grew abundantly in the forests of sarkar Champaran.<sup>62</sup> Musk was also produced in the region. It was taken out of the naval of a type of small deer.<sup>63</sup> Bamboo grew near Patna and Ghorghat and in Rahtas hills.<sup>64</sup> Toddy ('tar' trees or palmyras) from which 'tari' or toddy was obtained were found around Bhagalpur and Dariapur.<sup>65</sup>

## Animal Husbandry and Dairy Produce

Fine species of castrated barbary goats were bred in Bihar which were so fat that they could hardly walk. The sarkar of Tirhut bred large buffaloes. Cattle breeding must

---

58. EFI (1618-21), p.258, IA. 1914, p.78.

59. EFI (1618-21), pp.258, 270.

60. Ain, II, p.165; KI, in Jadunath Sarkar, op.cit., p.37.

61. Marshall, p.413.

62. Ain, II, p.165; KI, in Jadunath Sarkar..., op.cit., p.37.

63. Bowrey, pp.229-230.

64. Mundy, II, pp.168-9, Marshall, p.122.

65. Marshall, pp.77, 121.

have been in good condition since milk was 'rich in quality and cheap'. Tirhut was famous for its milk and curd.<sup>66</sup> The cattle were also important from the point of view of carriage and use in agriculture.

### Craft Production

We have seen that agriculture was in a good state and agrarian produce like foodgrain as well as cash crops were cultivated in abundance in Bihar. That was an essential aspect of the economy which could support the manufacturing sector. The craft production was significant from the point of view of trade; internal as well as external.

Patna was a centre of manufacture of fine earthen pottery.<sup>67</sup> The Venetian traveller, Nicolao Manucci, observed manufacture of bottles and 'cups of clay, finer than glass, lighter than paper, and highly scented'. These articles were sent to the court and carried all over the world as rarity and curiosity.<sup>68</sup> A sort of fine earthen ware was

---

66. Ain, II, p.164; KI, in Jadunath Sarkar, p.38.

67. Niccolao Manucci, Storia De Mogor (tr.), William Irvine, London, 1907, pp.84-426 (Hereafter Manucci).

68. Ibid., p.84, 426.

manufactured at Minapur near Hajipur.<sup>69</sup> According to John Marshall these earthen ware weighed only 1,1/8 oz. (Troy) and it held 18 oz. (Troy) water without breaking.<sup>70</sup> Much 'finer and lighter' earthen wares were manufactured at Begumsarai (Begusarai).<sup>71</sup>

Regarding production of glass wares *Ain-i Akbari-i-Akbari* & *Khulasat-ut Tawarikh* mentions manufacture of articles of gilded glass in Bihar.<sup>72</sup> Manucci states the fine bottle manufacturing at Patna.<sup>73</sup>

Good paper was manufactured at Rajgir (in 'Sarkar' of Bihar).<sup>74</sup> Near Rajgir and Gaya there were Quarries of stone resembling marble, of which ornaments were made.<sup>75</sup>

---

69. Marshall, p.414.

70. Ibid.

71. Ibid.

72. Ain, II, 164; KI, in Jadunath Sarkar, op.cit., p.38.

73. Manucci, p.84.

74. Ain, II, p.164; KI, in Jadunath Sarkar, op.cit., p.35.

75. Ain, II, p.164; KI, in Jadunath Sarkar, op.cit., p.35.

Bhagalpur produced bows and arrows and also huqqah.<sup>76</sup> Bamboo stick (Lathi) was procurable at Catchagola near Ghorghat and Patna.<sup>77</sup> John Marshall found the lathi from Patna much superior than that of catchagola because these were not much red and not much rubbed with oil.<sup>78</sup>

The boat building industry must have been flourished due to the riverine trade which was carried through Bihar. Abul Fazl mentions 100 boats in the province.<sup>79</sup> Later the necessity of saltpetre trade served as an incentive to boat construction under the patronage of the East India Company.<sup>80</sup>

Patna also produced shields which was sold at Agra.<sup>81</sup> Tavernier noted making of beads from yellow amber and coral

---

76. Marshall, p.121 and n.; John Marshall states 'neat hubble bubble', an Indian tobacco pipe, a primitive 'hooqah'.

77. Marshall, p.122 and n.; Bowrey, p.249 n. J. Marshall refers to Lathi of the Bamboo (*Pendrocalamus Strictus*).

78. Marshall, p.122; Bowrey, p.249 n.

79. Ain, II, p.165.

80. Marshall, p.153.

81. Francisco Pelsaert, The Remonstrantie, (tr.), and (ed.), W.H. Moreland and P. Geyl, Delhi, 1972, p.7 (Here after Pelsaert).



and ornaments from shells at Patna. It was a household production and women and girls were employed at this work.<sup>82</sup>

## Textile Manufacture

### Cotton

Bihar produced cotton and cotton cloths in large quantity, particularly *Amberti* calicoes.<sup>83</sup> *Amberti* calicoes were manufactured mainly around Lakhawar, some 30 miles from Patna.<sup>84</sup> Besides Lakhawar, there were other centres of production of *amberti*. Peter Mundy mentions Nundownepore

---

82. Tavernier, II, p.208.

83. EFI, 1618-21, p.192; IA 1914, p.70 *Amberty*, *ambetree* (Hindi, *amriti*, *amrti*, *imrati*), a name applied to a stout cloth of Northern India; Mundy, II, p.141 n.

84. EFI, (1918-21), p.192; IA, p.70.

and Salimpore '12 and 14 course (kos) off'.<sup>85</sup>

Bihar (place name, not the province) was also a manufacturing centre for 'amberty' and their cloth called *Kaimk-hais*.<sup>86</sup>

The *ambertis* were strong, close and well-conditioned, and stouter than the varieties of white cotton cloth known as *Dariabads* (made at Dariabad in Barabanki district), *Ckhaireabad* (Khairabad in Sitapur district) and better than *Semianos* (or Samana, a fine cloth made at samana in Patiala state).<sup>87</sup> The *ambertis* as noted by English Factors in 1620 were a full Jehangir coved (= 40 inches or a

---

85. Mundy, II, p.154 and n, R.C. Temple could not identify these two places. Jagdish Naryan Sarkar suggests on the basis of survey of India map that Salimpure is modern day Islampur and 'Nundowne pore' is Nundun, about 30 miles off Patna, Jagdish Narayan Sarkar, Studies in the Economic life in Mughal India, Delhi, 1975, p.8.

86. Kenn's note (1661) says at. Banaras [Sic? Behar] 12 Coruse from Pattana and Lachore, 16, there white cloth for Persian to be had called *Umbertees* and *Camcanys*, from Rs. 1-8 a... EFI, (1618-21), p.192n, 195 and n. *Camcanys* - Qaim khani, may have been so called after Qaimkhan.

87. Mundy, II, p.369, pp.140-141 n; EFI (1618-21), p.236; IA, 1914, pp.98-99.

little more) broad, which is a yard, half quarter English which width as they say, they cannot exceed, to have them close wrouete.<sup>88</sup> It was comparatively narrow in width. The weavers were unable to make them broader. The durability of *ambertis* depended on its narrowness since they were closely woven.<sup>89</sup>

The weavers made the *ambartis* brown or raw or unbleached.<sup>90</sup> They were generally 13 coveds (14 1/2 yards) long although there were little variations in the length. The *ambartis* were of different varieties sizes and prices.<sup>91</sup> There were mainly three varieties of *ambartis* produced in Bihar province - (a) The *rasis* or *rasseyes* or *razai*. It is described as of "narrow bredths... generally corce (coarse) and fewe or none above two rups not the piece of about half

---

88. EFI (1618-21), p.197; IA, 1914, p.13.

89. EFI (1618-21), p.197; p.213; IA, 1914, p.73.

90. EFI (1618-21), p.205, p.213; IA, 1914, pp.79-81.

91. EFI (1618-21), p.205, p.213; IA, 1914, pp.80-81.  
Mundy, II, p.396, Palsaert notes the length 14 gaz,  
Palsaert, p.7.

a yard broad and 13 yards long.<sup>92</sup> So the razai were 620 inches long, 20 inches wide and priced at Rs.2 net a piece. (b) The next sort of ambertis were called *Zefferconnyes* [*Zafarkhani*]<sup>93</sup> and were about one-fourth broader than the razais (i.e., 25 inches to 30 inches) but much finer and priced higher, from Rs.2 to Rs.6 per piece.<sup>94</sup> (c) The third one was the broadest and finest of all three sorts known as *Jehangeres* or *Jahangiri*. These were about full English yard or a Jehanger Coved (40 inches) wide and priced at Rs.3 to 12 net piece.<sup>95</sup> All these varieties were more or less 13 coveds in length and there was little difference in all the varieties. All these were procurable at Lakhavar raw or brown.<sup>96</sup> The other variety produced at Lakhavar was

---

92. EFI (1618-21), p.213; IA, 1914, p.80 and n. It is noted in both the sources that 'halfe Jahanger coved broade' instead 'halfe a yeard brode' means both are meant the same and equal to 20 inches.

93. EFI (1618-21), p.192 n.

94. EFI (1618-21), p.213; IA, 1914, p.80.

95. EFI (1618-21), p.213; IA, 1914, p.80; Palsaert, p.7, Palsaert puts the price of finer variety of amberty from Rs.4, to Rs.10.

96. EFI (1618-21), p.213; IA, 1914, p.80.

Camsukes.<sup>97</sup>

The weavers produced the *ambertis* calicoes raw or brown and whitening and starching was separately done.<sup>98</sup>

Although we do not have direct evidence for the process of production of cloth during 17th Century in Bihar. We can have an understanding on the basis of the general manufacturing process prevalent in Northern India during this period.

The process of production of cloth had to undergo several stages and was based on the division of labour. In production of cotton cloth the first step was to clean the raw cotton and to remove the seeds. The cleaning apparatus was a foot roller which separated the cotton from its seeds. This apparatus was used to clean inferior type of cotton. For a better quality of cotton Charkha was used to clean the seeds from this cotton, and this was more popular than the foot roller. These cleaning apparatuses consisted of two rollers, fitted so as to revolve towards each other when in

---

97. EFI (1618-21), p.200.

98. EFI (1618-21), pp.192-193; IA, 1914, p.70.

contact. The cotton was placed on one side and drawn through the revolving rollers, and since the opening was kept smaller than the size of the seeds, <sup>they</sup> were thrown out to the other side.<sup>99</sup>

After clearing the seeds, the knots and dirt were removed from the cotton by ginning. In 1811-12 F. Buchanan found many ginners working on hire and some of them capable of buying little cotton and retailing them after cleaning.<sup>100</sup>

After ginning, spinning was done. Spinning was done by two equipments, the spindle for finer yarns and the spinning wheel for coarse yarns. The spinning wheel was made of metal, bone or wood having a crochet like hook at the top in which the yarn was caught while undergoing the operation of twisting. The coarse yarn was spun on a heavy one thread wheel made of teak wood.<sup>101</sup> Since spinning was not a complex job it was a household occupation often done by women.

---

99. H.K. Naqvi, Urban Centres and Industries in Upper India, 1556-1803, Bombay, 1968, p.149.

100. Ibid., pp.149-50.

101. Ibid., pp.150-151.

The weaving was done on the usual loom which consisted of two bamboo rollers to serve as the warp and weft.

After weaving, the cloth was sent to the bleachers and dyers. Bleaching was a tedious job and took 2 to 3 months time.<sup>102</sup> The bleachers used lemon and some local ingredients as bleaching agents. To give whitish effect and starch the cloth, thick soup of boiled rice mixed with indigo was used. According to F. Buchanan, Kundri-a local root was used as the starching agent.<sup>103</sup>

After all these stages the bleached cloth was ready for colouring and printing. Various local agents like indigo, turmeric, lac etc. were used to give the cloth different colours.<sup>104</sup>

The production process of cotton cloth depended on professionally distinct and specialised groups. The cotton cloth production was cost effective and manufacturing was done on a smaller or some times bigger scale.

---

102. EFI (1618-21), pp.192-193; IA 1914, p.70.

103. H.K. Naqvi, Urban Centre, op.cit., p.153.

104. Ibid., pp.158-175.

## Silk

Baikunthpur, 10 miles east of Patna was a centre of silk manufacturing.<sup>105</sup> The produce was called *alachah*<sup>106</sup> and *Tuckrees* or *Becutpoorees*<sup>107</sup> (Baikunthpuri). In the factory records of 1620 the size is given as 5, 1/4 coveds long and somewhat more than 3/4 coved broad.<sup>108</sup> Peter Mundy noted in 1632 the *Tuckrees* or *Becutpurees* as 4 coveds long and 7/8 coved broad.<sup>109</sup> They were considered fit for petticoats for women<sup>110</sup> and were cheap in price.<sup>111</sup> They were produced in a very large quantity due to its demand outside in Persia.<sup>112</sup>

Apart from Baikunthpur fine silk was woven at Patna.<sup>113</sup>

---

105. EFI (1618-21), p.197 & n; IA, 1914, p.73. Mundy, II, p.155 & n.

106. EFI (1618-21), p.197 & n; IA, 1914, p.73.

107. Mundy, II, p.155 & n.

108. EFI (1618-21), p.197; IA, 1914, p.73.

109. Mundy, II, p.155 & n.

110. EFI (1618-21), p.197; IA, 1914, p.73; Mundy, II., p.155.

111. EFI (1618-21), p.17; IA, 1914, p.72. Rate is given as 12, 10 and 16 rupees per course (score).

112. EFI (1618-21), p.197, IA, 1914, p.73.

113. Munucci, II, pp.83-84.



## Mines and Minerals

Tujuk-i-Jahangiri mentions the diamond mines in the kokhra region of south Bihar. This mine was annexed by Mughal emperors when expedition were sent to the Palamu.<sup>114</sup>

Tavernier had also mentioned the mines in the region and identified the place of procurement of diamond as Soumelpur.<sup>115</sup> According to Tavernier the diamonds were procured from the sands of koel river mainly by the end of January when water receded in the river. Tavernier gives detailed account of procuring the diamond. About 8000 persons of both sexes engaged in this work. "They commence to search in the river at the town of Soumelpur and proceed up-stream to the mountains where it takes it rise... In the places where they believe there are diamonds they excavate the sand in the following manner. They encircle these places with stakes, fanciness, and clay, in order to remove the water and dry the spot as is done when it is intended to build the pier of a bridge they then take out the sand, but do not excavate

---

114. Tujuk-i-Jahanqiri, (trS), A. Rogers and H. Beveridge, Vol.I, London, 1909-14, pp.154-5, 238.

115. Tavernier, II, p.62.

below the depth of two feet. All this sand is carried and spread upon a large space prepared on the banks of the river and surrounded by a low wall a foot and a half high, or thereabouts. They make holes at the base, and when they have filled the enclosure with as much sand as they think proper, they throw water up on it, wash it and break it."<sup>116</sup>

Ralph Fitch, travelling in the later half of the 16th Century, noted gold mining near Patna, by digging deep pits in earth.<sup>117</sup>

The necessary conditions for the formation of saltpetre in a soil are (i) supplies of nitrogenous organic matter, (ii) climatic conditions favourable to the growth and action of nitrobacteria (iii) the presence of potash and (iv) meteorological conditions suitable for the efflorescence of the potassium nitrate at the surface. These conditions were found in different parts of the Indo-Gangetic tracts

---

116. Tavernier, II, pp.66-67.

117. Ralph Fitch observes "Here at Patanew they finde gold in this manner: they digge deepe pits in the earth, and washe the earth in great boller, and there is they finde the gold and they make the pits round about with bricke, that he earth fall not in". Ralph Fitch, Early Travels..., p.232.

especially in Bihar - Patna, Gaya, Tirhut, Saran and Champaran.<sup>118</sup>

A Dutch report pertaining to the year 1688 gives details regarding the annual output, the names of the parganas producing saltpetre. According to this, the total output a year amounted to 226,2000 maunds (raw) and 127,238 maunds when refined (*dobara-cabera*).<sup>119</sup> Following are the places of saltpetre production and their locational details as given in the Dutch report.

Table IV

	Name of Pargana	Quantity Produced (in maunds)
1.	'Bahaar'	5,000
2.	'Gooaspour'	5,000
3.	'Terruwa'	10,000
4.	'Casmer'	3,000
5.	'Bissara'	40,000
6.	'Macker'	15,000

contd...

---

118. Jagdish Narayan Sarkar, Studies in Economic life in Mughal India, Delhi, 1975, p.68.

119. Susil Chaudhury, Trade and Commercial Organisation in Bengal, Calcutta, 1975, p.161.

contd...

Table IV...contd...

	Name of Pargana	Quantity Produced (in maunds)
7.	'Retty'	12,000
8.	'Moneer'	2,000
9.	'Sirant'	4,000
10.	'Goa'	14,000
11.	'Raat'	14,000
12.	'Mansy'	10,000
13.	'Ara'	2,000
14.	'Sereesa'	15,000
15.	'Melky'	10,000
16.	'Neyerpour'	2,000
17.	'Morwa'	4,000
18.	'Messy'	5,000
19.	'Bobbra'	5,000
20.	'Barry'	10,000
21.	'Bossary'	4,000
22.	'Geddesen'	3,000
23.	'Derbanga'	10,000
24.	'Ballia'	3,000
25.	'Siouparen'	5,000
26.	'Bara'	10,000
27.	'Nerhan'	1,200
28.	'Poorunia'	3,000

Source: Susil Chaudhuri, Trade and Commercial Organisation in Bengal, Calcutta, 1975, pp.229-231.

#### Salt petre production

The producers of saltpetre belonged to a particular caste called the nunia and the period of production was between November and the middle of June. The first step in

the process was the collection of saline earth by scraping the surface of old mud heaps and waste grounds where saltpetre had developed in a thin white efflorescence resembling frost rind. This earth was then dissolved and filtered through bamboos and grass mats. Next the saltpetre liquor was evaporated to a crystallizing state, which was done in earthen pots fixed in two rows over an oblong cavity dug in the ground the interstices between the pots being filled up with clay. The product at this stage was known as dobara saltpetre, and contained 80 to 85 percent pure nitre. In order to produce refined saltpetre called dobaro-cabessa or *Kalmi* - whose nitre content was about 95% - the dobara saltpetre was redissolved and crystallized.

**An Assessment:** In the foregoing discussion we started with a description of the physical geography of the region which constituted suba Bihar in the seventeenth century. The soil of the region is extremely fertile and alluvial. This was favourable for agricultural activities. The rich agriculture of the region is amply signified by the fact that throughout the period of our study the *jama* (estimated) figure of revenue was increasing. This shows that in terms of its resource potential the region was extremely well. The different agricultural as well as non-agricultural productions in the region reflects upon the diversification in the

process of production and its commercialization. This process led to the emergence of several manufacturing centres as well as re-vitalization of many which continued from the earlier period. It led to the growth of trading activities. Through the process of trade the economy of the region also got linked up with the larger economy of the sub-continent and also even beyond the frontiers of the sub-continent in several cases. It is this process which we shall take up in our second chapter.

## CHAPTER II

### TRADE

In the previous chapter we made a survey of production and the centres and localities in which they were produced. In this chapter we propose to study trade in agricultural and non-agricultural products of Suba Bihar meant for the local consumption as well as trade with other regions and outside the sub-continent. The discussion will also cover trading activities of various trading communities and imports into Bihar for local consumption as well as for production and onwards dispatch to various parts of India and outside. We shall also consider various commercial organisations and institutions which facilitated the trade in the region.

It may be pointed out at the outset that this study is mainly based on the information contained in the English language sources. Requirements of the Europeans were limited to certain items, textiles and saltpetre being chief, therefore these sources are not helpful in understanding level and extent of trade in many commodities, especially in foodgrains, which was not small by any standards as we shall try to show.

We noticed in the previous chapter that in terms of resource generation Bihar was not behind the adjoining regions and there was an extension of cultivation during seventeenth century. We have suggested that in the adjoining areas agricultural production was at optimum level therefore trade in foodgrain was not as brisk as in non-agricultural products. However dependence of agriculture on monsoon rains frequently created situations of draught and floods<sup>1</sup> and accordingly direction and volume of trade changed from season to season. European or Persian language sources have noticed only such occasion when scarcity was of extreme level, for example drought in Gujarat in early 1630s. In spite of paucity of information we suggest that trade in food crops was extensive in view of the development of cash nexus in the seventeenth century.<sup>2</sup>

Land revenue was collected either in cash or in kind i.e. crop-sharing (*batai*).<sup>3</sup> Even where crop-sharing was in vogue major part of the foodgrains were brought to market

- 
1. Irfan Habib, Agrarian System..., pp.100-110.
  2. Satish Chandra, Medieval India: Society, the Jagirdari Crisis and the Village, Delhi, 1982, pp.155-165.
  3. Irfan Habib, Agrarian System..., cf. Chapter VI, pp.190-256.



centres at the harvest times. The assignee, who collected the revenue in kind was obliged to sell it so as to meet his obligations enjoined upon him under the *mansab* system. It has been suggested that *mansabdars* spent about 25 per cent of their *zat* salary on the maintenance of war and transport animals.<sup>4</sup> The possibility of similar other obligations cannot be ruled out. To meet these expenditures they were constrained to sell a major part of their collections immediately. Thus we are told that in both the systems of revenue collection grain was coming to a chain of villages which acted as collecting centres of grain (*mandis*) leading up to a bigger *mandi* for a region. These bigger *mandis* were closely linked to the large towns and to the big grain dealers (the *banjaras*).<sup>5</sup>

Food grains were also needed in the urban centres to meet the requirements of occupational workforce engaged in non-agricultural manufacturing sector and others. We do not know the items that entered long distance trade. However, Thomas Bowrey states that "Pattana be a soe fertile to

---

4. K.K. Trivedi, "The Share of *Mansabdars* in State Revenue Resources: A Study of the Maintenance of Animals", IESHR, Vol.24, No.4, 1987, pp.418-421.

5. Satish Chandra, Medieval India..., p.162.

afford to such a plentiful country as Bangala."<sup>6</sup> Similarly, suba Agra and other places received sugar, rice, wheat etc. from Bihar and Bengal.<sup>7</sup>

## TEXTILE

### Cotton

Textiles emerges as the most important item of trade from the Bihar territory. Availability of different varieties and sizes of cotton textiles in sufficient quantities attracted merchants from different region of the sub-continent and nationalities to suba Bihar. Thus we notice individual merchants from Armenia, Central Asia ('Mogoles'), and European company servants with substantial money to arrange their requirements.<sup>8</sup>

---

6. Bowrey, p.226.

7. Pelsaert, pp.4-5, 9; Mundy, Ipp.95-6, 98-9. Also see Irfan Habib, Agrarian System..., p.72; Tapan Raychaudhuri, "Inland Trade", in T. Raychaudhuri and Irfan Habib, (eds), The Cambridge Economic History of India, Vol.I, 1984, p.330. Ain, II, p.164, also praises the rice produced in Subah Bihar.

8. EFI (1618-21), P.192 and fn.1, informs that the Asian merchants purchased textiles worth around ten hundred thousand rupees per annum. Similarly, Manucci found an Armenian investing Rs.30,000 at Patna; See Manucci, II, p.84.

The most sought after varieties were *Amberti*, and *Kaimkhani*. *Amberti* had sub-varieties, like *Razai*, *Zafarkhani* and *Jahangiri*. The sub-varieties differed from one another on account of varying breadths. Lengthwise, these were available in 13 yard pieces. However, these also differed in quality, and thus '*Razai*' was a coarse variety and *Jahangiri* was finest. Market price was determined by the size as well as quality of the product. *Razai* was available for Rs.2.00 per piece; *Zafarkhani* from Rs.1.5 to Rs.6 and *Jahangiri* from Rs.3 to 12 per piece.<sup>9</sup>

We notice a strange practice in the sale of *Amberti* -- known as '*reza*'. *Amberti* was available both as raw as well as bleached. The charge for bleaching was usually fixed at Rs.3 per '*courge*' (score) approximately.<sup>10</sup> However, the charge varied according to the fineness and breadth of the cloth.<sup>11</sup> The local merchants recovered the bleaching expenses by cutting 10 per cent from the length of the cloth before it was sent for bleaching. This practice was known

---

9. IA, 1914, p.80; EFI (1618-21), p.213.

10. EFI (1618-21), p.192; IA, 1914, p.70.

11. IA, 1914, p.80.

as *reza*.<sup>12</sup> Local merchants derived greater margins through the custom of *reza*. The English factors, therefore, decided to purchase raw stuff which was bleached elsewhere.<sup>13</sup>

English factors mainly purchased *Zafarkhani* and *Jahangiri* for taking it to England.<sup>14</sup> In 1620 English factors at Patna had hoped to procure 20,000 pieces of *Amberti* annually.<sup>15</sup> However, by August 1621 they could arrange only 9,500 pieces due to lack of funds.<sup>16</sup> They could raise their purchases only in the second half of the seventeenth century when they had established their factory at Hugli.<sup>17</sup>

Portuguese, Armenians and Central Asian merchants were also engaged in the purchase of *Amberti*. However, value of goods purchased by them is not possible to compute.<sup>18</sup>

---

12. EFI (1618-21), pp.192, 205; IA, 1914, pp.70, 80.

13. EFI (1618-21), p.205; IA, 1914, pp.79-82.

14. IA, 1914, pp.98-99; EFI (1618-21), p.258.

15. IA, 1914, p.80; EFI (1618-21), p.205.

16. EFI (1618-21), pp.258, 260; IA, 1914, pp.105, 108.

17. Bowrey, p.232.

18. EFI (1618-21), 192, 195; IA, 1914, p.71. We are told that Armenians invested very large amount of money in the purchase of textile. However it is not possible to ascertain what part was meant for *Amberti*.

Another important variety, for which there was very large demand, was known as *Kaimkhani*. It was available in 15-5x1 yard size and was priced 40, 50 and 60 rupees per 'course' (score).<sup>19</sup> Purchase for this variety made by the English factors was meant for sale in Persia, Turkey and other places than England.<sup>20</sup> Thus we find that Armenians and Central Asian ('Mogoles') merchants were mainly interested in purchase of this variety. It appears that major part of their investment, suggested at ten hundred thousand rupees per annum,<sup>21</sup> was for purchase of *Kaimkhani*.

The demand for different varieties of cotton textiles appears to be very high. While the English East India Company was pouring in about 60 to 120 thousand rupees mainly for the purchase of *Amberteas*<sup>22</sup>; a single Armenian merchant was purchasing textiles worth Rs.30,000 at one

---

19. EFI (1618-21), p.195; IA, 1914, p.71.

20. Ibid.

21. EFI (1618-21), P.192 & fn.1.

22. Around 1620 English factors purchased about 10,000 pieces of *Amberteas*, priced between Rs.2 and Rs.12. Taking an average of Rs.6 per piece total value comes to Rs.60,000 which can go to a maximum of Rs.120,000; See EFI (1618-21), pp.258-60; IA, 1914, pp.105, 108.

go<sup>23</sup>; or that Armenians were spending ten hundred thousand rupees, annually, for their purchase of textiles from Bihar only.<sup>24</sup> The above figures project a limited picture of the transactions as the requirements and investments of other merchants is not known. However, the purchase by the Armenians show that they were lifting approximately 7.5 million yards of cotton textiles per annum. Since we do not know the weaving capacity of a loom it is not possible to suggest how many looms were in operation in the suba Bihar. However, their number was not insignificant from any standard.<sup>25</sup> The above deduction also suggests that this large quantity of textile could not have been produced in 2 or 3 centres only that find mention in the records of the seventeenth century.

The large market for the textile products that had developed at Patna over a period of time had started to

---

23. Manucci, II, p.84.

24. EFI (1618-21), p.192.

25. It is a well known fact that weavers were perpetually short of funds to produce goods on their own, and thus the *dadani* system started. This suggests that the number of looms in operation was very large to meet the heavy demand; for example see EFI (1618-21), pp.197, 213; IA, 1914, p.73.

induce producers and merchants of outside regions to bring their merchandise here. Thus we find that a number of varieties manufactured in the Bengal and Orissa regions was also available in suba Bihar markets, for example - *Sahan*, *hammam*, *chautare*, *rahmoutes*, *cassa*, *dupatta*, *sanah*, *gingham*, *rumal* etc.

*Sahan* (fine sheeting) takes its meaning probably from endurance.<sup>26</sup> *Hammam* has been described by Peter Mundy as - 'Lynen, 11 coveds long, 1<sup>1</sup>/<sub>4</sub> broad'. It was a thick stout cloth used for wrappers.<sup>27</sup> *Sahan* and *hammam* were not products of Bihar. The trade of both the cloths were in the hands of Pathan dealers who brought the cloths in small parcels from lower parts of Bengal.<sup>28</sup> Both the cloths were products of Orissa.<sup>29</sup> It seems that these were not very much in demand for local consumption and their trade must

---

26. EFI (1618-21), p.193 and fn.2; IA, 1914, p.70.

27. Mundy, II, p.155 & fn.7.

28. EFI (1618-21), p.193; IA, 1914, p.

29. Felsaert, p.8; Mundy, II, p.155.

have increased due to demand put forward by English factors at Patna.<sup>30</sup> In 1620, by month of October English traders had bought 60 pieces of *sahans* and *hammams*.<sup>31</sup>

Literally, the '*chautare*' means four folds, a coarse double-width cotton cloth of two lengths.<sup>32</sup> From the correspondence of English factors at Patna in 1620 it appears that '*sahan*' and '*hammam*' were the varieties of '*chautare*', because immediately after mentioning '*sahan*' and *hammam* it is written "other sorts of *chautare* are not here to be gotten, unless some fewer *rahmoutes*".<sup>33</sup> Here *rahmautes* seems to be a kind of '*chaudth*' but otherwise its meaning is not clear. *Chautare* seems to give a wide range of meaning and variety.

'*Cassa*' (*khasa*) was a variety of muslin, and was dealt in by Portuguese at Patna.<sup>34</sup> According to Peter Mundy the finer variety was produced at Sonargaon (Bengal) and thicker

---

30. EFI (1618-21), pp.193, 197, 206; IA, 1914, p.

31. IA, 1914, p.77.

32. EFI (1618-21), p.193 and fn.4; The word is '*chautdh*', '*chautdhd*', '*chaudtdi*', IA, 1914, p.70 and fn.4.

33. EFI (1618-21), p.193; IA, 1914, p.70.

34. EFI (1618-21), p.195; IA, 1914, p.71.



variety was brought from Orissa. It was 16, 17 and 18 coveds long and 1 coved broad.<sup>35</sup> *Khasa* of finer quality was also brought from Dhaka to Patna.<sup>36</sup> Pelsaert noted during his stay at Agra that Patna produced much muslin (*casa*) of coarse variety, worth Rs.4 or 5 per piece.<sup>37</sup>

'*Doupatta*' (*Dupatta*) was a kind of narrow calico and it was much used for garments.<sup>38</sup> It was brought to Patna by the 'Mogole' and 'Prayches' from Malda.<sup>39</sup>

*Sashes* and 'strips' interwoven with gold and silver of Kasimbazar was also sold at Patna.<sup>40</sup> From Hugli and Bala-sore, '*Sanas*', *Ginghams* and '*Orammalls*' (*rumal*) came to Patna for marketing.<sup>41</sup> Some of these varieties were cotton and silk mixed, and some were muslin.

---

35. Mundy, II, p.154 and fn.3.

36. Bowrey, p.230.

37. Pelsaert, pp.7-8.

38. EFI (1618-21), p.195 and fn.7.

39. EFI (1618-21), p.195; IA, 1914, p.71.

40. *Sashes* - Turban cloth, *strips* - cotton cloth interwoven with gold and silver, Bowrey, p.230 and fn.5, 6.

41. *Sanas* - a kind of fine cloth, *Gingham* - a cloth made of cotton yarns, dyed before being woven. *Rumal* - handkerchief, Bowrey, p.231 and fn.1, 2, 3.

Procurement of goods was made in two ways. One was to approach the producers/weavers at their looms directly or through some brokers. The European companies, who were not well-versed with production centres and related arrangements, preferred to engage brokers. However, we know that institution of brokers was not a new phenomenon which developed after the entry of the Europeans, we can suggest that other merchants also utilised the services of the middlemen. Another passage through which the goods entered the market was when weavers themselves brought it there. In such cases weavers sold their products at the local market centres known as *ganj*.<sup>42</sup> Merchants sometimes had to visit a number of such markets to arrange their requirements. However, it was cumbersome and very time consuming.<sup>43</sup> Weavers' preference to personally reach the market was perhaps to save a margin of profit, which varied between 12.5 to 25 per cent, and was subject to bargaining.<sup>44</sup> In case of unbleached material buyers did not give any brokerage. However, a broker would increase the price of a piece

---

42. EFI (1618-21), pp.192, 204; IA, 1914, pp.70, 77.

43. Mundy, II, p.145.

44. EFI (1618-21), pp.193, 204, 205; IA, 1914, p.80.

by 5 paise. This increase was shared by the local official and the seller; 2 paise for the broker, 2 paise for the local official and 1 paise for the sellers.<sup>45</sup>

### Silk

Bihar had a flourishing trade in Silk goods as well as raw silk. Manufacture of silk goods were mainly confined at Baikunthpur and Patna but trade in raw silk and silk goods at Patna was attracting trading communities there.

We noticed in the first chapter the silk manufacture of Baikunthpur was known as 'alachah' and *Tuckrees* or *Baikunthpuri*. It was  $5\frac{1}{4}$  coveds long and somewhat more than  $\frac{3}{4}$  coved broad. This silk cloth was considered fit in length for petticoats for women and cheap in price. Its demand in Persia was very large so the production must have flourished. It is possible that some quantity of raw silk was produced in Bihar in response to growing demand of its products. However, we have no evidence in support of our suggestion. Almost entire demand of raw silk was met by the produce of Bengal.

---

45. IA, 1914, p.81; EFI (1618-21), p.205.

Raw silk was brought by the dealers from Murshidabad and Saidabad.<sup>46</sup> This raw or serbundy silk was sold at Rs.100 gross per maund (of 40 ser per maund and  $34\frac{1}{2}$  pice per ser). There was a discount of 25% on this sale so the real cost was Rs.75 per maund met.<sup>47</sup> It appears from English Factory records that the governor had control over the sale of silk and it had to be bought through the local 'Kotwal' or governor's agent at the rate of 25% to  $37\frac{1}{2}$ % higher than what Kotwal had to pay to the dealers.<sup>48</sup> The brokerage on all variety of silk was fixed by the nawab's commands, 5 annas of a rupee per cent from the buyer and 10 annas from the seller. But the brokers usually took one-half per cent from the buyer and one per cent from the seller. For brokerage on silk cloth they claimed nothing from the buyer, and took only half a pice per rupee from the seller.<sup>49</sup>

The serbundy (cocoon) silk was wound into different varieties of skeins and they were cheaper at Patna compared

---

46. IA, 1914, pp.81, 98.

47. EFI (1618-21), p.194; IA, 1914, p.71.

48. IA, 1914, p.74.

49. IA, 1914, p.71.

to Agra. In July 1620 the English factors noted the prices of available variety of wound silk. The two variety of skins which were mainly required by them at Agra and England priced at Rs.5<sup>1</sup>/<sub>2</sub> gross per ser, of 34<sup>1</sup>/<sub>2</sub> pices weight per ser, from which 17% was abated as discount (*dusturi*) and which would cost not above Rs.4<sup>1</sup>/<sub>4</sub> the ser of 34<sup>1</sup>/<sub>2</sub> pices weight. The other two variety noted by the English factors and which they usually bought at Agra was not wound and priced Rs.4<sup>1</sup>/<sub>4</sub> gros per ser. After the 17% discount its cost was 3 rupees and 9 anas net per ser at Patna. these varieties were at least 35% cheaper at Patna than Agra. Robert Hughes, the English factor at Patna wrote on 12 July 1620, "These are their present prizes, between which and that we buy in Agra you will perceive a great difference in price for this four sortes, to say one-third of the sort no.1 and two-thirds of the sorte no.2 hath cost us together in Agra near upon 5<sup>3</sup>/<sub>4</sub> rup(ee) net the sear of 30 pices, which here half on(e) half the other may bee bought for about 4 rup(ee)s net the sear of 34<sup>1</sup>/<sub>2</sub> pices weight per seare."<sup>50</sup>

---

50. Letter dated 12 July 1620 in IA, 1914, p.69; EFI (1618-21), pp.193-194.

The form in which raw silk was available at Patna did not suit English Company's requirements.<sup>51</sup> The wound silk bought from Kotwal also cost dearer and the stuff provided by him was not good. So the cheapest and surest dealing for the English was to buy the serbundy and get it wound by employing workmen. As such, the English factors at Patna started a local *Karkhana* for winding of silk.<sup>52</sup> In August 1620, they got the serbundy silk wound into seven varieties to be sent to Agra for onward despatch. The second, third, fourth and fifth varieties were worth  $4\frac{1}{4}$  rupees net the ser of  $34\frac{1}{2}$  pice with all charges of winding. The first was worth of  $4\frac{9}{16}$  rupees per ser, the 6th  $1\frac{1}{2}$  rupees per ser and the 7th  $29/32$  rupees per ser.<sup>53</sup> Within one month the number of workers engaged in English *Karkhana* was increased from 30 to almost 100. However, to stop them leaving the establishment advance payments was made.<sup>54</sup> It would appear that in the initial stages the wound silk of Patna was not at par with that of Agra and Lahore which had the

---

51. EFI (1618-21), p.229; IA, 1914, p.97.

52. EFI (1618-21), pp.197-98; IA, 1914, pp.73-74.

53. IA, 1914, p.73.

54. IA, 1914, p.75; EFI (1618-21), p.198.

tradition for such work, in the weaving of tafeta, from earlier period.<sup>55</sup> The English factors at Patna also sent the *Gird* (round i.e. even quality),<sup>56</sup> *Katwai* (imperfect, discoloured),<sup>57</sup> and *Shikasta*<sup>58</sup> (broken, irregular threads) variety of silk to Agra for sale.

They also experimented in making sleeve (floss) silk<sup>59</sup> (silk thread capable of being separated into smaller fragments for use in embroidery) to be sent to England. Sleeve silk was made of dressing the 'Katwai' and 'Shikasta' and dyed into several colours. The cost of making sleeve silk by dressing and dyeing was 4 rupees net per ser.<sup>60</sup>

Patna was a flourishing trade centre for silk goods which were brought from other regions. Satgaon quilts, wrought with yellow silk, were sold at Patna at reasonable

---

55. IA, 1914, p.98; EFI (1618-21), p.229.

56. Round i.e., even quality; IA, 1914, p.74 and fn.14.

57. Imperfect, discoloured. IA, 1914, p.74 and fn.13.

58. Broken, irregular threads. IA, 1914, p.74 and fn.12.

59. Silk thread capable of being separated into smaller fragments for use in embroidery. IA, 1914, p.74 and fn.11.

60. IA, 1914, p.78.

rate.<sup>61</sup> They were not products of Bihar but brought from the bottom of Bengal.<sup>62</sup> The English traders at Patna bought the Satgaon quilts and modified them by trimming and lining them partly with tafeta and tusar silk for export purposes.<sup>63</sup>

In 1632 Peter Mundy noted that three varieties of silk goods came from Malda to Patna. (i) 'ornees' or 'orhni', it was a woman's mantle, 16 coved in length and wrought with silk and gold, (ii) 'Ballabands' or 'bala band' (turban band), 3 coveds long and wrought with silk and gold, (iii) 'Ellacha' or (alachah), a silk stripped stuff, 16 coved in length.<sup>64</sup> From Sherpur in Bengal came 'Amber' or *Jettalees*, a thin coloured silk for female apparel. It was 4 coved long and 7/8 coved broad.<sup>65</sup>

Bengal also provided tussar stuff to Bihar. It was

---

61. EFI (1618-21), p.195; IA, 1914, p.69.

62. EFI (1618-21), p.206; IA, 1914, p.82.

63. EFI (1618-21), p.198; IA, 1914, p.75.

64. Mundy, II, p.155.

65. Ibid.



half silk and half cotton and considered a coarse silk.<sup>66</sup> From Orissa, came to Patna, 'ambarees' ('amari') and 'chare-connaes' (*charkana*) a variety of being 16 coved long and 1 coved broad.<sup>67</sup> 'Curtabees' or *Katani*, a fine cloth wrought with silk silver and gold, in flowers and spots, 4 coveds in length was also procurable at Patna.<sup>68</sup>

It was the prospect of trade in silk and cotton in Bihar which attracted the English and other merchants.<sup>69</sup> Pelsarf noted at Agra during 1620s that 'Patna yields annually 1000 to 2000 maunds of silk' the price being Rs.110 to Rs.120 per maund. The major part of that silk was consumed in Gujarat and the rest at Agra.<sup>70</sup> The trade in silk continued through the 17th century. In 1670 Thomas Bowrey observed various sorts of raw and wrought silk at Patna which were brought from Kasimbazar.<sup>71</sup>

---

66. EFI (1618-21), p.197; IA, 1914, p.73.

67. Mundy, II, p.155.

68. Ibid., II, pp.155-156 & 156, fn.8.

69. EFI (1618-21), p.212; IA, 1914, p.82.

70. Pelsaert, p.7.

71. Bowrey, p.230.

## **Saltpetre**

Bihar came to acquire prominence in the production and trade of saltpetre in the second half of the seventeenth century when it became an important item in the export list of the European companies. Saltpetre was an essential ingredient in the manufacture of gunpower and its indigenous production in Europe had not been keeping pace with the rise in demand. During periods of conflict among the European nations in the 17th century, their requirement for saltpetre increased considerably. For example, the English East India Company wrote to Surat in 1653 for procurement of saltpetre due to the war with the state of Holland, "saltpetre being a commodity desired by our state and of great expense in those times of war between them and the state of Holland."<sup>72</sup> Its demand increased also due to its use as ballast to make the deep sea ships sailworthy since it was cheaper than other modes of ballasts.

Before 1650 Gujarat and the corromandal were the chief source of supply of saltpetre to the European companies. But in the second half of the 17th century Bihar replaced

---

72. Letter from the Company to Surat dated 12th Sept. EFI (1651-54), p.196.

all the other sources of supply. Although, Dutch had already started trading in saltpetre from Bengal and Bihar since 1638. The Dutch had begun trade of textile and raw silk in Bengal on a regular basis in 1636, but the saltpetre trade had to wait for another two years because the agreement concluded with subhadar Islam Khan in 1636 explicitly banned the company from procuring this item - a restriction that was removed only by the royal farman of 1638.<sup>73</sup> By 1650 English EIC factors in India also recognised Bihar for the best place for purchase of saltpetre.<sup>74</sup>

In 1655, as regards the prospect of supply of saltpetre from Surat, the Surat factors of English EIC were not hopeful since Mughal government had monopolised its sale. Besides the quality was not considered good and was full of salt even after refining and priced Rs.6<sup>7</sup>/<sub>8</sub> per maund.<sup>75</sup> The Ahmedabad product, though white, was also very bad and full of salt. The saltpetre received from Surat in England by the company being expensive, the company directed Surat

---

73. Om Prakash, op. cit., p.58.

74. EFI (1646-50), pp.332-333, 337.

75. EFI (1655-60), p.15.

not to send it since it was cheaper in Bengal/Bihar,<sup>76</sup> where it sold at Rs.4<sup>1</sup>/<sub>2</sub> per maund.<sup>77</sup> Added to the price factor, the famine at Masulipattanam in 1662 stopped the supply of saltpetre from that region. Thus, Bengal and Bihar emerged as the only two place from where the company could procure saltpetre.<sup>78</sup>

The Patna saltpetre was considered the best from the point of view of making gunpowder and it was cheaper than other places. It was reported in the correspondence of the English traders in 1650 that saltpetre cost only Re.1 per maund at Patna though customs and freight charges raised the price at Hugli to 1<sup>3</sup>/<sub>4</sub> rupees per maund; and at the port of Balasore (in Orissa) the cost was upto 2<sup>5</sup>/<sub>8</sub> rupees per maund. However, in buying the saltpetre at the port was a risky affair because the quality and price depended on the seller.<sup>79</sup> The cheaper and convenient river transport down

---

76. EFI (1661-64), pp.85, 187; EFI (1665-67), p.6; EFI (1668-69), p.188.

77. EFI (1665-67), p.6.

78. EFI (1661-64), pp.57, 61-62, 401, 402.

79. EFI (1646-50), p.337.

the Ganga enabled the European companies to dispatch it to the sea ports.

Saltpetre occupied the prime position in the English company's trade from Bengal.<sup>80</sup> and largely bulked in all the consignments<sup>81</sup>, during the initial phase of its trade in Bengal. The English company in 1659 ordered 5,000 pound to be remitted annually to Patna<sup>82</sup> for it. Saltpetre was such an important commodity for the company that in 1659 out of the stock of 5,000 pound sterling which reached Balasore, 4,000 pounds was transmitted to Patna for investment in saltpetre.<sup>83</sup> In 1673 the company decided to invest in saltpetre at Patna by reducing it, at Kasimbazar, in silk.<sup>84</sup> The initial demand by the company in England for 200 tons annually from Patna rose to 800-1000 tons by 1670.<sup>85</sup> Sushil Chaudhury points out that there was fluctuation in demand of

---

80. EFI (1655-60), pp.275, 276.

81. EFI (1670-77), Vol.II, p.335.

82. EFI (1655-60), pp.275-276.

83. Ibid., p.296.

84. EFI (1670-77), Vol.II, pp.357, 358.

85. bid., p.334.

saltpetre from England which depended on the requirements and shipping conditions.<sup>86</sup>

The English East India Company depended heavily on the Bihar saltpetre for the vessels going to South sea towards Bantam and Jambi.<sup>87</sup>

The Dutch listed larger quantity of saltpetre than the English from Bihar. Trevisa (English factor at Patna) found in 1660 alone that Dutch had 9 boats of saltpetre with 26,000 maunds of saltpetre.<sup>88</sup> The order of Dutch EIC for saltpetre from Bihar for Holland itself far surpassed that of English company throughout the period. The Dutch also supplied its other Asiatic factories like Bantam and Ceylon.<sup>89</sup>

There were generally three varieties of saltpetre: (a) the crude variety was called 'cutcha' or raw, (b) the twice boiled or 'dobara' and (c) the refined one was called

---

86. Susil Chaudhury, op. cit., pp.163-170.

87. EFI (1655-60), p.391; EFI (1661-64), pp.146, 185, 401, 402.

88. EFI (1655-60), pp.408-9.

89. Ibid., p.166.

'dobara-cabessa' or 'culmy'.<sup>90</sup> The European companies preferred the refined saltpetre. The raw variety increased the freight charges and the custom duties were the same on both crude and refined variety. The company in England had already made instructions in 1653 to Surat that in future, saltpetre should only be sent in a refined state, as the charges for freight and customs were the same for both raw and refined.<sup>91</sup> In 1652, agent at Fort St. George (Madras) informed the company in England and in the absence of suitable equipment saltpetre would be sent raw which would increase the freight.<sup>92</sup>

The variety mostly available in Bihar was the semi-refined one called 'dobara'. On the 'kalmi' variety purchasers had to pay a higher price. So Dutch established a factory at Patna in 1656 for manufacture as well as procurement. However, the capacity of Patna unit could not keep pace with the growing demand, and more so, the 'dobara' variety was selling in the Dutch market so well that by 1669, it was considered economical to purchase the entire

---

90. Sushil Chaudhury, op. cit., p.162.

91. EFI (1651-54), p.179.

92. EFI (1651-54), p.95.

requirement of *dobara* variety from the market. Consequently, refining equipments were sold to the local merchants. Some refining kettlies retained by the company for possible use, however, and there were occasionally rented out at a charge of Rs.20 per annum, for a big kettle, and Rs.12 for a smaller one.<sup>93</sup> Tavernier noted, in 1665, that Dutch requirement was so large that they established their factory at Patna to supervise purchase and refinement to their standards at a village called Chapra situated on the right bank of the Ganges, 10 Kos above Patna.<sup>94</sup> The English East India Company also established a factory at Patna for the same purpose. The 'new general stock' was formed, by the English, in October 1657 by a fresh charter. When the Committee of the new stock came to shape its administrative policy they decided on 24 December 1657 to group all their Eastern establishments under one President and Council at Surat, with four branches, viz., the corromandal coast, Bengal, Persia and Bantam (Java) each under an agent and council. Patna was placed under Bengal Agency with its headquarter at Hugli. The other factories were at Balasore

---

93. Om Prakash, op. cit., pp.112-113.

94. Tavernier, I, p.100.



and Kasimbazar.<sup>95</sup> English EIC established factories also at Singhyia<sup>96</sup> and Nanagur<sup>97</sup> near Singhee.

The English factors preferred their residences at Singhee rather than at Patna. In a letter dated 12 December 1669 it was noted that "Pattana itself is not a place to manage the Peter trade in; yet, that being the residence of the Nabob that governs that country, the chief must sometimes repair thither, and always keepe a vikkeel to solicit the companies business. If the factory be with the cittie, nigh, the place where the peter is made, convenience will be very great in increasing the investments and securing the peter man from selling what we have bought of them to thers, and the charge less than to reside at Pattana."<sup>98</sup> The similar reasons were given by John Marshall.<sup>99</sup> At Nanagur

---

95. EFI (1655-60), pp.140, 142.

96. For factory and ware house at Singhyia (near Lalganj) about 15 miles north of Patna, in Sarkar Tirhut at that time, EFI (1668-69), p.304 and fn. Marshall noted in his Account of Pattana, (Accounts of Patna), "Singhi which lies north of Patna, about ten or twelve miles Extra Ganges". Marshall, I, p.23.

97. EFI (1665-67), p.287; Marshall, pp.23, 89, 159; not traceable on the modern maps. EFI (1665-67), p.287 fn.

98. EFI (1668-69), pp.312-313.

99. Marshall, pp.23, 24.

only a 'baniya' (agent) or a peon of the company resided to procure the saltpetre from the petremen.<sup>100</sup>

The refining was usually done by the Indian methods of evaporation in which earthen vessels were used.<sup>101</sup> The English factors reported in 1652 that there was difficulty in refining saltpetre in big earthen pots since it was tedious and troublesome and very often broke in the middle of the process, and there was a need of suitable copper pans. The suitable copper pans were not available locally so the company decided to divert to this purpose, the appliances which had been sent out for making sugar at Assada in Madagaskar.<sup>102</sup>

The saltpetre was generally procured through petremen. For continuous supply of saltpetre it was essential to give advances to them.<sup>103</sup> The advances were made in the right season, and it appears from the English factory records that

---

100. Marshall, p.23.

101. EFI (1651-54), p.95.

102. Ibid.

103. EFI (1665-67), p.139; Marshall, p.24.

it was from September to June.<sup>104</sup> At Singhee alone, there were 30 to 40 petremen who had other subordinates.<sup>105</sup> The company employed 'banias' (agent) and peons at factory houses to collect the saltpetre from the petremen.<sup>106</sup> If the petremen brought bad saltpetre, it was returned to be boiled again.<sup>107</sup> The peons at warehouse watched the petremen so that when the saltpetre was ready they could not sell it to others.<sup>108</sup>

Due to increased demand of the saltpetre the company contracted local merchants also for procuring it from the open market. In January 1662, the merchants of Patna owed 6,000 maunds of saltpetre to the company which were undelivered due to Mir Jumla's attempt to monopolise its sale.<sup>109</sup> Brokers were also employed, as Ganga Ram was working for the company in 1661.<sup>110</sup> The saltpetre brought at Patna from the

---

104. EFI (1668-69), p.303.

105. Marshall, p.24.

106. Ibid., p.24.

107. EFI (1665-67), p.139.

108. Marshall, p.24.

109. EFI (1661-64), p.67.

110. EFI (1661-64), p.69.

local merchants was to be dried before being weighed.<sup>111</sup>

Saltpetre trade received big encouragement due to the combined demand of the European companies. However, it experienced many ups and downs due to a variety of factors. During the famines of 1670, in Bihar, many workers and producers of this item died as there was very low margin available to them. Later, heavy floods severely damaged warehouses; storages problem drastically reduced purchases.<sup>112</sup> Also, the political situation in 1659 due to campaign of emperor Aurangzeb against Shah Suja checked the trade of saltpetre. On the other hand the route from Patna to the sea ports of Bengal became unsafe while on the other hand the officials in Bihar did not allow any saltpetre to be sent down the river for the fear of its falling into the hands of Shah Suja.<sup>113</sup>

Occasional attempts by officials to monopolise the saltpetre trade sometimes affected the export trade. Mir

---

111. The Diaries of Streyنشam Master 1675-80, Vol.II, (ed.) R.C. Temple, London, 1911, p.338 (here after Master).

112. EFI (1670-77), Vol.II, pp.335, 353; Marshall, pp.154-156; Bowrey, p.226.

113. EFI (1655-60), pp.280-81, 285, 290, 388.

Jumla and then Shaista Khan tried to monopolise the saltpetre trade. However, such measures were short lived and did not affect the saltpetre trade in the long run.<sup>114</sup>

According to a Dutch Report 1688 the total output of saltpetre in Bihar amounted to 226,200 maunds (raw) per annum and when refined (*dobara-cabessa*) the figure stood at 127,238 maunds. Of this amount, 1,200 maunds were sent to Hugli, 3,000 maunds to Dacca and 7,000 maunds were retained for Patna gunpowder factory. The rest amounting to 105,238 maunds were left for export.<sup>115</sup> During 1685-1690, the average annual procurement by the Dutch company was, 38,500 maunds, of the total output of refined saltpetre.<sup>116</sup>

#### TRADE IN OTHER ITEMS

Opium was a high value, low bulk commodity in the intra-Asian trade. In the second half of the 17th century Bihar opium occupied the prime position among the Bengal commodities which the Dutch company sold in the Indonesian

---

114. EFI (1661-65), pp.69-71.

115. Sushil Chaudhury, op. cit., p.161.

116. Om Prakash, op. cit., pp.59-60.

archipelago.<sup>117</sup>

According to an estimate of a Dutch account pertaining to 1688 the annual output of opium in Bihar was 8,700 maunds. Of this amount only about 0.6% was consumed within Bihar. About 10% to 12% was sent to other parts of the Bengal region, 34.5% to 46% were exported to Agra and Allahabad. The export to other national and international markets accounted for the remaining 41% to 55%. The Dutch company procured annually, on the average of 1,000 maunds (approximately about 11.5% of the total output).<sup>118</sup>

A very good quality musk was procured at Patna. Although it was produced in the region,<sup>119</sup> a very great quantity was brought from the region of China, Bhutan<sup>120</sup> and Nepal<sup>121</sup>. According to John Marshall it was sold at Rs.49 per ser.<sup>122</sup> The merchants did not prefer to sell the musk

---

117. Ibid., pp.23, 448.

118. Ibid., pp.57-58.

119. Bowrey, p.229.

120. Tavernier, II, pp.112, 201.

121. Marshall, p.163.

122. Ibid.

in hot season because it loses weight and affected the margin of profit.<sup>123</sup> English and Dutch had considerable investment in the musk at Patna which was exported to Europe.<sup>124</sup> In 1674, musk worth of Rs.1516-10 was entered in the Patna Books of English EIC to be sent to England.<sup>125</sup> Musk also had a place in the private trade of the employees of English company.<sup>126</sup>

The merchants who brought musk from the mountainous regions of the north used to buy finished and unfinished coral and amber and ornaments of sea shell from Patna.<sup>127</sup> The merchants from Bhutan and Armenian merchants were mainly engaged in this trade.<sup>128</sup> Rough yellow amber of the size of a nut was sold at Rs.30 to 40 per ser at Patna,<sup>129</sup> and yellow amber of a size of a ser sold at Rs.250 to Rs.300

---

123. Tavernier, II, p.202.

124. Bowrey, p.229.

125. Master, II, p.270.

126. EFI (1661-64), p.185.

127. Tavernier, II, p.204.

128. Ibid., II, pp.204, 208.

129. Ibid., II, p.208.

depending upon its colour and beauty.<sup>130</sup> Rough coral or worked into beads was also sold at sufficient profit but rough was much preferred.<sup>131</sup> These items were "exported to the kingdoms of Bhutan, Assam, Siam and other countries to the north and east of the territories of the Great Mogul."<sup>132</sup>

Turmeric and Tincal (native borax) were exported from Patna by English company in large quantity.<sup>133</sup> In November 1676, 1800 maunds of Turmeric and 400 maunds of Tincal was procured by the company at patna.<sup>134</sup> Dry ginger was also exported to Europe by the European companies from Patna.<sup>135</sup>

Fine earthen wares of Minapur near Hajipur, Begumsarai (Begusarai) were taken in high esteem by John Marshall.<sup>136</sup> Regarding bottles and cups of clay the venetian traveller

---

130. Ibid.

131. Ibid.

132. Ibid., II, p.109.

133. Master, I, pp.308, 331; EFI (1670-71), Vol.II, p.415.

134. Master, II, p.64.

135. EFI (1646-50), p.338.

136. Marshall, p.414.



Nicolai Manucci observed that these were 'finer than glass, lighter than paper and highly scented' and these articles were sent to the court and carried all over the world as rarity and curiosity.<sup>137</sup> The shields manufactured at Patna were sold at Agra.<sup>138</sup> Sugar of Patna was exported by the English to as far as Gombroon.<sup>139</sup>

### Land Routes

Major towns and production centres of suba Bihar could be reached either through a land-route or by river transport from all parts of the sub-continent. The road repaired and reconstructed at certain places by Sher Shah from Sonargaon to Peshawar passed through Patna,<sup>140</sup> linking it with major towns both on east and west. Towns located on the coast of Gujarat could be reached via Agra. Some of the towns could be reached by two routes, for example Patna to Benaras the northern route was via Saidpur, and southern route was via Khurramabad and Sasaram. Same way to reach Allahabad one

---

137. Manucci, II, pp.84, 426.

138. Pelsaert, p.7.

139. EFI (1655-60), p.224; See also EFI (1646-50), p.333.

140. Nizamuddin Ahmad, Tabqat-i Akbari, (tr.), B. De, revised & edited by Beni Prasad, Delhi (reprint, 1990), p.106.

could follow either of the above routes, additionally, reaching Saidpur the road bifurcated for Benaras and Jaunpur, and from Jaunpur there was a connection for Allahabad.<sup>141</sup> Another route across riverine Bengal linked Balasore in Orissa via Midnapur, Kasimbazar, Rajmahal and Monghyr to Patna.

In the north, Patna was connected with Nepal and Bhutan via Hajipur. It followed the stages, Mughlani Sarai, Sunder Ki Sarai, Mehsi, Motihari, Hathawra and Kathmandu.<sup>142</sup> The route from Kashmir to Bhutan was not safe, due to high mountains and wild beasts, so the people of Kashmir went Bhutan via Delhi, Agra and Patna.<sup>143</sup> According to Tavernier the route from Patna to Bhutan was via Gorakhpur.<sup>144</sup> It is not clear to us whether Tavernier confused Gorakhpur with some other place or it was really an alternative route since he does not mention the place names which were mentioned by John Marshall.<sup>145</sup> Tavernier writes about the route, "coming

---

141. Mundy, II, pp.128-134; Tavernier, I, pp.98-100; also see Irfan Habib, An Atlas..., Sheets 8B, 10B.

142. Marshall, p.161.

143. Ibid., p.196.

144. Tavernier, II, pp.204-205.

145. Marshall, p.94.

now to the road which must be followed from Patna to the kingdom of Bhutan upon which the caravan spends three months. It leaves Patna generally at the end of December and arrives on the eighth day at Gorakhpur, which, as I have said, is the last town in this direction in the territories of the Great Moghul, where the merchants obtain their supplies for a portion of the journey."<sup>146</sup>

There is paucity of information on the routes connecting various centres within the suba. There is no doubt that all the sarkar headquarters could be reached from the suba headquarters, Patna. Similarly, some kind of route should have taken one to various pargana centres from sarkar headquarters. We have seen that manufactures of the suba were available at Patna, which were mainly brought there by brokers and local merchants. The large volume of these products could only be carried through well marked routes. However, the representatives of European companies were not found frequenting these minor routes, therefore details about the condition of these routes, facilities, like sarais etc., available on them and halting places and similar other

---

146. Tavernier, II, pp.204-205.

information is not available. Still some stray references show that Patna acted as central point and was connected with Lakhawar and Gaya; with Bihar and Rajgir; from Begumsarai one could reach the main highway a couple of miles in its south to reach Patna.

Routes were full of sarais and supplied with all the amenities. Travelling upon Hugli-Agra route via Patna Mannuci observed "The routes I had traversed are much frequented, full of villages and sarais, food being good and cheap."<sup>147</sup> Regarding Patna-Agra route Manrique says, "We found this route studded with habitations large towns and small villages, and much frequented by travellers. On the account it was well supplied with caramossoras (caravan sarai), some being quite famous and built at great expense by wealthy men or persons of rank as a relief to their conscience."<sup>148</sup> On the route between Patna and Agra, names of some of the sarasi are as follows: Naubatpur Sarai, Aganur Sarai, Mutta Ka Sarai, Arwal Sarai, Daudnagar Sarai,

---

147. Manucci, II, p.96.

148. Fray Sebastien Manrique, Travels of Fray Sebastien Manrique (1629-1643), Vol.II, (eds.), C. Eckford Luard and H. Hosten, Oxford, 1927, p.146 (hereafter Manrique).

Makrain Sarai, Khuramabad (Jahanabad) Sarai, Mohania Ka Sarai, Saiyadraja Ka Sarai, Khwaja Ka Sarai, Mughal Sarai.<sup>149</sup>

On Patna-Hugli route which followed the course of Ganges John Marshal noted many sarais. Some of the sarais between Rajmahal and Patna noted by travellers are: Baikunthpur,<sup>150</sup> Rani Sari,<sup>151</sup>, Abumali Ka Sarai,<sup>152</sup>, Gunsurpur,<sup>153</sup> Barh,<sup>154</sup> Dariapur,<sup>155</sup>, Surajgarh,<sup>156</sup> Bhagalpur,<sup>157</sup> Sultan Ka Sarai,<sup>158</sup>, Pialapur,<sup>159</sup> Garhi Sarai,<sup>160</sup>,

---

149. Marshall, p.160; Tavernier, II, pp.98-100; Mundy, II, pp.128-29, 134, 165, 172.

150. Tavernier, I, p.101.

151. Marshall, p.126.

152. Ibid.

153. Ibid.

154. Ibid., p.125.

155. Tavernier, I, p.101.

156. Marshall, p.124.

157. Ibid., p.121.

158. Ibid., p.120.

159. Ibid.

160. Ibid.

Daulat Ka Sarai,<sup>161</sup> Bhabunia Ka Sarai,<sup>162</sup> and Burgangal.<sup>163</sup> Burgangal was in Suba Bengal but being an entry point into Bihar there was a very large sarai of 200 rooms. Every room was enough for 4 persons to stay. The charge for stay for one night was 'one pice or 1/28 rupee'. It was a thatched sarai. There were 5 rooms of 100 square yards.<sup>164</sup>

On the route which came from Bhutan and Nepal, Marshall noted 'Mughlani Sarai' and 'Sundar Ki Sarai' beside one at Hajipur.<sup>165</sup>

The above statements of the European travellers cannot be considered an exaggeration. We have observed that huge investments were made by merchants in Bihar. They were frequenting these areas in large numbers for most days of the year. Local potentates, jagirdars and local officials all were to gain through collection of sanctioned and forbidden taxes, like *rahdari*. Therefore, when such facilities

---

161. Ibid., p.121.

162. Ibid.

163. Ibid., pp.117-18.

164. Ibid.

165. Ibid., p.161.

were provided on the routes, rich dividends were reaped through them.<sup>166</sup>

On many points on a routes one had to cross a river. Depending on the volume of traffic on such routes bridges were constructed. Thus we find several bridges in Suba Bihar on important routes over 'nalas', ditches and on non-navigable rivers, which facilitated the traffic throughout the year. On the Agra-Hugli route via Banaras and Patna many bridges in Bihar were noticed by contemporary observers in seventeenth century. There was a stone bridge near Khurmabad over Khudra river.<sup>167</sup> The list of the bridges between Patna and Rajmahal are as follows: a stone bridge over Pupun river at Fatuha,<sup>168</sup> a stone bridge with 3 arches at Kalyanpur. There were small watch houses at every corner of this bridge,<sup>169</sup> a stone bridge with 7 arches at Ghorghat which was about 40 yards long, 15 or 20 yards high, and 6 or

---

166. Maurique, II, pp.135-38, writes that travelling between Munger and Patna he encountered 18 custom houses, and at each of them he had to pay varying amounts for same merchandise; also see Tavernier, I, p.99 for duty paid between Daudnagar and Sasaram on river Son.

167. Mundy, II, p.129; Tavernier, I, p.98.

168. Marshall, p.77.

169. Ibid., p.123.

7 yards broad.<sup>170</sup> In 1670 John Marshall observed the construction of a new bridge over a ditch between Garhi and Pialapur.<sup>171</sup>

Besides bridges on the major routes there were also bridges over the routes which connected remote areas to large trading centre. On such type of routes there was a bridge over Fulgu river at Telhara between Lakhawar and Patna.<sup>172</sup> Another bridge was over Khakra 'nala', south of Munger which was built by Shah Suja, second son of Shahjahan.<sup>173</sup>

At the risk of being repetitive one has still to say that the volume of goods originating in Bihar or passing through its territory was enormous. We have seen the value of money spent by the Central Asians, on the purchase of textiles, European companies on textiles and saltpetre. Transport of huge quantities of these finished products, or

---

170. De Graff described this old bridge had 8 arches and octognal stone towers at each end, ibid., p.74 and fn.69.

171. Ibid., p.120; see map.

172. Irfan Habib, An Atlas..., sheet 10B.

173. Ibid., p.41, sheet 10B.



raw materials for some products from other regions, like raw silk from Bengal, should have created regular demand for large number of transport vehicles and pack-animals. We do not come across any complaint from the European travellers or company representatives where their purchases might have been stranded at any point for want of transport, except under exceptional circumstances like during Aurangzeb's campaign against Shah Shuja during war of succession. Merchandise was carried to different destinations either by land or river transport.

#### Transport

Pack oxen, ox-driven carts, horses, and camels were used as means of land transport. Usually carts were used as the main carriage for bulk goods.<sup>174</sup> During the rainy seasons pack animals were preferred.<sup>175</sup> The carts were generally organised in 'caravan' and the transportation charge varied accordingly to the current rate of the caravan.<sup>176</sup> A contract was made for the delivery of goods from

---

174. Ain, II, p.164; EFI (1618-21), pp.191, 195-96; IA, 1914, p.72.

175. EFI (1618-21), p.258; IA, 1914, p.72.

176. EFI (1618-21), p.258; IA, 1914, p.103.

one place to another within a given time failing which a certain amount was deducted accordingly.<sup>177</sup> The carriage charge between Patna and Agra was Rs.1<sup>1</sup>/<sub>4</sub> to 2<sup>1</sup>/<sub>4</sub> per maund.<sup>178</sup> The carriage of goods from Patna to Agra used to take anything between 30 to 40 days<sup>179</sup> and between Patna and Banaras 4 days.<sup>180</sup> We come to know from the English factory record pertaining to Patna that there was an agreement between English agents and the cart owners to deliver the goods at Agra within 30 days, with a deduction of 25% for time taken in excess of that period. If the goods were delivered safely in time the cart owners used to get Rs.8 as bonus.<sup>181</sup> The journey between Patna and Agra was preferred by carts and those carts were covered and protected from the odd weather.<sup>182</sup> Manrique found the road between Patna and Agra in good condition which suited the carts.<sup>183</sup>

---

177. EFI (1618-21), p.199; IA, pp.78, 103.

178. EFI (1618-21), pp.197, 199, 268; IA, 1914, p.82.

179. EFI (1618-21), p.195; IA, 1914, pp.72, 82.

180. Manrique, II, p.146; Manucci, II, p.83.

181. EFI (1618-21), p.199; IA, 1914, pp.78, 103.

182. Manrique, II, p.145.

183. Ibid.

Kahars (porters) were also available for carrying goods. They were hired to take goods to the places where usually carts could not pass or for brittle goods.<sup>184</sup>

On the journey from Patna to Bhutan one could go till the foot of the mountains in the Indian carriages' and 'pallanken' (pallanquins) but oxen, camels or the 'horses of the country' (hill ponies) were usually used.<sup>185</sup> According to Tavernier these hill ponies were short and strong and when a man mounted them, his feet nearly touched the ground. These ponies could cover 20 leagues at one stretch, having little amount of food and drink.<sup>186</sup> Peter Mundy also found certain small horses called 'Goonts' or 'Tangans' at Hajipur which were brought from places east of Patna (perhaps Bengal and Assam).<sup>187</sup>

John Marshall has given the list of carriage and their rates from Patna to Agra for the period 1670. "At Pattana Coaches, oxen, horses and ca are every month let to Agra

---

184. EFI (1618-21), pp.283; 105 n.; IA, 1914, p.111.

185. Tavernier, II, p.205.

186. Ibid.

187. Marshall, p.138.

(except in the 4 months of the Raine). An ox is let for 12 rupees, the owner thereof being at the charge of a man to go with the ox, and also for the ox meal, and this ox will carry 4 maunds.

A coach which will carry 40 maunds and goes with 6 oxen is let for 80 rupees. A coach that will carry 4 men and goes with 2 oxen is let for 22 rupees. A horse is let for 10 rupees. Cahars (Kahar) to go with a Pallamkeen will have 5 rupees per piece, besides 1 seer dal (dal, pulse) a piece every day, which will amount to 1<sup>1</sup>/<sub>2</sub> rupees per piece more; in all these cases of the oxen, coaches, horses or wagons, the owners here of are all (sic att) all charges, except custom paid at places for the goods carried."<sup>188</sup>

When Marshall writes about a cart drawn by six oxen he shows no surprise. Other travellers do not even bother to mention these. This suggests that such large carts of heavy capacity were a common sight all over the places. It also suggests that transporters did not face any difficulty in arranging large volume of merchandise which could be profitably carried on them in any region. Experiencing ready

---

188. Ibid., pp.425-426.

availability of goods transporters appears to have improved their carts to economise their expenses.

### Water Route and Transport

The main water route in Bihar was on the Ganges which linked Allahabad and Bengal via Benaras and Patna. Between Allahabad and Patna, the Ganges was fully navigable only when it was full of water. Between Patna and Bengal boats plied almost throughout the year.<sup>189</sup> The road from Patna eastward which followed the Ganges was not so beaten<sup>190</sup> as road from Patna to Agra.<sup>191</sup> and the charges were not less than the river transport.<sup>192</sup> So the Ganges was more convenient means of transport between Patna and Bengal.

Within the Suba of Bihar, Burhi, Gandak which entered the Ganges between Munger and Jangera from north was navigable.<sup>193</sup> The Gandak which entered the Ganges near Patna was

---

189. Tavernier remarks, "If the river had been strong, as it is after the rains, I should have embarked at Allahabad or at least at Benaras." After reaching Patna he proceeded to Dhaka by boat, Tavernier, I, p.101.

190. EFI (1665-67), p.2.

191. Manrique, II, p.145.

192. EFI (1655-67), p.2.

193. Tavernier, I, p.101.

important from the point of view of the petreboats, which brought the saltpetre from Singhee and other place to Patna.<sup>194</sup>

Various types of boats were available for the river transport in Bihar.

'Patela' or 'Patelo' - A large flat bottomed boat. It was built very strong, because it has to face impetuous oddies on their way up and down the Ganges. It was mostly used to carry saltpetre but wheat and other grains were also loaded on it. According to Bowrey, each Patela was capable of carrying 4000 to 6000 Bengal maunds of saltpetre.<sup>195</sup>

'Palwar' - A small boat ofr 12 to 13 tons.<sup>196</sup> English factors at Patna was directed to send saltpetre to Hugli in these boats in 1669. 'Ulak' - These boats were rowed with 4 or 6 rowers depending upon its size.<sup>197</sup> 'Purga' - These boats were used for the most part between Hugli, Pipli and

---

194. Marshall, p.23.

195. Bowrey, p.225.

196. EFI (1668-69), p.303.

197. Bowrey, p.227.

Balasore, to carry goods to the ships.<sup>198</sup> 'Dingi' - Small boats for travelling, rowed with 10 oares and steered by one man.<sup>199</sup> 'Boora' or 'Bhar' - a very light boat, rowed with 20 or 30 oares. It was used to carry saltpetre and other goods. It was also used as 'tow' boats for the ships bound for up or down the river.<sup>200</sup> 'Budgrow' or 'Bajra' - A pleasure boat.<sup>201</sup> The bajra in which John Marshall came to Patna was about 23<sup>1</sup>/<sub>4</sub> yards long, 2<sup>1</sup>/<sub>4</sub> yards broad in the middle and rowed by 14 men and 2 steermen.<sup>202</sup>

Boats were hired by the merchants for transportation of goods.<sup>203</sup> An incident of 1671 throws light on the organisation of the boatmen. "Job Charnock (English factor at Patna) complained that the boatsmen had extorted Rs.450 from him on account of their 'pattelos' (Patela or patelo) having been detained after they had been frightened. The English

---

198. Ibid., p.228.

199. Marshall, p.95.

200. Bowrey, pp.228-229.

201. Ibid., p.228; Mundy, II, p.157.

202. Marshall, pp.79, 127.

203. Ibid., p.63.

agent Bagnell at Hugli seized and imprisoned their ring-leaders, whereupon, 30 or 40 of the boatmen went to the Governor with bamboos in their hands to complain, alleging that the money had been given as 'bakshish' (compensation) for the detention of the boats. However, Bagnell succeeded in convincing the Governor that the money ought to be repaid to the company and the fellow punished. Moreover, he managed to recover Rs.2.50 from them and hoped to get more before they were all released."<sup>204</sup>

It seems that there was some kind of 'guild' of boatmen in the region of Bihar and Bengal. As noted here, the boatmen always demand compensation for the delay in departure of their boats.<sup>205</sup>

#### **Financial Organisation**

The brisk and voluminous trade that was carried in all parts of the sub-continent necessitated large scale money transactions. These led to the development of many financial institutions which reached high level of sophistication by the being of the seventeenth century.

---

204. EFI (1670-77), Vol.II, p.336.

205. Master, I, p.109.



Money was transferred from one place to another through the *Hundis* which minimised the risks in the operation of cash especially during long journey. The *sarrafs* had specialised in the business of *hundis*. *Hundi* was operated in a very well organised manner by *sarrafs* who had commercial arrangements at other places through their *gumastas* (agents).<sup>206</sup> At Patna there were *sarrafs* who issued bills of exchange and also there were agents of *sarrafs* of other places. One could only get the *hundis* cleared from the agents of the particular *sarraf* who issued them. For instance, a *sarraf* refused to clear the *hundi* brought by English merchants from Agra on the ground that it was not from his '*shawe*' (*sarraf*) but by a different *sarraf* named Kalyan at Agra whose *gomasta* had left Patna.<sup>207</sup> *Hundis* could only be accepted or paid when the *sarraf* was certain about the authenticity of the issuing merchant and his credit worthiness. The payment was made according to the conditions laid down in the term of settlement.<sup>208</sup> Between

---

206. Irfan Habib, "The System of Bills of Exchange (Hundi) in the Mughal Empire", *PIHC*, 1972, p.291.

207. *EFI* (1618-21), pp.247-248; *IA*, 1914, p.101.

208. *EFI* (1618-21), pp.236, 248; *IA*, pp.99-100.

Agra and Patna the period specified for the bills of exchange was 40 or 45 days, and allowing for 11 days for 'speedy' messengers to traverse the distance, this implied allowance of interest for a period of 51 or 56 days.<sup>209</sup> A letter of introduction was needed to draw the money on the bills of exchange. The rate of exchange between Patna and Agra was normally 1.87% i.e.,  $98\frac{1}{8}$  rupees nurie (sikka) against Rs.100 hundis payable at Agra.<sup>210</sup> But this rate could be altered depending upon circumstances. In March 1621 the exchange rate on bills drawn at Patna on Agra altered from 1.87% to 1.25% i.e. one would get  $98\frac{3}{4}$  Rs. sikka instead of  $98\frac{1}{8}$  Rs. sikka against Rs.100 hundis payable at Agra. This fall in rate of exchange was explained in the context of 'delivering' of Rs.300,000 by Muqarrab Khan, the outgoing Governor of Bihar for payment of Agra.<sup>211</sup>

Sarraf's role was very vital in the working of financial institution during seventeenth century. Besides issuing

---

209. Ibid., see also Irfan Habib, "The System of Bills...", p.296.

210. EFI (1618-21), p.236; IA, 1914, p.99.

211. EFI (1618-21), pp.236, 248; IA, 1914, pp.99-101, see also Irfan Habib, "The System of Bills...", p.293.

the hundis, they could simultaneously act as money lender.<sup>212</sup> Apart from dealing in the monetary matters there were sarrafs like Champa Shah, who was the chief banker of Patna, and acted also as a middleman for providing goods to European companies.<sup>213</sup> Some of the famous sarrafs of Patna during seventeenth century were Man Makan,<sup>214</sup> Sundermaidas, Chand Sahai Shah<sup>215</sup>. Khemchand and Chitramal became dominant sarraf of Patna during later half of seventeenth century.<sup>216</sup> Churmali was another sarraf during second half of seventeenth century who gave money to European companies on interest.<sup>217</sup>

The aforesaid nuances into the matrix of production, trade routes, transportations, demand pull and growing money economy reveals that the economy of suba Bihar was a part of the wider whole. There was a high level of production for

---

212. EFI (1651-54), p.193; Pelsaert, p.28.

213. EFI (1618-21), p.198.

214. Ibid., p.236.

215. IA, 1914, p.75.

216. Master, II, pp.303-5, 309, 336.

217. EFI (1651-54), p.193.

local adjoining and wider area which is attested by existing prerequisites and near absence of merchants complain about goods getting scarce. A well knit communication network, both land and water, in a period of general stability fastened the process of integration of economy of suba Bihar into the larger economy of sub-continent. The ever present demand pull factor and the technique of exchange having crept into the sectors of productions adopted new innovations to keep the pace with the economic mechanism.

### CHAPTER III

#### URBANISATION

In the foregoing discussions we have attempted to see the production and trade levels in the suba of Bihar. The production in agricultural and non-agricultural sectors should have indicated fair amount of revenue generation available for other productive use which one could relate with urbanisation. While we are able to draw estimates to some extent, of surplus available from the agricultural sector, nature of our sources do not allow us to estimate, with any level of certainty, how much money was in circulation in non-agricultural sector. It has been suggested that in the estimated revenue statistics of the *Ain-i Akbari*: an average of 10 per cent came through taxes on trade etc. levied on all kinds of commodities.<sup>1</sup>

Table

S.No. (1)	Year (2)	Volume of Trade (in dams) (3)	Index (4)
1.	C. 1595	73,97,23,936	100
2.	1638-56	1,22,94,21,039	166
3.	C. 1709	1,35,72,56,427	183

1. Shireen, Moosvi, The Economy of . . . . ., p.316.

Selecting estimated revenue figures at an interval of 50 years for the suba Bihar,<sup>2</sup> we have taken their 10 per cent as contribution from tax derived from non-agricultural production and trade. We know that this sector was taxed at a rate between 2.5 and 3.5 per cent *ad valorem*,<sup>3</sup> or at an average of 3 per cent. To arrive at the total value of goods taxed in the suba we have multiplied the figure obtained as 10% of the estimated revenue by 33.33%. The figure thus obtained is shown in column 3 of the above table. We have taken C.1595 figures as 100 to see the level of increase in trade, and find that in the seventeenth century there was progressive change in the value of goods produced or in-transit in Bihar. In other words, the above table is an index of activities associated with urban growth.

Let us see what part of the surplus from the agricultural sector could have percolated to urban area. This is possible to estimate from the share of a mansabdar's salary in his total salary bill, on the assumption that a mansabdar stayed at an urban centre and utilised almost his

---

2. Irfan Habib, Agrarian System..., pp.66-67.

3. Ibid., pp.66-67.

entire salary there. On the other hand, a sawar would perhaps have not kept his family in his ancestral home located in a village, still he was obliged to spend a part of his salary, in an urban centre, on his personal upkeep as well as on the maintenance of his equipage. To calculate we have taken the salary entitlement of first category of mansabdars, from 4000 zat to 1000 zat, who maintained equal number of sawar to their zat rank.

Table

Sl.No.	Rank	Monthly Salary (in Rs.)	Annual Salary (in dans)
(1)	(2)	(3)	(4)
1	4000	22,000	1,05,60,000
2	3500	19,000	91,20,000
3	3000	17,000	81,60,000
4	2500	14,000	67,20,000
5	2000	12,000	57,60,000
6	1500	10,000	48,00,000
7	1000	8,200	39,36,000
TOTAL			4,90,56,000

Source: Based on Salary Schedule for the Zat rank in the *Ain-i-Akbari*; See *Ain-i Akbari*, tr. Blockman, Vol.1, pp.257-58.

Total of the Zat rank is 17,500. Since mansabdars belong to first category, the size of the cavalry would also be 17,500. Taking 800 dans as the average salary per month

of a sawar, the total salary bill for the sawar would be 16,80,00,000 *dams*. And the total for Zat plus sawar rank would come to 21,70,56,000 *dams*. In this total salary claim the ratio of Zat and sawar is 22.60:77.40. As we have said above that a part of sawar salary was spent in the urban centre, we can, thus, suggest that 25 per cent of the surplus generated in the agricultural sector found its way in urban areas,<sup>4</sup> which could include marginal amount spent by the zamindars also.

The above 25 per cent could not have been evenly distributed over the entire territory of the Suba by the simple logic that if higher ranked mansabdars were assigned jagirs in the Suba, fewer number of them would have claimed the surplus on the basis of their salary claim. However we have no means to know how this surplus was distributed. Secondly, the tendency of higher ranked nobles would have been to establish their residences in larger towns, thus major utilisation would have taken place in larger towns and cities. Here again we are handicapped with paucity of

---

4. Irfan Habib, "Population" in The Cambridge Economic History of India, Vol.I, (ed.) Tapan Ray Chaudhury & Irfan Habib, Delhi, 1984, pp.167-68, has also suggested the same ratio, though he has not elaborated the methodology used to arrive at this above estimate.



evidence specific to one Suba. Added to these two, is the fact that assignments could be located in any region of the empire but assignees area of active involvement may be elsewhere, far removed from his jagir. In such a situation major part of money, on account of both the ranks, played no productive role in the region of its source. Therefore, it is not possible to suggest what extent surplus revenue generated in Suba Bihar influenced the level of urbanisation.

We have already discussed, in earlier two chapters organised production in non-agricultural sector in which large scale utilisation of raw materials produced within the suba as well as from outside was made. We have also seen that local and long distance trade in different commodities was a regular phenomenon. As a result of these Bihar region was actively involved in an economic exchange of complex nature. These had led to the growth of higher and lower levels of urban centres in the Suba.

The most prominent and largest urban centre in Suba Bihar was Patna with all its heterogeneity. The importance of Patna as a political and commercial centre goes back to ancient times. It was the capital of the Mauryas and Guptas. But after that it lost its importance as political

centre. The importance revived during 16th century when Sher Shah impressed by the strategic location of the place ordered the foundations of the headquarter of the local government.<sup>5</sup>

The formation of the Suba Bihar under Akbar with its headquarter at Patna gave an added impetus to the growth of the city. More important factor for the growth of Patna was its geographical location as a trading and commercial centre and rich hinterland.

By looking at the map of Bihar we can see the central location of Patna. All major trade routes from various directions converged at Patna. Although the region had no direct access to the sea ports, goods could be floated down the Ganges from Patna to the sea ports of Bengal. Patna had elaborate arrangements for mode of transport of both land and river route.<sup>6</sup>

We discussed the potentialities of the suba in terms of resource generation and all the production centres and

---

5. Qeyamuddin Ahmad, "Patna Azimabad (1540-1765), A Sketch", in Qeyamuddin Ahmad (ed.), Patna Through the Ages, New Delhi, 1988, p.71.

6. See Chapter II.

localities constituted the vast hinterland for Patna. The products of Bihar were collected at Patna for dispatch to their regions. Patna had trade relations with every important trading and production centres of Bengal and Orissa on one side and Northern and Western part of Mughal empire on the other side. The land route towards mountaineous region of north enabled Patna to have trade relations with Nepal, Bhutan, Tibet and China.<sup>7</sup> Not only Patna exported merchandise to other regions but goods from other regions came to Patna either for local consumption or for redistribution to various regions. For example Patna was an emporium for raw silk and various kinds of cotton and silk textiles which were brought from Kasimbazar, Dhaka, Malda, Sherpur, Satgaon, Murshidabad and Saidabad, in Bengal and also from Orissa.<sup>8</sup> Johnpur carpets were available at Patna for export trade.<sup>9</sup> The trade prospect of Patna attracted entrepreneurs to exploit its potentialities. Merchants of different regions and nationalities were noticed by contemporary

---

7. Marshall, p. 161; Tavernier, II, pp.112, 204-5; Bowrey, pp.229-30.

8. Mundy, II, pp.155-156; EFI (1618-21), pp.195, 198, 206; Bowrey, 230-232.

9. EFI (1618-21), p.195; IA, 1914, p.71.

observers.<sup>10</sup> Earlier we discussed about the trade of pathans, Mogoles (Central Asians), Armerians, Portuguese, English and Dutch and merchants of Tibet and Bhutan. All converged at Patna for making fortunes.

With the advent of European trading companies in the seventeenth century Patna acquired a very important position in European markets, particularly in the second half of seventeenth century in the trade of saltpetre. The English and Dutch companies established their factories at Patna for the procurement and refinement of saltpetre.<sup>11</sup>

The vastness of Patna and its trade potentiality was noticed by contemporary European observers. Manucei says that Patna was 'a very large city with bazars.'<sup>12</sup> Manrique and Taverneir considered Patna as one of the largest town of Mughal empire.<sup>13</sup> According to Peter Mundy Patna was the 'greatest mart' of the region.<sup>14</sup> Manrique tells us that

---

10. Manucci, II, p.139; Bowrey, p.221.

11. EFI (1655-60), p.140-142; Om Prakash, The Dutch EIC,...pp.112-13. See also Bowrey, pp.123-125.

12. Manucci, II, p.83.

13. Manrique, II, p.140; Taverneir, I, p:100.

14. Mundy, II, p.157.

Patna had 'never ending marts' with 'enormous quantity and quality of merchandise'.<sup>15</sup> The English factors wrote in 1620 that Patna was the 'chiefest mart of all Bengala'.<sup>16</sup>

The volume of trade was such that Manrique informs us that there were 'over 600 brokers and middlemen engaged in commerce, all of them derived such profits that most of them were wealthy men'.<sup>17</sup>

It seems that the city developed along the course of the Ganges. The contemporary European observers don't comment on the breadth of the city but say that it was a long town.<sup>18</sup> According to Tavernier it was 'not less than 2 kos in length'.<sup>19</sup> Patna was a developing city in the seventeenth century, and suburb had grown around the city walls in early part of the century. The English factors of the first commercial mission to Patna in 1620 noted that Alam-ganj was a densely populated suburb of the city, one kos

---

15. Manrique, II, p.139.

16. EFI (1618-21), p.212.

17. Manrique, II, p.140.

18. Ralph fitch, Early Travel..., p.23.

19. Tavernier, I, p.100.

away from the city walls.<sup>20</sup> Mundy also noticed in 1632 a Sarai called *Ikhtiyar Khan Sarai* in the suburban area, 3/4 miles away from the gates of the city.<sup>21</sup>

Regarding the condition of the houses we get the impression that majority of the houses were simple and thatched and some had tiled roofs (Khaprial).<sup>23</sup> These house must have been inhabited by common people during the course of sixteenth and seventeenth century many new building of grandeur and nepute, private as well as government, were constructed at Patna. The establishment of factory houses also added to the housing patterns of the city.<sup>24</sup>

We do not have any other reliable populaton estimate than Manrique's which is 200,000 for the period 1641.<sup>25</sup> This population consisted of various professional and

---

20. EFI (1618-21), p.246; IA, 1914, p.100.

21. Mundy, II, p.163.

22. Ralph Fitch, Early Travels, op.cit, p.23; Tavernier, I, p.100, Manucci, II, p.83.

23. Ain, II, p.164; KI in Jadunath Sarkar, op.cit., p.35.

24. Geyamuddin Ahmad, "Patna-Azimabad"..., p.73.

25. Manrique, II, p.140.

service people. Since Patna was the provincial capital so there would be various officials and staffs attached to the offices of Subadar, Diwan, Bakshi, and the Sadar.<sup>26</sup> There was also military contingent stationed at every suba headquarters. there was a large chunk of population engaged in trading and commercial activities, from big merchants and brokers to petty dralers and shopkeepers. As Manrique tells us that there were 600 brokers and middle men<sup>27</sup> and Mundy noticed 200 grocers.<sup>28</sup> To facilitate the commercial transactions there were many Bankers and sarrafs, who had business links with other cities.<sup>29</sup> Since Patna was a manufacturing centre of different varieties like textile,<sup>30</sup> pot-

---

26. U.N. Day, The Mughal Government, Delhi, 1970, pp.72-80.

27. Manrique, II, p.140.

28. Mundy, II, p.157. See also pp.145,146, 147 for brokers and small shopkeepers.

29. EFI(1618-21), pp.198, 236, 247-48; IA, 1914, pp.75, 101; Master, II, pp.303-5, 309, 336.

30. Manucci, II, pp.83-84.

tery,<sup>31</sup> glass ware,<sup>32</sup> shields,<sup>33</sup> Sugar,<sup>34</sup> opium<sup>35</sup> etc. so there was many categories of artisans and craftsmen. The textile industry itself was based on division of labour of specialised groups. The elaborate transport facilities included Pallanguen bearers, *kahars*, cart drivers etc.<sup>36</sup>

The nature of urbanisation that is evident from the above discussion shows that the city Patna was involved in a high level of economic activity in which different section of society were actively engaged. The population of the city far exceeds the number of retinue/contingents/ cavalrymen that could have been possibly engaged out of the estimated revenue of the entire Suba (17,500 as we have gauged earlier). The suggestion of Moreland,<sup>37</sup> based on a stray

---

31. Ibid., II, p.84, 426.

32. Ibid., p.84.

33. Pelsaert, p.7.

34. EFI (1646-50), p.333; (1655-60), p.224.

35. Marshall, p.414.

36. Ibid., pp.125-26.

37. W.H. Moreland, India at the Death of Akbar, reprint, Delhi, 1962, Chapter II, Stephan Blake, Shahjahanabad city in Mughal India, 1639-1739, New York, 1991, pp.13-25.



comment of Bernier, that Indian cities were camp towns don't get support from our discussion.

The other urban centres were not as vast as Patna. They were of different category and performed a modest role in relation to local commerce, resource and consumer needs.

The Sarkar headquarters developed as a town. In the established Mughal administrative framework, the presence of the *faujdar*, *amil*, *qazi*, and their staff at Sarkar headquarters caused the movements of officials at the place which must have enjoyed enough importance to be selected as a Sarkar headquarters was bound to develop further commercial activity.

Attempt to categorise all the towns as administrative, manufacturing, commercial or pilgrimage centres will be problematic because some of the towns had overlapping functions.

Bihar (place name) was an important textile manufacturing centre, called *kainukhani*.<sup>38</sup> The articles of gilded

---

38. EFI (1618-21), p.

glass was also manufactured here.<sup>37</sup> *Ain-i Akbari* notes 'Bihar with suburban districts' and a fort of stone and brick.<sup>40</sup> Based on Jain inscriptions Surendra Gopal informs that Jain merchants built a number of temples at this place, in Sambat (1581 A.D.), 1643 (1586 A.D.) and 1694 (1677 A.D.), who were quite affluent and constructed similar temples elsewhere as well.<sup>41</sup> Construction of temples suggests that these merchants were permanent residents of the town. Dates of construction of the temples indicate continuity of residence by a section of community who were mainly engaged in trade. Bihar acted as a market place of surrounding countryside. The trade in textile contributed to the prosperity and growth of this place.

Lakhawar was a flourishing market for textile called amberti. The manufacturing area was spread around this place and weavers and merchants brought amberti cloth to Lakhawar for marketing.<sup>42</sup> This cloth had international

---

39. *Ain*, II, p.164, *KI*, in Jadunath Sarkar, *op. cit.*, p.38.

40. *Ain*, II, p.166.

41. Surendra Gopal, "Jainas in Bihar in the Seventeenth Century", *PIHC*, 1972, pp.322-323.

42. *EFI* (1618-21), p.192; *IA*, 1914, p.70; Mundy, II, p.154.

market in 17th century so Lakhawar's growth is attributed to this commodity due to regular visits of traders.<sup>43</sup>

Baikunthpur, 10 miles east of Patna on the Hugli-Agra route, was a flourishing centre of silk manufacture.<sup>44</sup> This product was sent outside the region to persian due to its large demand.<sup>45</sup> Merchants from those regions regularly visited this place.<sup>46</sup> Tavernier noted a sarai at this place.<sup>47</sup> So it was a place of manufacturing and trade in 17th century.

Bhagalpur was a 'town' (on Agra-Hugli route) with a sarai and a production centre for bowes, arrows and *hugah*.<sup>48</sup> There were abundance of 'Toddy' [Tar] and gardens of Mango trees around.<sup>49</sup>

Other manufacturing centres were Rajgir and Begumsarai.

---

43. See Chapter II, for trade in textile.

44. EFI (1618-21), p.197; IA, 1914, p.73; Mundy, II, p.155.

45. EFI (1618-21), p.197; IA, 1914, p.73.

46. Ibid.

47. Tavernier, I, p.101.

48. Marshall, p.121.

49. Ibid.

Rajgir was famous for being a sacred Jain place near Bihar<sup>50</sup> and manufacturing of good quality paper<sup>51</sup> Fine earthen pottery was manufactured at Begumsarai.<sup>52</sup>

We have already discussed that between Naubatpur and Patna and around Dariyapur extensive cotton cultivation was undertaken.<sup>53</sup> It is possible that weaving was also carried out in these parts. However, Lakhwar and Bihar find frequent mention as renowned for their cotton textiles. Due to extensive demand for raw material, the cotton grown areas should have led to the development of a few market centres with permanent establishments of some merchants, as well as itinerant traders who visited these centres during harvest seasons. Thus Manrique informs that Dariyapur was a large town with a population between two to three thousand.<sup>54</sup> Tavernier noted a sarai at that place.<sup>55</sup> And John Marshall

---

50. Surendra Gopal, "The Jainas in Bihar"..., p.322.

51. Ain, II, p.164; KI, in Jadunath Sarkar, op. cit., p.35.

52. Marshall, p.414.

53. EFI (1618-21), pp.192-193; Mundy, II, p.134; Marshall, pp.74-76.

54. Manrique, II, p.138.

55. Taverneir, I, p.101.

found all the houses thatched and bazar for provisions.<sup>56</sup> This place had an added advantage of being on the major trade route (Hugli-Agra).

Hajipur was the sarkar headquarters.<sup>57</sup> In the pargana list of *Ain-i-Akbari* it is written "Hajipur with suburban district"<sup>58</sup> (*Hajipur ba haveli*). So it was a pre existing town. Hajipur was famous for its grapes<sup>59</sup> and jackfruits.<sup>60</sup> Minapur near Hajipur was a manufacturing centre for the fine earthen ware.<sup>61</sup> This town was on the very important route, which linked Nepal with Patna, across the Ganges opposite Patna.<sup>62</sup> On account of heavy traffic via this place we find a sarai also.<sup>63</sup> In seventeenth century Hajipur became an important place as collecting and transit point for saltpetre obtained in the area, before being dispatched to Patna.

---

56. Marshall, pp.76-77.

57. *Ain*, II, p.166; Shireen Moosvi, *op. cit.*, p.321.

58. *Ain*, II, p.166.

59. Marshall, p.142.

60. *Ain*, II, p.164, *KI*, in Jadunath Sarkar, *op. cit.*, p.38.

61. Marshall, p.414.

62. *Ibid.*, p.94.

63. *Ibid.*

On the account of saltpetre trade English EIC has taken a house on rent at Hajipur for which they paid Rs. three and half per month.<sup>64</sup>

This was a sacred place for Hindus and people from far of places came here to take holy dip at the place where the Ganges and the Gundak rivers meet. According to John Marshall 40 to 50,000 people used to take bath on the particular day.<sup>65</sup> They carried with them the water of the place which was considered to have great merit of 'washing' all the sins committed by any one.<sup>66</sup> John Marshall informs us that some people came from even Tartary (central Asia) region at that particular time.<sup>67</sup>

Gaya has been a place of Hindu pilgrimage.<sup>68</sup> From ancient times the compiler of *Khulasat ut Tawarish* notes "Thirty Kos south of this city (Patna) stands the shrine of Gaya, on the skirts of hills. Hindus, having come from

---

64. Marshall, p.414.

65. Ibid, pp.141-142.

66. Ibid, pp.141-142, 157-58.

67. Ibid.

68. Ain, II, p.164.

distances, make offerings to the souls of departed ancestors. Especially during the 40 days when the Sun remains in the sign of Sagittarius, many men resort to this place and please the souls of their ancestors by reading spells and making offerings of grains and water (*pinda*). And they regard this as a deed of piety and merit on their own part and the cause of the redemption of the deed.<sup>69</sup> This place was also called *Brahma Gaya* being dedicated to *Brahma*. It was a mart of precious stones which were brought from foreign ports and there was a constant traffic at this place.<sup>70</sup> There were quarries of stone resembling marble, of which ornaments were made.<sup>71</sup>

Some administrative centres like Rohtas and Munger were strategically very important. Rohtas was sarkar headquarters and *Ain-i Akbari* notes it as a town.<sup>72</sup> There was a fort at this place on the top of the hill which was very much re-

---

69. *KI*, in Jadunath Sarkar, *op. cit.*, p.35.

70. *Ain*, II, p.164.

71. *Ain*, II, p.164, *KI*, in Jadunath Sarkar, *op. cit.*, p.35.

72. *Ain*, notes Rohtas with Suburban district, *Ain*, II, p.166.

nounced for its strength and height.<sup>73</sup> This fort existed from early medieval times. Sher Shah captured it in 1539, and immediately began to strengthen the fortification. During Akbar's time Man Singh on being appointed governor of Bengal and Bihar selected Rohtas garh as his stronghold, and according to two inscriptions in Sanskrit and persian, erected many buildings. When died, the fortress was attached to the office of Wazir of the emperor.<sup>74</sup> Manucci informs us that his was one of the principal fort of the Mughals, commanded by selected and loyal officers.<sup>75</sup> Its circumference was about 14 kos.<sup>76</sup> Bamboos and canes grew in abundance which were important items of trade and were carried to other places because of their use in buildings.<sup>77</sup> The land was also cultivated and there were many springs serving as means of irrigation.<sup>78</sup>

---

73. Ain, II, p.165; Mundy, II, p.134; Tavernier, I, p.64.

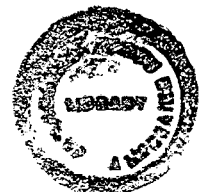
74. The Imperial Gazetteer of India, vol.XXI, reprint, New edition, New Delhi, (n.d.).

75. Manucci, II, p.445-46.

76. Ain, II, p.165, Mundy, puts the circumference at 13 kos, Mundy, II, p.168.

77. Mundy, II, p.169.

78. Ain, II, p.165, Tavernier, II, p.64.





Munger was Sarkar headquarters in seventeenth century<sup>79</sup> and known as 'key of the kingdom of Bengal.'<sup>80</sup> Contemporary European observers in seventeenth century refer this place as town.<sup>81</sup> It was a town of old foundation since the time of Pala dynasty.<sup>82</sup> Since early medieval times Munger is often referred to as a place of military importance. Prince Daniyal, son of Alauddin Hussain the Afghan ruler of Gaur, repaired the fortifications. In 1580 Raja Todar Mal, on being deputed by Akbar to support the rebellion of Afghan chiefs of Bengal, made Munger his headquarters and constructed entrenchment between the Ganges and the hills.<sup>83</sup> In 1659, Shah Suja being defeated by the Aurangzeb's army retreated here and strengthened the fortification and threw up lines of entrenchment.<sup>84</sup> This town was famous for the

---

79. Ain, II, p.166.

80. Manucci, I, p.334.

81. Ibid., Tavernier, I, p.101; Marshall, pp.75-76, 96, 123-24.

82. Radhakarishna Chaudhuri, History of Muslim Rule in Tirhut (1206-1765), Varanasi, 1970, p.77; Imperial Gazetteer op.cit., vol. XVII, p.393.

83. Imperial Gazetteer, op.cit., p.393.

84. Ibid., Manucci, I, p.334.

tomb of Shah Nafah the patron saint of the town.<sup>85</sup> Munger was situated on the Agra-Hugli trade route (both Ganges and Land route) and there was a very large establishment of *chauki* which kept vigilance on the traffic of trade.<sup>86</sup> The opium produced at and around this town entered the European trade during seventeenth century.<sup>87</sup>

Sasaram was another important township on the major trade route. It had been the seat of political power under Afghan rulers, and after the establishment of Mughal hegemony<sup>88</sup> in Bihar it continued to be residence of officials to have control over the area.<sup>89</sup> Tombs of Afghan ruler Sher Shah and his son Salim Shah were built here. The tomb of Chandan Shah, the saint, attracted devotees.<sup>90</sup> This town served as a halting and provising centre for travellers for being on much frequented trade route and also as a marketing

---

85. Ibid., Imperial Gazetteer, op.cit., p.393.

86. Manrique, I, pp.136-37.

87. Marshall, p.414, Om Prakash, op. cit., pp.23, 440.

88. Man Singh, Akbar's noble and general defeated the Afghan's in 1592, Mundy, II, p.131 & fn.4.

89. Ibid., p.132.

90. Ibid.; Taverneir, I, pp. 98-99 & n.

centre for adjoining countryside.<sup>91</sup>

In identification of towns we have to rely on the source material of European origin. If a European observer identified a settlement as town we have to take it as a non-rural settlement, what ever the size of that settlement might have been.

Let us consider the following settlements which were not manufacturing production or administrative centres but were observed by European as towns on the major route (Hugli-Agra). This list will give us an idea about the nature of source of the non-rural settlement in 17th century.

Between western border of Suba Bihar and Sasaram- *Khurramabad* (Jahanabad)- This was a town on the bank of river Kudra.<sup>92</sup> For crossing the river there was a stone bridge<sup>93</sup> and this town was "well supplied with all necessaries".<sup>94</sup>

---

91. Mundy, II, 132.

92. Tavernier, I, p.98.

93. Mundy, p.129; Tavernier, I, p.98.

94. Mundy, p.129.

Between Patna and Rajmahal- where land route followed the river course of the Ganges.

Gunsurpur - There was a sarai and grain market.<sup>95</sup>

Fatuha - John Marshall called it 'a long town' and gives the length as 1\2 kos. There was a stone bridge also.<sup>96</sup>

Barh - J. Marshall calls it 'A great town', and observes several stone houses, a sarai and grain market.<sup>97</sup>

Suraj Garhi - J. Marshall calls this place 'a great town'.<sup>98</sup>

Ghorghat - J. Marshall observes, "This a long town or rather severall Hindu towns joined together". It was a centre for buying provisions, and there was a stone bridge with 7 arches.<sup>99</sup>

Jangira (Jahangira) - Marshall observed, "This town lie upon

---

95. Marshall, p.126.

96. Ibid., p.77.

97. Ibid., pp.95, 125.

98. Marshall, p.76.

99. Ibid, p.74.

Ganges, a very great town of that hut houses".<sup>100</sup>

Masdi - "This town great, and both sides the road, which are high and having a bank on each side, which seems to be formerly artificial, being full of bricks."<sup>101</sup> There seems to be an artificial embankment to protect the town from the Ganges. According to Marshall Jangira and Masdi were seemingly in continuum, connected by other small settlements.<sup>102</sup>

Caushdee (Kosdi) - A town with a *chauki* and *masjid*.<sup>103</sup>

Dolladee - a market centre for buying provisions it was opposite to *pir painti* and 1\8 koss from the river Ganges.<sup>104</sup>

Paintee (*Pir Painti*)- The town is situated on the right hand under a pleasant little hill, on the top of which is a muskeet (*masjeed*), and at the side next the river a pleasant

---

100. Marshall, p.122, 74.

101. Ibid.,

102. Ibid., p.122.

103. Marshall, p.73.

104. Ibid., p.72.

Bungelah (Bungelow).<sup>105</sup> Marshall also noticed a *chauki* also.<sup>106</sup>

Apart from these places J. Marshall noticed many towns but did not give their names.<sup>107</sup> In the list of above mentioned towns, there are some towns with sarai or *chauki* (custom houses), and some are simply mentioned as centre for provisioning. These towns has to be placed in the context of seventeenth century. There could be two possible explanation for simultaneous existence of townships and sarai. Either the towns developed around the sarais or the sarais were constructed in the towns. We can imagin that maximum distance a traveller could have travelled using medieval means of transport. so there had to be a place where they could stay. so we find towns with sarai at very short interval. The traders had to stop at the *chaukis* for clearing duties so there emerged marketing facilities for the traders. Due to heavy traffic on the route there had to be frequent provisioning centres. Some of the towns were grain

---

105. Ibid., pp. 96-97.

106. Ibid.,

107. Ibid., pp. 72-74, 77.

market and these had to be seen with the growth of *gasbas* with grain market in seventeenth century. Due to growth of money economy grain was to be sold either to meet revenue demand in cash or for maintenance of nobles and various landholders.<sup>108</sup> The increased marketing activity in grain led to the rise and growth of many 'nuclear' urban centres where grain dealers, money lenders, *sarrafs* were drawn.<sup>109</sup> The above mentioned grain markets belonged to the chain of such urban centres, which provided easy outlet of grain because of their location on the much frequent trade route and were bound to grow during the period under consideration.

In the above discussion, we have noted a variety in the existence of urban centres in the seventeenth century Bihar. Although, Patna, does shows unmistakable signs of being a great urban centre, however, similar informations, extensive in nature about other urban centres in Bihar in the seventeenth century is lacking. However, on the basis of available information we can make some preliminary observations

---

108. Satish Chandra, Medieval India, pp.162-63.

109. Gavin R.G. Hambly, "Town and Cities", in Cambridge Economic History, op. cit., p.442.

regarding the varying sizes and degrees of different urban centres.

These urban centres varied from a big township like Patna, where intensive non-agricultural activities were carried on with a high level of diversification, to small qasbas. In between these two levels existed towns, which were administrative centres, manufacturing centres and centres of being religions significance like Gaya. Several of the towns became important as transit points for the carriage of goods and their distribution to far-flung areas. Periodical markets also led to the beginning of non-agricultural pursuits in several of these centres. The complexity of most of these urban centres in terms of their functioning, thus, does not allow us to place them in a neat categorizaion. On the contrary, from one extreme to other, these urban centres presents a picture of over lapping functions being played by most of these centres.

Even in terms of population, the figures for two of the urban centres which are available to us, of Patna, an estimated 2,00,000 in 1641 and of Daryapur around 2000-3000 does not bear any conclusive significance for postulating the extent of urbanisation. As Braudel has noted in the context



of France, that even centres with 2,000 population could qualify as being an urban centre because of the diversified nature of non-agricultural pursuits in which people were engaged in these places.<sup>110</sup> Similar things can also be said about the urban centres which we have discussed in the Suba Bihar. In most of the urban centres we have seen, no matter what was their size or the nature of their origin, but the available information does suggest that during this period, extensive commercial activities and non-agricultural pursuits were carried on in these places.

It is not without significance that most of these urban centres were either located close to a river channel and the villages therein had good irrigation facilities, or they contained a market and mandi and thus the zamindars and the peasants around had some incentives to produce more and better marketable crops. The location of these centres on favourable trade routes further intensified the commercialization of economy and its general growth in the region.

Bihar also experienced tremendous growth of trade

---

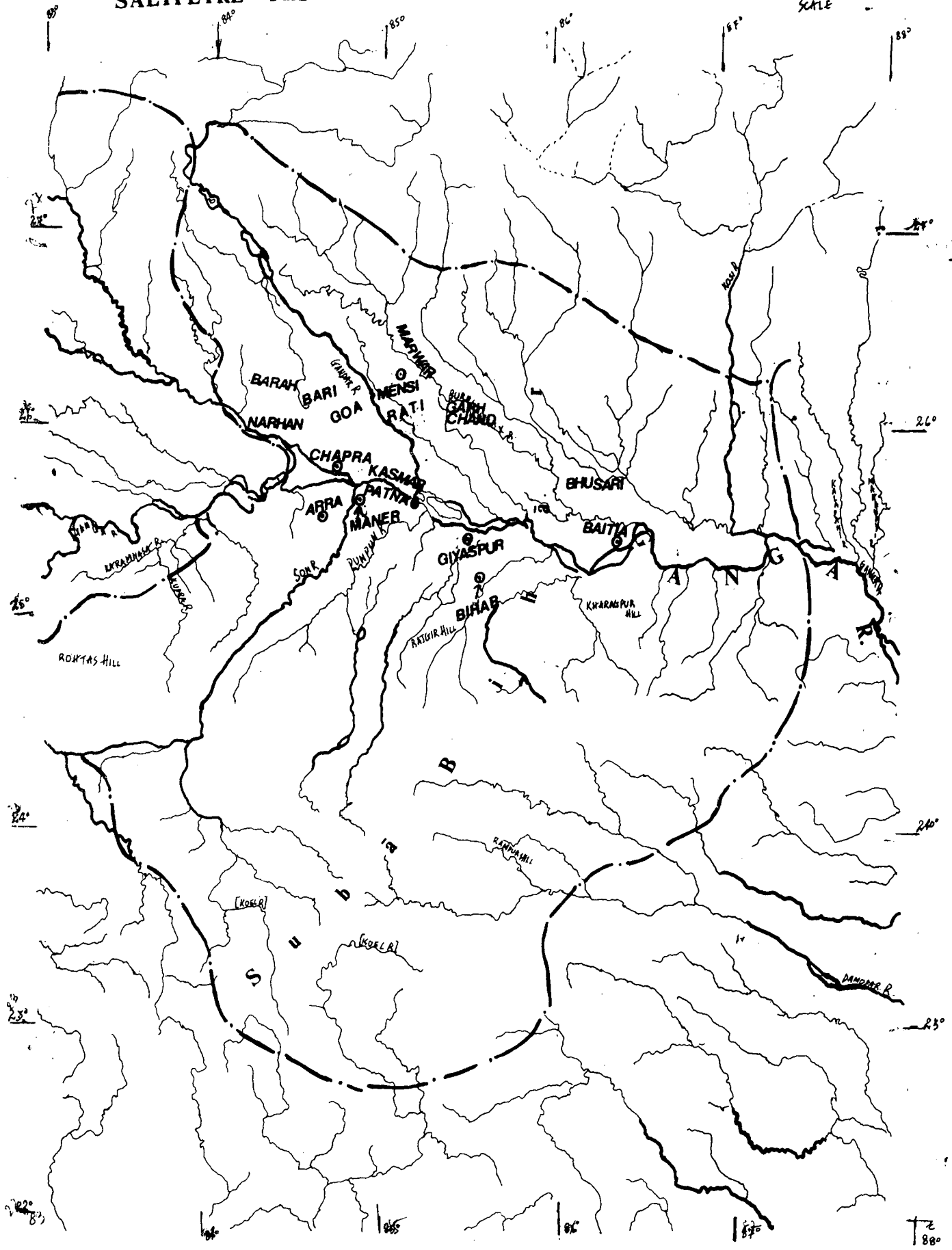
110. F. Braudel, Civilization And Capitalism, 15th to 18th Centuries, Vol.I, The Structures of Everyday Life, (Tr.), by Sian Reynolds, London, 1981 (1985), pp.481-482.

following the advent of the European trading companies by the mid-seventeenth century. They made concentrated attempts to settle in Bihar, following the Gujarat famine which threatened their trade in Western India. This process was also encouraged by the location of all the production centres in the suba Bihar on major or minor trade routes which provided an easy access to them.

These extensive economic activities in the region, witnessed a parallel rise and also encouraged an extension in the cultivation of cash crops like cotton, opium and sugar. They might also have provided incentives to local artisanal production and all this contributed a good deal to growth in the economy of the region in this period. This process also linked the economy of the region with the larger economy of the sub-continent and in several cases, its trading activities even linked it with the economy of regions beyond the frontiers of the subcontinent.

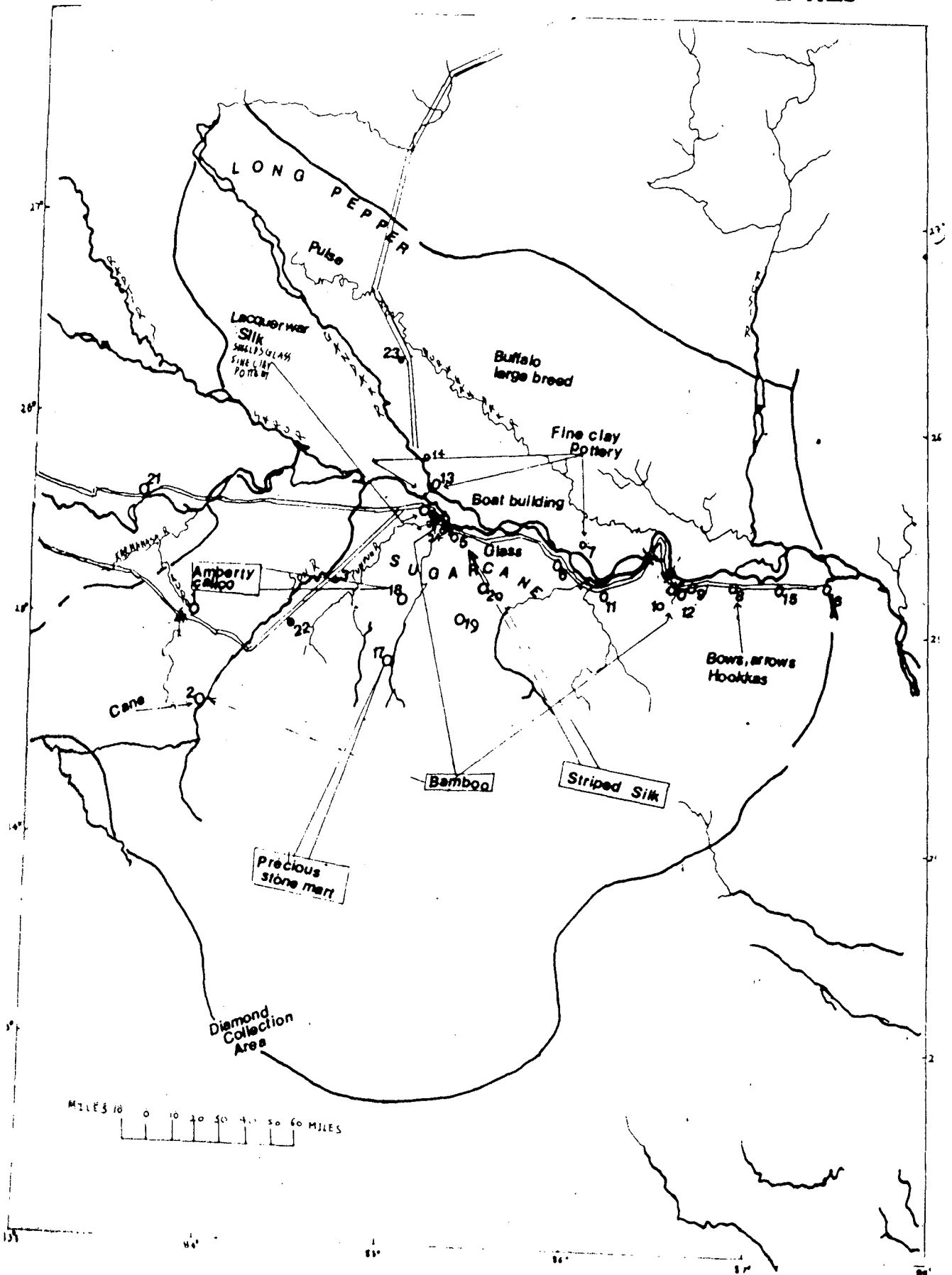
# SALTPETRE PRODUCTION REGIONS

MILES 0 10 20 30 40 50 MILES  
SCALE



Map N. 1

# TRADE ROUTE, URBAN CENTRES & PRODUCTION CENTRES



Map N. 2

KEY TO THE MAP NO.2

---

1. KHURAMABAD
2. ROHTAS
3. ARVAL
4. PATNA
5. BAIKUNTHPUR
6. DARYAPUR
7. BEGUM SARAI
8. BHAGALPUR
9. JANGIRA
10. GHORGHAT
11. MONGER
12. MASDI
13. HAZIFUR
14. SINGHIA
15. KOSDI
16. PANTI
17. GAYA
18. LAKHAWAL
19. RAJAGRIHA
20. BIHAR
21. GAZIFUR
22. DAUDNAGAR
23. MEHSI

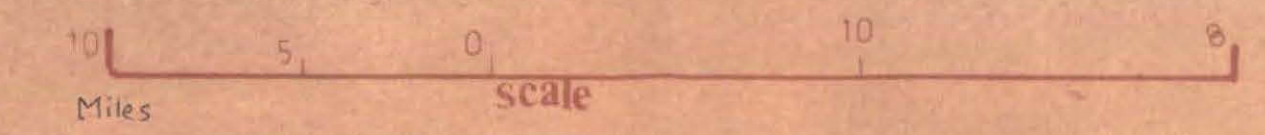
LEGEND

- 0 - URBAN CENTRE  
) ( - BRIDGE

URBAN CENTRES ON THE TRADE ROUTE ALONG THE GANGES  
FROM PATNA TO PAINTI



Map N.3



## BIBLIOGRAPHY

### PRIMARY SOURCES:

#### Persian:

Abul Fazl, Ain-i Akbari, (ed.), Blochmann, Bibliothic Indica, Asiatic Society of Bengal, 1972.

Abul Fazl, Ain-i Akbari, 3 vols. (tr.), Blochman and Phillot, Vol.1 (tr.), H.S. Jarrett and J.N. Sarkar, Vols.II & III, New Delhi, 1977-78.

Ahmad, Nizamuddin, Tabqat-i-Akbari, (tr.), B. De, revised and edited by Beni Prasad, Delhi, (reprint), 1990.

Babur, Baburnama, (tr.), A.S. Beveridge, London, 1970.

Jahangir, Tuzuk-i Jahangiri, (tr.), A. Rogers and H. Beveridge, 2 vols, London, 1909-14.

Rai Chatar Man Kayath, Chahar Gulshan, (tr.), in Jadunath Sarkar, India of Aurangzeb, Madras, (n.d.).

Sujan Rai Bhandari, Khulasatut Tawarik, (tr.), in Jadunath Sarkar, India of Aurangzeb, Madras, (n.d.).

**Published English Records & Diaries:**

- Buchanan, Francis, Journal of Francis Buchanan Kept During the Survey of the District of Bhagalpur in 1810-1811, (ed.), C.E.A.W. Oldham, Patna, 1930.
- Fawcett, Charles (ed.), English Factories in India, 4 vols., (New Series), 1670-1684, Oxford, 1936-55.
- Foster, W. (ed.), English Factories in India 1618-69, 13 Vols., Oxford, 1906-27.
- Hedges, W., The Diary of William Hedges, Esq. during his agency in Bengal & C., 3 vols., Nos.74, 75 & 78, London, 1887-89.
- Master, Streyنشam, The Diaries of Streyنشam Master (1675-80), 2 vols., (ed.), R.C. Temple, London, 1911.
- Rennell, James, James Rennell's Memoir of a Map of Hindustan or the Muqhal Empire and his Bengal Atlas, (ed.), Brahmadeva Prasad Ambash-thya, Patna 1915
- Temple, R.C., "Documents relating to the First English Commercial Mission to Patna, 1620-1621", Indian Antiquary, A journal of Oriental Research (1872-1933), (eds.), R.C. Temple & Devdatta Ramkrishna Bhandarkar, Vol.XLIII, 1914, Swati Publications, Delhi, 1985, pp.69-83, 97-111.



### Foreign Travellers' Accounts:

- Bernier, Francois, Travels in the Mughal Empire, 1556-68, (tr.) A constable, revised by V.A. Smith, London, 1916.
- Bowrey, Thomas, A Geographical Account of Countries Round the Bay of Bengal, 1669-1679, (ed.) R.C. Temple, Cambridge, 1903.
- Fitch, Ralph, Early Travels in India, (ed.) W. Foster, New Delhi, (reprint) 1985.
- Fitch, Ralph, England's Pioneer to India and Burma, (ed.) J. Horton Ryley, London, 1889.
- Hamilton, Alexander, A New Account of the East Indies, being the Observations and Remarks of Captain A. Amilton, (1688-1723), (ed.) W. Foster, 2 Vols., London, 1930.
- Manrique, Fray Sebastien, Travels of Fray Sebastien Manrique (1629-164 ). 2 vols., (tr. and ed.) C. Eckford Luard and H. Hosten, Oxford, 1927.
- Manucci, Niccolao, Storia Do Mogor or Moqul India, 1653-1708, (tr.) William Irvine, 4 vols., London, 1907-8.
- Marshall, John, John Marshall in India, Notes and Observations in Bengal, 1668-1672 (ed.), Sha faat Ahmad Khan, London, 1927.
- Mundy, Peter, The Travels of Peter Mundy in Europe and Asia, c.1608-1667, (ed.) R.C. Temple, London, 1914. Vol. II, Travels in Asia (1628-34).

Pelsaert, Francisco, The Remonstrantie, (tr. and ed.), W.H. Moreland and P. Geyl, (reprint), Delhi, 1972.

Tavernier, Jean-Baptiste, Travels in India, (tr.), V. Ball, (ed.) William Crooke, 2 vols., reprint, New Delhi, 1977.

Thevenot, Jean de, Indian Travels of Thevenot and Careri, (ed.), Surendranath Sen; New Delhi, 1949.

#### **Gazetteers:**

O'Malley, L.S.S., Bihar and Orissa District Gazetteers: District Shahabad, 1924.

The Imperial Gazetteer of India, Vol. XXI & XVII, reprint, New Delhi, (n.d.).

#### **SECONDARY SOURCES:**

##### **Books:**

Ahmad, Qeyamuddin (ed.), Patna Through the Ages: Glimpses of History, Society and Economy, New Delhi, 1988.

Alam, Muzaffar, The Crisis of Empire in Mughal North India, Delhi, 1986.

- Askari, S.H. and Ahmad, Qeyamuddin (eds.), Comprehensive History of Bihar, Vol.II, Part II, Patna, 1987.
- Banga, Indu (ed.), The City in Indian History, Urban Demography, Society, and Politics, New Delhi, 1991.
- Blake, Stephan, Shahjahanabad city in Mugal India, 1639-1739, New York, 1991.
- Braudel, Fernand, Civilization and Capitalism 15th-18th Century, Volume I, The Structure of Everyday Life, Trans. by Sian Reynolds, London, 1985 (1981).
- Chaudhuri, K.N., The English East India Company: the Study of an Early Joint Stock Company, 1600-1640, London, 1965.
- Chaudhuri, K.N., The Trading World of Asia and the English East India Company, 1660-1760, Cambridge, 1978.
- Chaudhury, Radhakrishna, History of Bihar, Patna, 1958.
- Chaudhuri, Radhakrishna, History of Muslim Rule in Tirhut (1206-1765), Varanasi, 1970.
- Chaudhuri, Susil, Trade and Commercial Organization in Bengal, 1650-1720, Calcutta, 1975.
- Chandra, Satish, Medieval India: Society, The Jaqirdari Crisis and the Village, Delhi, 1982.

- Cipolla, Carlo M., The Fontana Economic History of Europe, The Middle Ages, London, 1976.
- Diwakar, R.R., Bihar Through the Ages, Calcutta, 1959.
- Gopal, S., Commerce and Crafts in Gujarat in the 16th and 17th Century, Delhi, 1973.
- Gopal, S., Patna in the 19th Century, Delhi, 1982.
- Gupta, S.P., The Agrarian System of Eastern Rajasthan, Delhi, 1986.
- Habib, Irfan and Raychaudhuri, Tapan (eds.), The Cambridge Economic History of India, C.1200-C.1500, Vol.I, Delhi, 1984.
- Habib, Irfan, Agrarian System of Mughal India, Bombay, 1963.
- Habib, Irfan, An Atlas of the Mughal Empire, Delhi, 1982.
- Moreland, W.H., From Akbar to Aurangzeb, London, 1923.
- Moreland, W.H., Agrarian System of Moslem India, Cambridge, 1929.
- Moreland, W.H., India at the Death of Akbar, Delhi, 1962.
- Moosvi, Shireen, The Economy of the Mughal Empire C.1595: A Statistical Study, Delhi, 1987.
- Naqvi, H.K., Urban Centres and Industries in Upper India, 1556-1803, Bombay, 1968.

- Naqvi, H.K., Urbanisation and Urban Centres under the Great Mughals, Simla, 1972.
- Prakash, Om, The Dutch East India Company and Economy of Bengal, Delhi, 1988.
- Pearson, M.N., Merchants and Rulers in Gujarat, California, 1976.
- Saran, P., Provincial Government of the Mughals, 1526-1658, 2nd Edn., Bombay, 1973.
- Sarkar, J., History of Aurangzeb, 5 Vols., Calcutta, 1973.
- Sarkar, Jagdish Narain, Studies in Economic Life in Mughal India, Delhi, 1975.
- Shukla, Prabhat Kumar, Indigo and the Raj, Peasant Protest in Bihar, 1780-1917, Delhi, 1993.
- Siddiqui, N.A., Land Revenue Administration Under the Mughals, Bombay, 1970.
- Spate, O.H.K. and Learmonth, India and Pakistan, A General and Regional Geography, London, 1967.
- Wilson, H.H., A Glossary of Judicial and Revenue Terms, London, 1855, (reprint) Delhi, 1968.

#### Articles:

- Chandra, Satish, "Some Aspects of the Growth of a Money Economy in India during the Seventeenth Century", IESHR, III(4), 1966,

- Chattopadhyaya, B.D., "Urban Centres in Early Medieval India: An Overview", Situating Indian History for S. Gopal (eds.) Sabyasachi Bhattacharya and Romila Thapar, Delhi, 1986.
- Chaudhuri, K.N., "The Structure of Indian Textile Industry in the Seventeenth and Eighteenth Century", IESHR, Vol.XI, Nos.2-3, 1974.
- Chaudhuri, Susil, "Saltpetre Trade and Industry in Bengal Subah, 1650-1720", PIHC, 1973.
- Gopal, Surendra, "Jainas in Bihar in the Seventeenth Century", PIHC, 1972.
- Habib, Irfan, "The System of Bills of Exchange (Hundi) in the Mughal Empire", PIHC, 1972.
- Habib, Irfan, "Notes on the Indian Textile Industry in the 17th Century", Professor S.C. Sarkar Felicitation Volume, New Delhi, 1976.
- Habib, Irfan, "Banking in Mughal India", Contribution to Indian Economic History (ed.) T. Raychaudhury, Calcutta, 1960.
- Habib, Irfan, "Usury in Medieval India", Comparative Studies in Society and History, VI, 1964, The Hague.
- Hasan, Aziza, "The Silver Currency Output of Mugal Empire and Prices in India During the 16th and 17th Centuries", IESHR, Vol.VI, No.1, 1969.

Khan, Ikhtidar Alam, "The Nobility under Akbar and the Development of his Religious Policy, 1560-80", Journal of the Royal Asiatic Society, 1968.

Khan, Ahmad Reza, "Revenue Statistics of Bihar (1526-1707)" in S.H. Askarai and Q. Ahmad (ed.), Comprehensive History of Bihar, Vol.II, Part II, Patna, 1987.

Hasan, S. Nurul, "Three Studies of Zamindari System" in Medieval India: A Miscellany, Vol.1, Delhi, 1969.

Moosvi, Shireen, "Formulation of Land Revenue Rates Under Akbar", Indian Historical Review, 1984-85.

Moreland, W.H., "Ranks (Mansab) in the Mughal Service", Journal of Royal Asiatic Society, London, 1936.

Prakash, Om and Krishnamurty, J., "Mughal Silver Currency - A Critique", IESHR, Vol.VII, No.1, 1970.

Prakash, Om, "The European Trading Companies and the Merchants of Bengal, 1650-1725", IESHR, Vol. No.3, 1964.

Prakash, Om, "Some Aspects of Trade in Mughal India", Presidential Address, PIHC, 1981.

Qaisar, A.J., "Distribution of Revenue Resources of the Mughal Empire among the Nobles", PIHC, 1965.

Qaisar, A.J., "The Role of Brokers in Medieval India", IHR, 1(2), 1974.

Qaisar, A.J., "Level of Technology in India on the Eve of the Eighteenth Century: The Case of Glass", Studies in History, Vol.II, No.1, 1980.

Sarkar, Jagdish Narayan, "Economic Life in Bihar (1526-1557)" in Comprehensive History of Bihar, (eds.) S.H. Askari and Q. Ahmad, Vol.II, Part II, Patna, 1987.

Subrahmanyam, Sanjay, "Precious Metal Flows and Prices in Western and Southern Asia, 1500-1750: Some Comparative and Conjunctural Aspects", Studies in History, New Series, Vol.7, No.1, 1991.

Trivedi, K.K., "The Share of *mansabdars* in State Revenue Resources: A Study of the Maintenance of Animals", IESHR, Vol.24, No.4, 1987.

Trivedi, K.K., "Emergence of Agra as a Capital and a City: A Note on Spatial and Historical Background", Journal of Economic and Social History of the Orient, Leiden (forthcoming).

Trivedi, K.K., "Area Statistics of the Agra Suba in the *Ain-i Akbari*", PIHC, 1972.

3078