Term Paper

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Introduction

India's development story has varied across different states and there is reason for it to vary as well given how diverse the land is, they have different historical backgrounds which might give rise to institutions that either beneficial or detrimental to economic growth. To give a brief introduction why that may be the case we look at how historically the developmental patterns have differed - A state like Assam was never under the rule of the Mughal dynasty who had a different revenue system while Assam for a large part was under the rule of the Ahoms but this revenue system that these systems may be done away with by the new regime that comes in but the old systems do remain and may in some parts of the country keep the social relations intact so there is a certain path dependency that the modern day institutions may be a result of. Additionally Assam was one of the last regions in the subcontinent to be colonized by the British so social engineering in this part of the country may not have been as elective as in other parts of the country so there may be a higher chance of Assam retaining some of its pre-colonial characteristics. This has had major implications on income divergence across the states, from a developmental perspective the question that arises is why do some states and themselves in an economy that does not translate into a virtuous cycle of growth. and what are the political economy considerations behind it. This term paper will take a class view of it and see how the relations of production, to borrow a term from Marxian literature, have kept states like Assam in a developmental quagmire.

The first few sections will aim to familiarize the reader about Assam and the important income divergence debate that has been around in India for a while, more importantly how tea as a commodity has evolved in Assam and the social relations that has made it possible to grant the status to tea it has today. There is a long tradition of answering the development question in the global south through an institutional lens and my section on Related Literature aims to do the same but with an eye on class relations in colonial Assam and whether or not these relations have remained after Independence and how that has helped to consolidate commodity extraction without establishing a proper manufacturing base.

Related Literature

Within country Income divergence in India has been a popular topic of discussion over the years. Cashin & Sahay (1996) examined the period of 1961 to 1991 and found that convergence of incomes do take place but what economists call β convergence i.e. it occurs when there are no explanatory variables other than the initial level of per capita income. However the speed of this convergence is slower than the within country convergence experienced in developed countries or what can also be called σ convergence. An Indian state would take on average 45 years to close the gap between steady state per capita income and its initial per capita income while a developed country takes on average 35 years. Das et al(1993) argue that it may not make sense to study absolute convergence in a homogenous country given its different regions may have similarities in preferences and technology as well as political and institutional environment but it may not be the best option in the case of India given its historical and natural differences between regions. What is rather an interesting aspect of this paper is that migration in response to differential state incomes was rather weak indicating economic, social and cultural barriers exist to such migration from less productive regions to more productive ones. This point does need highlighting and it will be clearer to the reader why that is the case in the context of Assam's development experience. Nagaraj et al(1998) provide a much more comprehensive account of Income divergence as it also provides for sectoral contributions. This paper also touches upon the legal structure of India and how the fiscal federalism in a country like in India is organized. With separatist tendencies abound in India the state is highly centralized and this matters a lot as most of the resources are allocated by the Central government in line with Article 246 of the Indian Constitution. Assam with its very own sedition movement is a big recipient of central funds. This is particularly important they say in the Indian context given the dominating role played by public investment in growth indicators. This paper also goes a step ahead to estimate conditional convergence i.e. the estimate the following regression

$$ln(y_{i,t}) - ln(y_{i,t-1}) = \alpha_i + \beta ln(y_{i,t-1}) + \gamma Agri_{i,t-1} + \phi dpma_{i,t} + \delta AX + \eta_t + \mu_{i,t}$$

The interesting bit from this regression is that they control for sectoral contribution, price shocks and types of infrastructure. captured by X. However the steady state of each state can differ and depend on initial conditions and they proceed to incorporate that in their next section and find that there are differences in the state fixed effects which captures political and social environment. Their benchmark state is Maharashtra and they compute the differences in the magnitude of the fixed effect compared to the fixed effect in Maharashtra, they find that Assam lags behind Maharashtra by 84 % while the national average is 61.3 %. The time period they cover was 1970 to 1994 while the recent studies have covered the latter time periods. Neoclassical model has savings rate at the heart of their growth engine and different attempts have been made to represent savings rate through different channels, Nayyer (2008) also uses private investment in addition to public investment and goes a step further by using a GMM estimation as certain methodological concerns about the robustness of fixed effects estimation in the context of dynamic panel data models. He also finds that there is no convergence as the neoclassical model would predict and fixed effects do play an important role in the divergence of incomes across India. Below is a summary of the main income divergence studies performed by different economists covering different time period, methodology may differ but the general consensus is that incomes have diverged and my essay is not another methodological paper on income divergence but the focus on the *fixed effects* of these models and what fixed effects could these papers be possibly referring to.

Summary of studies			
Paper	Time Period	β convergence	σ convergence
Cashin & Sahay (1996)	61-91	Yes	No
Nagaraj et al. (1988)	70-94	No	No
Ghosh et al. (1998)	60/61 - 94/95	No	No
Dasgupta et al.(2000)	70/71 -95/96	No	No
Adabar (2004)	76/77 -00/01	-	No
Nayyar (2008)	78/79 - 02/03	No	No
Kumar & Subramanium (2012)	01-09	No	-

North (1981) defines institutions as *a set of rules, compliance procedures and moral and ethical behavioral norms designed to constrain the behavior of individuals in the interests of maximizing the wealth or utility of principles.* These rules have been the bedrock of a plethora of a studies on the growth across countries. Pande (2005) emphasize on the need to include *de facto* institutions rather than *de jure* institutions, so thereby making a departure from North's definition of institutions being designed. If one thinks of it class relations in a country fall under the category of *de facto* relations. The Constitution of India does not lay down the legalities related to class relations but we see a persistence of these relations since pre-colonial times or the well-documented case of caste relations in India which has existed since time immemorial. We see in Figure 1 the income divergence between Assam and the rest of India, my paper tries to study what *fixed effects* can this divergence attributed to. There is a renewed interest among economists in finding whether

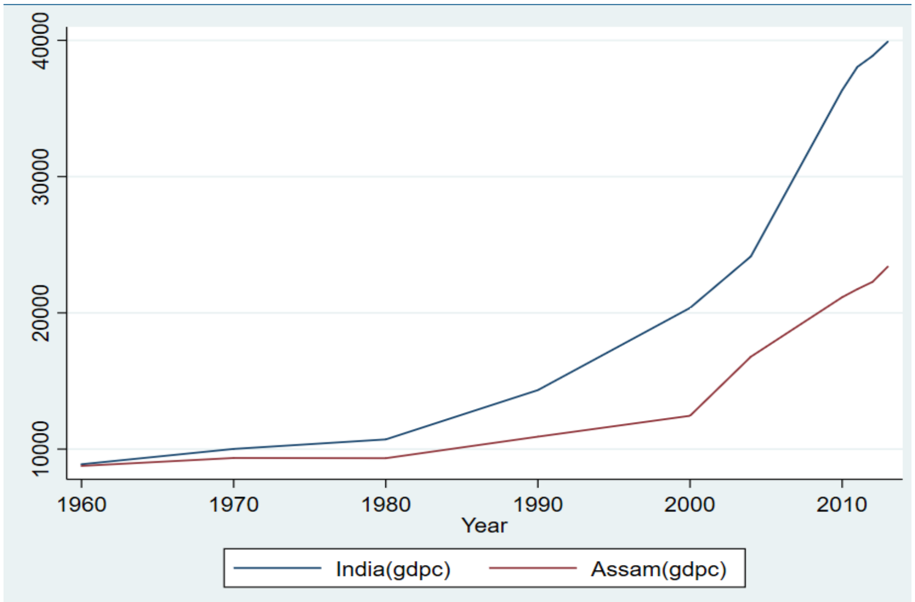

Figure 1: Rest of India - Assam divergence; *Source - Economic Survey of Assam 2017/8*

history, through its effect on the pattern of institutional development has a persistent effect on economic performance. Acemoglu et al (2002) is probably the pioneering piece in the analysing the role of institutions in the economic development of a country, they show that the mortality rates among early European settlers is a strong predictor of whether these countries end up with institutions with good quality today. Along the same lines Engerman and Sokoloff(2002) argue that the reason Brazil and United States differ so much is because Brazil was deemed suitable for growing sugar while the United States was a cotton growing economy. Sugar needed more slave labor and the society as a result is more hierarchical than in the United States. Banerjee and Iyer(2005) focus one very specific historical institution - the system for collecting land revenue - in India. They compare the different districts placed under the Landlord system (Zamindari) and individual system (Ryotwari). They find that the districts where the collection of land revenue from the cultivators was assigned to a class of landlords underperformed.

$$y_{it} = constant + \alpha_i + \beta NL_i + X_{it}\gamma + \epsilon_{it}$$

where y_{it} is the outcome variable of interest like agricultural investment, productivity etc in district i and year t with time fixed effects and NL_i is the dummy for non-landlord districts. They run OLS regressions and also an IV regression only to confirm that there is no endogeneity issues and find that the landlord districts indeed underperformed. As we can see from the map below that colonial India was divided into three main regions - landlord, individual system and village collection. Assam fell under the individual system and all other states that did fall under the individual system differ from Assam today in the sense that they have a much higher gdp per capita and perform better industrially than Assam and is well explained in the previous papers on regional divergence that I cite. They hypothesize that despite the abolition of the formal structure of landlordism, the class-based antagonism that it created within the communities persisted well into the post-Independence period. My essay tries to get to the bottom of this class structure in Assam and investigate whether class antagonism of any form has held Assam back as it seems to be the odd one out in the list of individual revenue states in colonial India.

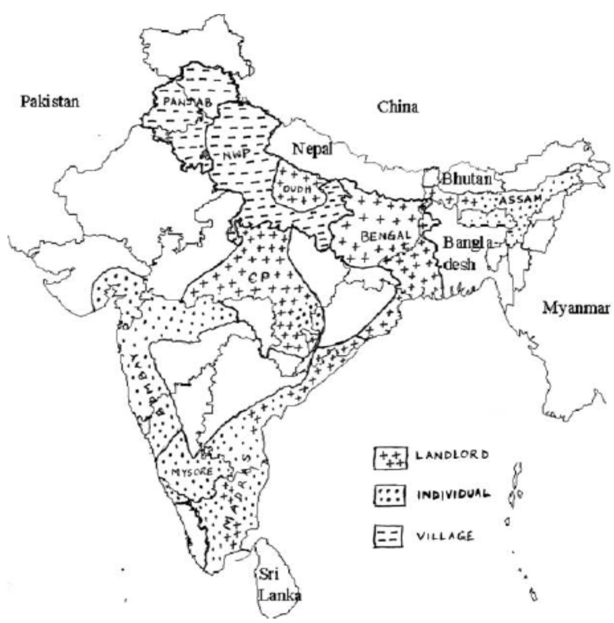

Figure 2: Zamindari and Ryotwari systems in India

Historical background

Chinese monopoly over tea was threatened with the discovery of tea forests in Assam and it found a valuable commodity that could be grown within its borders and opium smuggling made clashes with the Qing dynasty frequent and commerce was a casualty so it made economical sense for Britain to devote all their resources in developing a tea industry in one of their colonies and as one can see in Figure 3 the share of Chinese tea imports declined drastically with the advent of tea production in Assam which in itself required a lot of social engineering. Here I would also like to point the institutional differences between a landlord state and an individual revenue system like Assam. Bihar was a landlord state and the peasants of Bihar were forced into indigo plantation which led to the infamous Champaran Rebellion led by Gandhi.

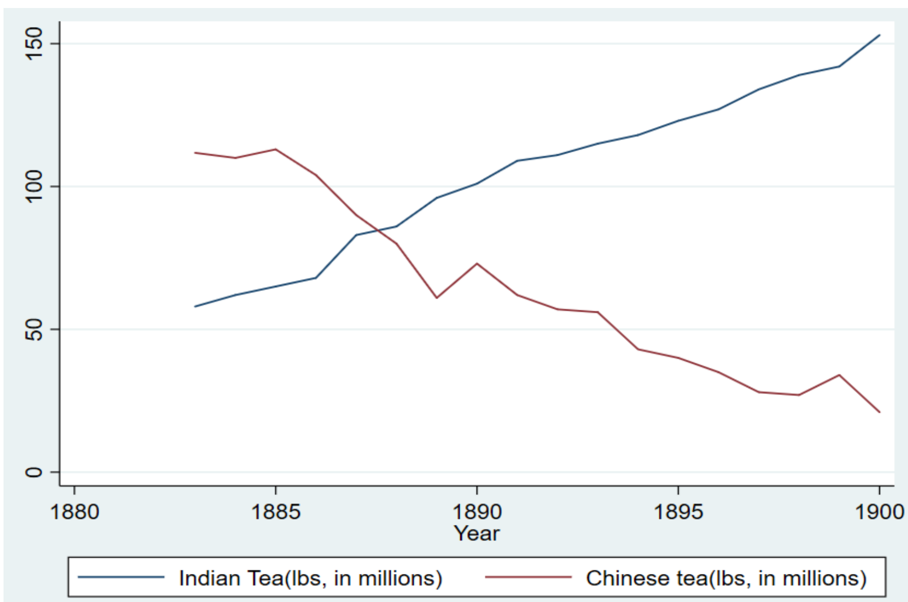

Figure 3: Tea Imports into Britain; Source - *John Weatherstone, The Pioneers 1825-1900: The Early British Tea*

It was a rebellion against the landlords by the tenants. While a similar event happened in Assam where the colonial government imposed plantation but there was no class antagonism in

Assam, or atleast as fierce as in Bihar and there was no rebellion against the landlords. Though colonial institutions do have a significant effect on present day post colonial institutions but these colonial institutions could also be a result of pre-colonial times. Kumar(1982) says that there was a continuity of the landlord system in Bengal as there was already a presence of a large landlord class before the British took over. Similarly when we talk about the case of Assam the pre-colonial we see a continuation of the pre-colonial system. Assam was ruled by the Ahom dynasty and its revenue collection system was based on corvee services and other payments by *paiks*(peasants). Under the Ahom dynasty the army and all the administrative work was looked after by mainly the Hindu upper castes. Colonel Francis Jenkins introduced European land ownership into India, he preferred to encourage British rather than local agrarian enterprise in Assam. It was also the first time in Indian colonial history that Europeans were allowed to hold land outside the Presidency towns on a long term lease or with free-hold rights. This paved the path for a colonial plantation economy. Jenkins said '*To obtain the full advantages that could accrue from European settlers, it appears to me that the grants must be altogether freehold, subject to no other condition other than the payment of a fixed and unalterable rate of rent and absolutely unencumbered with any stipulations in regard to ryots or sub-tenants*' This was followed by the framing of the Wasteland rules of 6 March 1838. This led to massive expansion of tea gardens in Assam and of course the displacement of thousands of individual cultivators (ryots hereinafter). Indigenous aspirants were not discriminated against as such, but these rules were framed in a manner so as to exclude them from all concessional grants in practice. For example the very first rule under these set of rules was that no grant for agricultural purpose could be made less than 100 acres at a time and to one who did not possess capital or stock worth atleast Rs.3 per acre. Though such a plantation economy in Assam faced a severe crisis in the form of labor.

Geographically, Assam also happens to be different from the Gangetic plains as they are characterized by densely populated lands while Assam was by and large forested in nature and given its abundant land availability in the state, peasants were not too drawn to wage labor which was indeed different from the experiences of other states where abundant land was not a factor. Also the Assamese (natives of Assam) acquired the epithet of 'lahe lahe' (slowly slowly) or lazy as their main crops grew without much effort including opium. "It is the low cost and great ease with which every ryot [peasant]is able to procure a supply of opium that so thoroughly demoralizes the whole people . . . This, if it produces no worse consequence, most certainly induces great laziness . . . the peculiar characteristic of the Assamese people."(Assam Company Board, 1852) So abundant land coupled with the laziness charge the British thought it would be ideal to look for labor elsewhere and they brought in labourers from present day Bihar, Jharkhand and Odisha. A huge proportion of the 'underclass' consists of these laborers brought in from other states and today this consists of around 20% of the entire state population, one can see how these migration numbers have varied over the years. We can see Geographical factors did play a role but at the

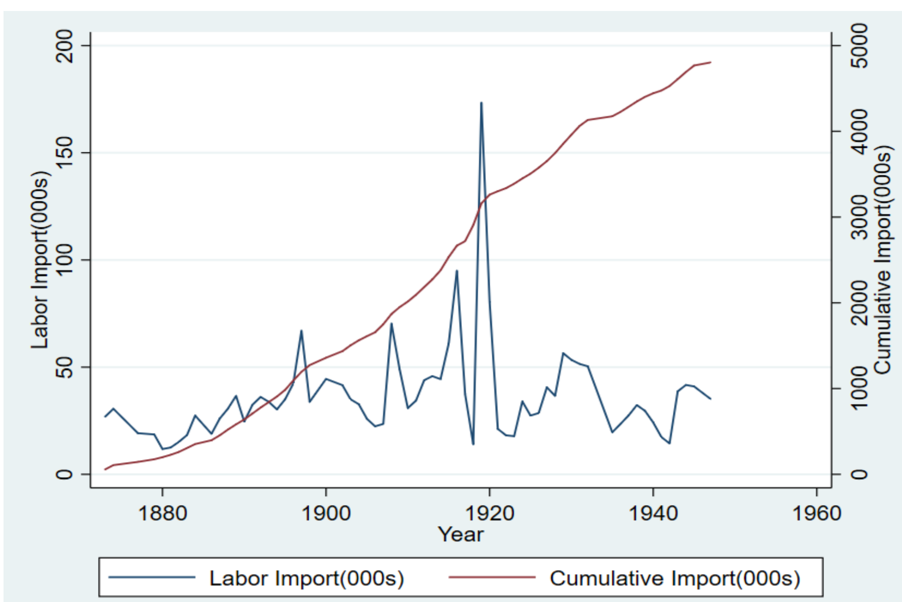

Figure 4: Labor Imports into Assam; Source - *Report on Emigration Labour in Assam 1877-1932*

same time there were different revenue systems in different parts of Assam, Goalpara district for instance had the Zamindari system in place which meant that every peasant had to pay taxes to its landlord (Zamindar) while in other parts of Assam it was the Ryotwari system which had every peasant (ryot) cultivate its own land and the taxes were paid by the ryots to the colonial government directly instead of having a middleman as in the case of a Zamindari system. These relations with the British government has come under a lot of scrutiny and analysis but it has not been looked at from a structural change perspective and more so the intersection of it with persistence. This is particularly important because of how labor wages of the migrants were suppressed and we can see in Figure 4 that the Real wages do see a decline over the years and the Output per worker in a sense remains the same. Walter Rodney has argued that that capitalist plantations required a particular type of labor 'Labor must be cheap and plentiful, and even more important, the labor must be easily controlled. Unless labor can be provided under conditions that maximize the industrial control, you cannot have a functioning plantation system'. Chinese tea plantation

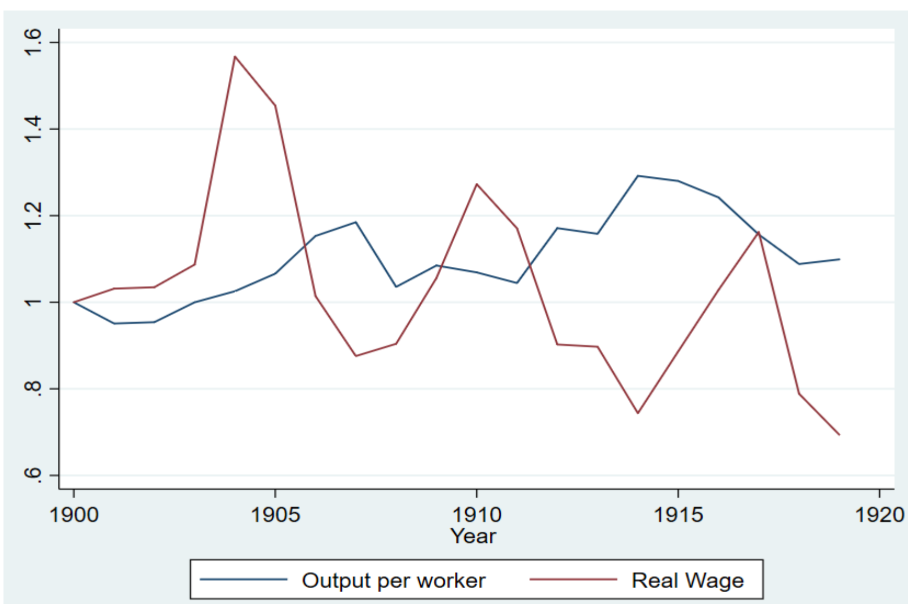

Figure 5: Real Wage Output per worker from 1903 to 1920; Source - *Annual Reports of the Working of the Tea District Emigrant Labour Act* for respective years

system differed from India as in China it was every farmer for themselves while in Assam it was wage labor and they made the production of tea very labor intensive and hence it relied on keeping tea prices cheap and competitive for it to be able to have a high enough share in world production. In addition to this, tea production was one of the largest employers of labor at the lowest level of wages of any private capitalist enterprise in the history of colonial India, all while the landed gentry was never employed in the tea Industry, even today one will not find the landed gentry employed in the tea gardens except as a manager or some other top management position. Here I must draw the reader's attention the role played by the rules enacted by the colonial authorities. Land revenue was generated from three main sources - wastelands and settlements that were fully or partially assessed. Most of these tea gardens were set up in wastelands and such wastelands did not accrue any revenue but most of the revenue was collected from the fully or partially assessed lands which were cultivated by the farmers and it did not develop the traditional agrarian sector. High revenue coupled with a low wage tea sector ensured that Assam largely remained a primary commodity producing state. This meant that the European capitalists were the sole beneficiaries of such a revenue system. If one were to take into account the first company to set shop in Assam, the Assam Company, they did not have to raise additional capital between 1854 and 1901 and yet trebled its tea acreage.

Year	Khiraj	Wasteland
1901-1902	2.44	0.22
1909-10	2.39	0.26
1919-1920	2.46	0.37
1929-30	2.37	0.59
1934-35	2.73	0.85
1939-40	2.67	1.20

Table 1: Land Revenue per acre(in Rs) on Fully Assessed Settlements (Khiraj) and Wasteland Grants in Lakhimpur District; Source - *Report on the Administration of the Land Revenue in Assam* for respective years

All this took place while the company also distributed an average dividend of 15.3% between 1872-1901. As economic law would suggest such extraordinary drew the attention of other European capitalists and it did not benefit the colonial government but the peasants had to bear the brunt of the revenue system tabulated below.

Assam Today

The previous section hinted at the beginnings of a dual economy. The labor shortage was well documented previously and this labor shortage also hurt the prospects of the rural peasant economy. There was an increasing demand from the plantation sector for grain as more and more plantation workers were imported. However this demand was not adequately met by the local peasant economy as they faced a massive shortage. Until then Assam's peasant economy was by and large relied on subsistence farming. Additionally the revenue systems meant that the local peasant economy could not amass a vast amount of capital for further investment. Thus, there emerged a serious imbalance between the fast-growing 'modern sector´ largely comprising of tea plantations but also to some extent coal mines, oil-fields and railways & 'traditional sector´ which comprised of the aforementioned local peasants. Not only that but the extracted surplus was remitted back to the United Kingdom in the form of dividends mainly to shareholders. ***This is the persistence of institutions that have hampered the chances of Assam making a structural change***. I mentioned earlier about how Chinese tea cultivation and Assamese tea cultivation differed in the sense one that did peasant based agriculture and the other had more labor intensive methods. Under the colonial government one can understand the insistence of keeping wages low but the post-Independence picture does not look too bright either. One can see in Table 2 that across different plantations across different states the minimum wages have a wide disparity. Tea plantations in Assam employ workers with the lowest wages. The table is particularly incriminating when one compares it other states. Assam's tea wages are less than half of what the workers are paid in the other plantations - coffee and rubber.

State	Tea	Coffee	Rubber
Assam	72	147.56	147.56
Kerala	171	209.97	171.98
Tamil Nadu	205.02	203.52	209.02
Karnataka	253.35	253.35	228.35
Uttarakhand	191.54	-	-

Table 2: Wage rates(in Rs) across different states and plantation type in 2013; Source - *Occupational Wage Survey(2013)*

Links between the plantation economy and the surrounding peasant economy remained minimal. Land was the only form of capital available to capitalists and all other forms of capital was imported from abroad and so was labor. This is very symbolic of an enclave economy when one thinks of the original Hirschmann(1958) piece on what makes a sector an enclave economy. An Enclave economy becomes an enclave when the modern sector does not use any of the products of the traditional sector as its inputs. The labor income earned is also used to consume not locally produced goods and rather buys cheap imports which does not trigger the powerful domestic household multiplier(Womack, 1969). When we see the other states compared to Assam we see that it does lag behind. India's growth story has been one of public investment that has fed into private investment as also talked about papers I cite previously in the essay.[1]

[1]see Nagaraj et al(2000)

State	Labor Productivity(Rs/kg)	Cost of production(Rs/kg)	Profit/ha (Rs in 000)
Assam	910	73.86	88.74
Kerala	1473	60.84	67.15
Tamil Nadu	3584	62.08	29.52
Karnataka	1780	55.15	32.47
West Bengal	957	84.22	91.64

Table 3: Intra-country relative advantages of tea production; Source - *Tea Statistics, Tea Board of India*

This is a rather interesting table, one that I am not sure how to interpret. There is more appropriation of surplus in the gardens of Assam and West Bengal while the tea gardens in the south use more capital intensive techniques but their profits are rather less. At the same time Assam's productivity is the lowest amongst all the states which points to a different institutional arrangement than the other states. One can talk of Kerala and its various CPI-M (Communist Party of India - Marxist) governments or caste based mobilizations than were missing in Assam to be the reason why wages may so widely vary within the same sector, this though is a comparative institutional analysis which is not the point of the essay. Rather I simply point out briefly how institutions matter in the long run and what colonialism has to do with it. The graph below is direct evidence of how backward Assam is. Not only has productivity within the traditional sector not improved but also within the modern sector the productivity has been low as we got a sneak peak into from the previous table also. Assam produces more than half of India's tea and its productivity still has not been as high as it should be for a sector that earns India a lot of foreign revenue. However, it continues to realize a high level of profits per hectare. This takes me to the next section where I talk about how a relational contract between different classes can be contextualized.

Figure 6: Annualized growth rates 1987-2009, Assam denoted by *AS*; Source - *Hasan et al(2013), Growth, Structural Change, and Poverty Reduction: Evidence from India; Asian Development Bank South Asian Working Paper Series*

Relational contract

What I would like to talk about here is a potential relational contract between the indigenous upper class of Assam and the European capitalists before Independence and then the capitalists from other states of India. When one talks of the political economy of Assam one simply can not not take into account the militant movements led by the Indigenous upper class Assamese. Till date it is the only armed militant group led by the upper caste/class in India which insinuates at tension between the Union of India and the state of Assam. Assam is also a special status state which means that most of its revenue comes from. Sen and Adelstein (2021) set the way to incorporate legal research into institutional developmental framework. They hint at a relational contract between the Zamindars (landlords) and the colonial government as the precedents passed by the state legislature is overturned by this relational contract as they *abuse* their superior legal authority to outdo the pro-peasant judgements. This may be the case in Assam after Independence with the state government outdoing any good achieved by the High Court of Assam. Secondly there is a concept of 'ultra-vires' in law which means that a statute passed by a competing authority undermines the legality of a higher authority. When this happens then the central legal powers will overrule any legislation passed by the state of Assam. When we talk about the state legislature being pre-dominantly upper class/caste and these classes and castes being the backbone of the militancy movement. This is another way to scrutinize the tension in the relational contract between the two classes, as statutes passed by the Assamese legislature will be 'ultra-vires' to the existing legal apparatus set in place by the Parliament. After Independence to continue the unabashed extraction of tea resources three acts were passed - Minimum Wage Act, 1948; Plantation Act, 1951; Tea Act, 1953. These Acts were discriminatory as they not only allowed for the minimum wages of workers to be less than the stipulated minimum wage but they also did not allow any capitalists without the necessary financial resources to acquire new land for tea cultivation. This prohibited any well-intentioned Assamese capitalist to not be able to invest in the production capabilities of the state.

Alternatively what I have seen in papers that study persistence in the mainstream literature study it by choosing a variable that may have differential levels as compared to a region untouched by colonialism. This method may not be applicable if one were to study structural change as such changes describe the whole economy and a control will be hard to find but an input output table for the recent years can still be informative. Weiskoff and Wolff (1977) talk about potential linkages in an enclave economy of Puerto Rico and how dividing the sectors further can help us find linkages between sectors.

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