‘LOCAL CAPITALISM’ AND THE DEVELOPMENT OF THE RICE ECONOMY - 1973-2010

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Introduction – questions and theory through which to address them

This essay asks how local agro-commercial and agro-industrial capitalism has developed the region in which the market town of Arni in northern Tamil Nadu is sited, in the final quarter of the 20th century and the early part of the 21st.[i] It explores local capitalism through the production of paddy and the post harvest system which converts it to rice, following it from the field to the local banana leaf, to the stalls of European cattle and even to US and Malaysian shopping malls. It has two theoretical preoccupations one ambitious and one more modest: first the value of the concept of local capitalism to understanding development; second, the character of clustered development.

The first, more ambitious question generates others. Development needs a surplus which can be put to productive use. Local capitalism is its building block. The state is vital to this process[ii] but in India two thirds of GDP is out of the state’s direct regulative control. Its informal economy is not transient, and informal activity penetrates the corporate sector and the state itself.[iii] How does the state regulate outside its reach? The answer can only be known by field enquiry.

While some commentators conclude that India’s capitalist class has consolidated itself seamlessly, others have drawn a distinction between the corporate sector and ‘the rest’. ‘Non-corporate capital’ is distinguished for some by scale as well as organization -

family businesses or 'petty' capitalism. Others draw attention to objectives linked to 'survival' or 'need' rather than profit.[iv] Yet others find that development is phased unevenly over time and that regional differences, social fracture zones and political contentions within the capitalist class have been being accentuated.[v] Another group of field economists cannot avoid the fact that the actually existing and rapidly growing contemporary economy is embedded in institutions often dismissed as 'archaic residuals' or 'impurities'.[vi] They form structures of authority outside the economy as well as within it which suffuse the practices of market exchange ('accumulate'!) with ethics and ideologies derived from the family, identity and status. By restraining social conflicts and contradictions these work to stabilize accumulation.[vii] Further, institutions outside work in the sphere of social reproduction, notably those providing for basic human needs such as health,[viii] education and justice are essential to the production of labour and thus to the circuits of capital.[ix] But while production ensures social reproduction, relations of reproduction in individual families also shape forms of production. What goes on, who does what, who controls what in the private sphere of the family forms the building block of the economy and the public sphere.[x] While it may be useful to theorise in terms of the divisions between private and public, production and reproduction, in fact there is no hard and fast division between these spheres such that would enable us to ignore them in characterizing local capitalism.[xi]

The collective capacities of a local capitalist class will be reflected in its scale, technologies, skills, organisational capacity, its social coherence, regulative practices and political power. Together these attributes and relationships will give local capitalism its character. For it to be possible to evaluate the competence of the local capitalist class to direct development, empirical research needs to examine: the dynamics of exploitation and accumulation in production, exchange and commodity circulation/distribution, the structures of competition and of collusion, technological change and its institutional consequences including resistance to it, the roles played by non-instrumental rationalities and the character of class formation. This is the frame for this essay.

Why take a single sector? Entirely for the sake of feasibility: the one we take – paddy-rice – is tractable to investigate. Our case-study can be justified in other ways. Rice is also the provisioning base of the economy. Like energy it is a basic need - it is a keyhole through which we watch the substitution of market demand for human need. It is a sector that is meaningful to local people, like silk[xii], but in a popular way, like gold[xiii], it is a vehicle for social communication and status relations. The operation of markets linking production with consumption guarantees the food security that is crucial to the legitimacy of the state. So the paddy-rice sector is a useful prism through which to peer in order to analyse the character of local capitalism.

On the second question, that of spatially clustered development, while the process of transition to capitalism is famously uneven, [xiv] the era of transition is well and truly over. But the economy has not differentiated itself into the polar social classes of factory capitalism, petty production being numerically the commonest form in India. [xv] Not only does petty production co-exist with wage work inside a given commodity chain, it is also segmented by sector, and sometimes territorially. The on-going dynamic transformations of the capitalist economy are uneven over time, society and space. India's non-metropolitan economic growth has always been spatially clustered. Growth is focussed on 'central' places, providing services according to the population size thresholds of the settlement system. Though Tamil Nadu is the most evenly urbanized of all Indian states India's as a whole has been notably hollowed-out and regionally varied.[xvi] But growth is also concentrated in artisan clusters, crammed with petty commodity producers, and in caste-based, occupationally specialised sectors. Many of these have now been mass-commodified and integrated into the national and global capitalist economy. Spatially concentrated, process-specialised, interdependent and flexible, embedded in local (rural) society, built with local capital and manned by local labour with larger numbers of firms, they often seem to satisfy the conditions of the latest dynamic phase of post-Fordist capitalism.[xvii] But compared with western models, they are a 'low equilibrium' variant - operating with low-tech, relatively low capital and with high intensities of labour exploitation.[xviii] However, a key trait of both large industrial districts and smaller clusters is that agglomeration has positive externalities: the concentration of relatively small firms creates competitive advantage, and local business organizations generate collective efficiency.[xix] It is a live question whether it is under-developed collective efficiency that lies behind the low-equilibrium.

Why take a town as a laboratory for local capitalism? While a town and its hinterland may be studied to shed light on local processes, the point about *local* capitalism is that a more general extrapolation depends on the possibility of comparison. This book permits comparison between the sectors forming the economic base of a town (Elisabetta Basile taking a general overview in chapter 3; she, along with M.V. Srinivasan, Camilla Roman, and Arivukkarasi examining silk (in chapters 2, 3 7 and 8 respectively - textiles and garments being the second most important sector of the economy in terms of employment after agriculture) and Jason Stanley examining the most basic medium of saving – gold – in chapter 5). While a town is by definition a concentrated cluster of many activities, only with the addition of its rural hinterland can the regional characteristics of specialized clustered development be made apparent. Only with the addition of a town can village level studies be made to reveal rural-urban trajectories of accumulation and the relations of labour, commodities and money involved in the processes of class formation. The study of a town then permits a tentative comparative extrapolation of quantitative information (gross outputs, commodity flows, income) and processes (growth, differentiation, diversification and informality (Basile, chapter 2 here)).

The town, Arni, is located in the centre of the paddy region of the Coromandel plain but it is eccentrically peripheral inside the district, Tiruvannamalai, that was carved from North Arcot in 1991. It is also eccentrically south of the globalised industrial corridor along the Chennai-Bangalore expressway (Map 2 - Preface). To turn south off that expressway is now to enter an economy with radically poorer infrastructural quality and smaller concentrations of capital than along the corridor. Arni is a central place for its rural hinterland, wholesaling and retailing goods of all kinds; it is a transport and energy hub, an administrative and infrastructural node. Apart from general manufacturing, repairs and finance, it is the site of three distinctive sets of clustered development: textiles and silk weaving, gold ornaments and paddy and rice. The town's official population has grown from about 33,000 in 1971 to 66,000 in 2001, but, as noted by other contributors here, the town's administrative boundaries are not its real ones. Its organic population is likely to exceed 1,00,000 and its local rural catchment will include about half a million people. Table 1 shows the growth of the rice market.

Table 1: The Paddy-Rice Sector in the 20th century

Sector	1973	1983	1993
Rice Mills	23	46	86
Rice wholesale	17	45	56
Rice retail	22	30	17
Total rice	62	121	159
Arni – total firms	1194	1923	4703
Paddy rice firms' growth %		95	31
Arni growth in total firms %		61	144

Source: Author's town censuses

Between 1973 and 1993 the gross output of the paddy-rice sector is estimated to have grown by a factor of 17 in real terms.[xx] Without counting the bran merchants, rice retailing / provisions stores, loading and unloading porters and the teeming sector of carts, vans and lorries, by the 21st century the paddy-rice cluster had about 250 mills, at least 75 commission agents and wholesalers and a labour force in the region of 5,000. It is now a major wholesale centre for parboiled / steamed high quality rice. Until the global food price spike in 2007-8, during which India banned exports of rice, Arni's rice was starting to be exported to Malaysia, the Middle East, France and the USA.

How to combine the study of a sector with that of a town? Originally the system of rice markets and trade in agricultural inputs was studied in an entire district, but this took over a year to complete.[xxi] One reason why local capitalism is so little researched may well be that the Indian state itself collects very little information that would enable its distinctive institutions and dynamics to be explored. The state holds (defective) lists of firms. It has records of weekly prices that are needed for the calculation of the cost of living and consumer price indices, which are politically sensitive. It has data on the quantities of agricultural products marketed (inherited from the era of movement restrictions for essential commodities). This information does not always square with estimates derived from surveys. It has credit plans and urban land use plans. With pleading, data on municipal and commercial taxes may be made available. While helpful, none of this information helps us characterise local capitalism in the way outlined above. There is no alternative to primary field research.[xxii] As explained in chapters 1 and 2, much of the primary data we use comes from three random sample surveys of businesses stratified by wards, after having made for each round a map of the businesses in the town. The part of the long-term urban study that is reported here has also benefitted from 'dedicated' research on the rice markets (21 firms in 1993-4) as well as purposive studies, including revisits in 2007 and 2010. Quantitative and qualitative field material is listed in Appendix 1 and its collection has been described in detail in the literature referred to there.

2. Local Agro-Capitalism in the 20th century – Production and Exchange

The technological and social transitions and transformations of Arni's local food-grains economy have been described in detail elsewhere.[xxiii] They will be summarized here to set the productive context in which the commodity markets we focus on are developing.

2.1 The Green Revolution

In the 1970s in the smallholding region around Arni - with relatively little landlordism - the initial phase of adoption of High Yielding Varieties raised yields and productivity. Rice production increased by 50% in ten years.[xxiv] But agrarian differentiation and the transition to capitalism were constrained by barriers to the acquisition of land. The main barrier was the reproduction of petty commodity production through the two fold process of hiring out wage labour and traders' money advances. While wage-labouring supplemented un-viably small landholdings, even permitting petty producers to hire-in labour at times of peak demand, traders' credit relations secured the marketed surplus of paddy and made petty producers dependent on agro-commercial capital. At the same time both sets of economic relations prevented smallholders from losing their land.[xxv] Competition between trader-moneylenders for paddy supplies, and state-directed, subsidised credit from the nationalised banks, set upper limits to the (disguised) interest rates that could be imposed. These exchange relations in turn enabled traders to exercise an indirect control over rice production. Traders had no interest in legal possession or direct management of the scattered parcels of land they could so easily have taken from small producers.

2.2 The final three decades of the 20th century

Subsequently, returns to production exceeded those to labour but yields stagnated and agricultural growth rates faltered.[xxvi] This region saw failures of collective action in water management and co-operative marketing, a surge in private investment and agricultural commodification, a rise and fall in state investment and the first bleats of chronic distress from nature. The tank system of irrigation, which required collective efforts to maintain it, collapsed accompanied by a state-assisted, epidemic of investment in private open wells. Energised from the remarkable rural electricity grid and exploiting the 100% subsidy on agricultural electricity, these wells over-extracted subterranean water and pitched the region into a crisis of water depletion.

Agrarian society differentiated itself between, on the one hand, a capitalist elite in which each household developed unique and diverse investment portfolios and on the other the vast mass of petty producers on increasingly miniaturized holdings. These were not the polar classes of capitalism because petty producers persisted in their independence. They reproduced their class first by shifting the balance of their work away from micro-holdings and towards the hiring out of their labour and second by taking loans from merchants in the non-farm economy as well as from those agricultural traders who used their credit to tie the marketed surplus. But to the extent that they took production decisions and were responsible for the outcomes, not all agricultural producers were reduced to the status of disguised wage labour.[xxvii]

First agriculture, then the rural economy diversified, slowly driving up the low real price of agricultural labour. This diversification could be speculative, driven by the existence of an investible surplus, or compulsive, driven by the needs of poverty. There is more evidence for the latter than the former. In the commodity market, paddy started to cede its monopoly to sugar-cane, vegetables, fodder and tree crops – anything using less water and/or less labour. The region saw a dramatic increase in wage-work. Households diversified their employment portfolios, though at first the only people migrating at distance were women at the time of their marriages. The minority that was able to invest speculatively put capital into weaving, small manufacturing, construction, transport and trade. As producers became consumers and food became a cash crop, its marketed surplus increased from under a third to nearly a half. Supplies to market were dominated by first generation high yielding varieties (HYVs) and by the larger producers and despite the season-proofing of irrigation from wells, the seasonal ebb and flow of supplies to market did not change radically.

Non-instrumental rationalities expressive of identity persisted in regulating the fast moving rural economy. The production of the most basic commodity – food – became the sector of next to lowest status.[xxviii] Women entered the labour market – but on subordinate terms with wages not reflecting their productivity and not on a par with those of men. As well as being feminised, the agricultural wage labour force was increasingly a reserve for dalits. As with work, so also with landownership, land lost its caste status as elites started to shift toward the non-farm economy and drift from their agricultural moorings. While fierce competition erupted among low castes for the ownership of land, contra-flows of capital moved through caste networks from villages to town (mills, property, trade) and vice versa (looms).

In the 1990s, the liberalizing state lost interest in the rural economy and real resources for agricultural research, rural infrastructure and directed credit all atrophied.

3. Local Agro-Capitalism in the 20th century – Markets

Since the fine detail of the research on markets is also in the public domain [xxix] and space here is at a premium, the discussion here takes the form of a brief analytical narrative.

3.1 *The Green Revolution*

At the start of the Green Revolution – indeed from long before, local food-grains markets were subject to the iron laws of competition and accumulation. Even if the majority of enterprises were working on ‘own account’, and were the equivalent in markets of pretty production in agriculture, a minority of firms were managed with active family labour and hired-in regular and casual wage-labour. Elsewhere we have referred to the latter type of firm as belonging to India’s intermediate capitalist classes. With enterprise costs indistinguishable from family expenses and profit taken in the form of a residual claim, with an interest in unmediated profit and a capacity to create scarcity, they have different interests from corporate capital. With an interest in raising the prices of basic wage goods, they also differ from the labouring class which has an interest in keeping them low.[xxx]

Rice production has been at the base of a ‘food-chain’ of profit, returns to pure trade exceeding those to processing and even to most money-lending which in turn exceeded those to agricultural production. Although this structure of returns enticed large numbers to enter trade, few were able to accumulate. Similar credit relations to those in production tied small traders to a handful of local oligopolists, mirroring in the organisation of markets the structure of property in production. The largest firms were not vertically integrated but tended to spread their investments in other directions: horizontally (establishing branches), diagonally (in related agro-commerce), or backwards (into new technology on their own agricultural holdings). The iron law of profit was subject to social regulation: the dominant (albeit Backward) agricultural caste used their domination of the market to set the terms and conditions of exchange; the patriarchal norms of joint families structured the division of commercial tasks and female wage labour was paid starvation wages.

The state had interests in this drawn out process that were simultaneously evident and obscure. Its partial interventions in inputs, credit and commodity markets expanded its own privileged labour force. The bureaucracy benefited further from a nexus of rents and fraud with the intermediate class of the agro-commercial elite: together they resisted the disciplinary aspects of interventions like the public distribution system of food. The state failed to provide employment or adequate food for the stream of hardly-landed labourers generated by the combined forces of population growth and the process of differentiation in agriculture. So it had the trappings of a local intermediate regime with a deep - if never explicitly articulated - interest in arrangements which slowed the stream of migrants.

3.2 *Rice Markets at the end of the 20th century*

In the mid 1990s, three groups of agri-business could be distinguished in terms of their size and scale (Table 2).

Table 2: Distributions of Assets [‘Estimated Present Value’, Rs ‘000] Turnover [Rs’000] and Labour force, Arni rice markets, 1994

Group	N	Av assets	Av gross output	Av labour force
1. mainly wholesale	7	437	3,500	4.6
2. wh + hulling	8	1236	13,200	46
3. rice mills	7	7850	16,200	30-5

Source, author’s rice markets survey

They also fell into three groups according to their operations and functions:

Group 1 consisted of paddy and/or rice wholesalers and commission agents (with some fertilizer dealing and other trade): – *‘wholesalers’*;

Group 2 consisted of paddy hulling merchants who hired-in mills to process paddy and rice, but who also might wholesale paddy and/or rice and act as agents : - *‘hullers’*;

Group 3 was distinguished by owners of rice mills, some of whom hired their mills out, and/or traded wholesale as well: – *‘millers’*.

These groups, though they overlap at the edges, were broadly stratified by technology as well as size and operations.[xxxi] All the groups mixed buying and selling with productive activity. Group one transported goods or arranged transport; group two leased mills to process rice and group three produced rice from paddy (and, in storing both, prevented them from deterioration and extended the market over time, while millers speculated on prices).

3.3 The circuit of accumulation

There had been no dramatic shifts in the *origins of capital* which had always been dominated by savings and profits from commerce itself. Oldest firms remained largest and were rapidly concentrating capital. Paddy-rice was being capitalized at several removes from the relations of production on which it relied for supplies.

Technological changes in milling (shellers replacing batteries of hulling mills; new mechanized de-stoners and polishers), in pre-milling processing (parboiling) and in transport (lorries and vans replacing carts) all increased the fixed cost components of marketing and did not reduce costs per unit of output unless equipment operated at unprecedently high capacity utilisation. So the security of supplies of *raw material* - enabling firms to defy the rainy seasons - became paramount. Competition on price and quality grew ever fiercer. Rice mills used credit to tie agents into their thrall and they and their commission agents used loans to tie supplies. Interlocked contracts typically involving two markets but extending up to five (money, land, water, fertilizer and paddy) deprived many producers of their freedom to choose marketing outlets.[xxxii] About a third of the town's supplies were secured this way. The bulk of raw material, however, came from transactions that were formally untied. Even so, rice mills could also tie suppliers by delaying payments and 'encouraging' small producers to use the mills as safe deposits for their small savings. Reliability and reputation became increasingly important attributes of trade - at the expense of caste and kin.

Agents and wholesalers themselves were under competitive pressure to increase the velocity of their money's turnover. They could do this by diverting crop loans in order to develop long-distance trade and by vertically integrating their business by leasing-in mill capacity for their hulling business.

3.3.1 The Labour process

Despite the vast expansion in physical flows, and despite technical change, the pressure of competition was expressed in the labour process. Fifteen per cent of firms were self-employed and reported increases in the hours of work – self exploitation - as did firms in which one or two family members worked. The number of regular wage workers remained constant over the period. Regular workers are not necessarily best paid (though mill mechanics are regular) but they involve relations of trust (from accountants to sweepers and the night watch). The most dramatic change (Table 3) was the massive increase in male and female wage labour, radically altering the structure of the industry, casualising and feminizing its workforce. By the mid 90s, casual female labour amounted to 45% of the total labour force in the local post-harvest system for rice. While employers' associations fixed wages for the sector, labour contracts were un-interpretable as a 'market' at the firm level, owing to the huge variations in casual contracts and modes of pay.

Table 3: Organisation of Labour and Inequality in Production

Year	Family Labour (no)	Perman -ent Salaried (no)	Casual Male (no)	Casual Female (no)	Total Labour (no)	Income per working family member Rs'000	Costs/ wage labour Rs '000	DS (1)
1973	1.1	5.8	3.2	5.6	14.6	11	0.9	71
1983	1.8	6.2	4	16.8	27	154	5.3	52
1993	1.7	6.2	15.3	10.7	31 (2)	547	5.4	15
1994						% Female (3)	Assets/ Lb (Rs '000)	
Gp1	1.9	0.3 (4)	0.7	1.7	4.6 (5)	35	86	
Gp2	1.6	7 (6)	18	24	46	48	65 (7)	
Gp3	2.2	6	8	16	32	50	308 (8)	

Sources: Basile (2011) ch 9 Table 5; Appendix TA1 and TA2; Author's paddy-rice sample survey, 1994
Note: (1) DS = distributive share (total labour costs as % of [profit plus total labour cost])

At an average of Rs 22/day in 1993-4, female wage workers, indispensible to the scaled up firms, were paid at rates two thirds that of men. Even so and even though these rates hovered just above the minimum wage – and the official poverty line - they were twice to four times those in agriculture proper.

3.3.2 Rates of return

Over the twenty year period, despite the crowding, rates of return due to trade doubled from 16% in 1973 to 35% in 1983 and 39% in 1993 (Table 4) .

Table 4: Indicative Accounts, Paddy-rice sector, 1994, Rs ‘000

Costs	Group1	Group2	Group3
Raw /intermed material	425 (6)	5344 (8)	1116 (7)
Trading and Processing	112 (6)	587 (8)	1088 (7)
Rent	6.5 (5)	8 (2)	15 (2)
Labour	17 (4)	NI	240 (6)
Interest on loans	NI	36 (2)	NI
Value added	2982 (6)	7152 (7)	5035 (7)
Gross Output	3430 (6)	13389 (7)	16210 (7)
Net returns	217	4265	4776
Rate of return	19 (2)	68 (6)	23 (5)

Source: 1994-5 Author’s paddy-rice sample survey
Notes:
Number of cases is bracketed
NI = no information

This increase was being driven by the very high returns to rented-in hulling operations, where fixed costs were relatively low compared with those of rice mill ownership. Returns to commerce continued to exceed most returns to money-lending [xxxiii] and all forms of local production.

Over the two decades while vertical multipliers and rents were constrained - with little demand for industrial starch or processed and packaged breakfast foods, local agro-capital also gained rents from specialization. As with silk, Arni had developed a culturally inferior, but physically higher quality commodity form that required a greater number of processing stages and costs. *Ven purungal Ponni*, a ‘hardly parboiled’ form of this high-quality, high-yielding variety could be sold at a premium price to the increasingly quality-conscious workforce in the industrial districts of Salem, Tirupur and Coimbatore, as well as Chennai. A growing element in the returns to rice in Arni was due to the rents obtained through specialisation and branding

By-products also became increasingly important in the structure of returns. Given that the general use of irrigation pump-sets, powered directly or indirectly by fossil fuel, had done away with much of the local demand for bran as cattle fodder, by the mid 1990s, bran was being removed from the region by an army of agents supplying a commercial oligopoly to satisfy the 24/7 appetite of the nearest factory in Andhra Pradesh. From there, bran oil was exported *inter alia* to Singapore.

3.4 Wealth and income in the paddy-rice sector

The portfolios of paddy-rice firms in which the foodgrain was not always the most significant component increased in size, concentration and internal diversification (Table 5).

Table 5: Accumulation, paddy-rice 1973-93, Rs ‘000 (current)

	n	Av stg capital	Av loan for wkg capital @ start	EPV	P O R- % no diversification	T F O- % invest -ing within sector	L I O % invest-ing in diffnt sector
1973	22	19	35	71	68	4	27
1983	5	18	NI	715	13	63	25
1993	6	543	1400	4000 (1)	17	66	17

Source: Basile (2011) Table A2
Notes: (1) from 1994-5 Author’s paddy-rice sample survey
EPV = estimated present value

The agro-commercial elite concentrated its ownership of rice mills, consolidated its control over urban property (stores, real estate for renting-out; proto-shopping malls), rural land (especially ‘plantation’ i.e. tree crops with little labour and profits after long-gestation periods), finance and informal banking, other commercial activity and agro-industries. They also invested in education.

In local rice markets, the distribution of income (Table 6) has always been internally differentiated but by the mid 1990s, the ratio of returns to employers (per business family member) to the income earned by wage labourers in their firms (per family member) is estimated to have varied between 13:1 for paddy wholesalers and their labour to 250-300:1 for rice millers and theirs.

Table 6: Income Differentiation within the Paddy-rice Sector, 1994

	Av hh size	Av no fam wkrs	Net Returns Rs '000*	Net Ret/ FM	Net Ret/ Fam Wker (NRF)	NRF in multiples of estd income of RL	NRF in multiples of estd income of CM	NRF in multiples of estd income of CF
Group1	8	1.9	217	27	114	13	11	23
Group2	6.6	1.6	4265	646	2665	296	266	533
Group3	7	2.2	4776	685	2171	241	217	434

Source: 1994-5 Author's paddy-rice sample survey
Notes: FM = family member; RL = regular labour; CM = casual male labour; CF = casual female labour; NRF =net return per family member
Male regular earnings estimated at Rs 8.5-15k; male casual at Rs 8.5-10 k; female casual at Rs 3.9-10k
* In the same period, the per caput income for paddy producers averaged Rs 4.1k; that for landless agricultural labour Rs 1.5k and that for households whose primary income came from the rural non farm economy Rs 2.5k (Srinivasan, 2004, p105).

Meanwhile the difference in inequality between the urban returns in rice markets per business family member, and rural incomes from agricultural labour per member of a labouring household varied between 11:1 for wholesalers and 260:1 for rice millers and male casual agricultural wage labour; and between 23:1 and 533:1 respectively for female casual agricultural labour. India's low gini co-efficient for income inequality (0.37 in 2004) [xxxiv] does not capture such relations. The income inequality deplored in OECD countries does not approach those of local Indian capitalism. When the largest local firms count as rather small 'small-scale industry' in the national scheme of things, this inequality is entirely due to the control and exploitation of wage labour.

3.5 Rural-urban commodity relations

While in the early years of the Green Revolution Arni was a local paddy marketing town with 75% of raw materials coming from local villages, by the end of the century only 20% was local, the rest being trawled state-wide and further afield in south India (Table 7). The hub developed functional complexity with the direction of long distance supply flows changing seasonally.

Table 7: Paddy-rice Commodity Flows, 1973-93, (%)

ORIGINS	Within Arni	Local vills	Local dt	Chennai	Other Urban TN	Other Rural TN	Outside TN
1973	32	42	16	3	4	2	
1983	8	18	28	-	10	19	24
1993	13	7	7	-	32	8	32
DESTI-NATIONS							
1973	24	12	15	21	26		
1983	13	3		15	48		22
1993	5	4	6	12	60		22

Source: Basile (2011) ch 9 T8; App T7
Note: These flows are constructed from estimated average annual quantities per respondent

As for the destination of milled rice, in 1973 about half of it remained in the town and its rural hinterland while the remainder was distributed to Madras/Chennai and other centres of urban demand in Tamil Nadu. By 1993 only about 15% of its vastly expanded physical output remained in the also much bigger town and its vicinity.[xxxv] Nearly two thirds was being shipped to urban centres in Tamil Nadu (to Chennai, Salem, Erode, Tirupur and Coimbatore) while 22% was exported to other Indian states.

4. The Character of Local Capitalism

What is ‘the role of the capitalist class in determining what kind of outcomes occur’ (Leys, 1994, p16)? Its role is to accumulate, which it does by competition. The competence with which it manages this dynamic process is shaped by its organisational capacity, its social coherence and regulative practices, all of which we turn to discuss.

4.1. The Character of the Accumulation Process:

Over a generation, food-grains became a cash crop and the local means of subsistence were commodified as never before. Production and distribution were increasingly dominated by the requirements of accumulation. Into the 1990s, the process was sustaining ever higher rates of return. A class of ‘micro conglomerate capital’ emerged from the food-grains sector and started to deploy a range of modes of extraction and distribution of the social surplus: rent, interest, manufacturing and trade. It was no longer confined to commerce. But were 'parasitic' forms of rentier and mercantile capital[xxxvi] yielding to manufacturing capital which expands the productive base? Not very much locally. Even in the rice sector, and without factoring-in the diversified portfolios in which it is set, while manufacturing returns were higher than those to pure trade, the biggest manufacturing firms had also become the most extensive traders.

4.2. Competition:

Relentless pressure bore down on costs. Competence was becoming an increasingly important aspect of a businessman's social identity. This did not mean that firms did not try to contain competition. Interlocked contracts bound exchange between producers and traders / millers and guaranteed about a third of Arni's supplies. But for the other two thirds a remarkable shift in the power relations of the first transaction between producers and traders, particularly in respect of credit and debt, meant that for the first time a majority of suppliers had become free to transact under closed tender in conditions regulated by a committee of local farmers and traders under the laws of the land.

However, in the absence of anything but incremental and/or symbolic technical innovation in processing, with post-harvest labour markets reported to be tight, with pre-harvest labour markets casualising and feminising and with urban pay up to four times as high as rural pay, capitalist competition in the post-harvest system took the beckoning route and cut labour costs through exactly the same means as in agricultural production: displacement, casualisation and feminization.

Unlike Roesch et al (2009) we found no evidence of the bonding of casual labour, though employers frequently declared that the permanent, salaried labour force was indebted to them. The distributive share – the relation between labour costs on the one hand and profit (or net returns to capital) on the other - shifted decisively against labour. Oppressive labour relations have been termed 'primitive accumulation' (Khan, 2001; 2003). Whether this term (which originally referred to the processes by which labour was dispossessed of land and initial capital was accumulated) loses its meaning if expanded to apply to such relations is open to debate. Certainly the primitive exploitation of labour was an integral part of this dynamic local capitalism. Exacerbated by labour displacement and oppressive market relations of petty production, it is plain that in the competitive dynamic of capitalism poverty is created alongside wealth.[xxxvii]

4.3. Dynamism:

The sector exhibited much dynamism. Not only had the marketed surplus and number of firms grown – and the growth of gross output vastly exceeded that in the number of firms - so also the physical volume of grain had grown. Whereas it is clear from the parallel research on production that the marketed surplus was produced under conditions polarised between agricultural capitalism and petty commodity production, our survey of the post-harvest system captured rather few petty commodity producers and traders in paddy and rice. Instead, the sector/cluster was increasingly internally differentiated into manufacturing-rentier and commercial capital on the one hand, and wage labour on the other. The diversification and differentiation which characterised capitalist investment portfolios in the town started to jump sectors – in an extreme example from rice milling to the desalination of water.[xxxviii]

These dynamic economic changes expressed themselves in spatial terms. Urban concentrations of capital were matched by spatial centralisation. Meanwhile, ruthlessly controlled and exploited labour, at the heart of this dynamic, was less centralised than capital. Workers constantly moved between town and countryside mobilizing caste and village networks in the inexorable search for work.

The sector had transformed its physical and functional logistics, blurring the distinction between wholesaling and retailing. From a parochial spatial reach in the 1970s, it had by the 1990s developed commercial tentacles throughout Tamil Nadu and in other states.

Is Arni's rice sector an example of an industrial district? There are reasons to doubt this. Socio-physical limits to the processing of rice mean that rice is a 'value chain' which is short on links and processes even if it is long on physical reach and social significance.

Instead the sector developed its collective local brand. In terms of technological diversity, the internal intricacy in its organisation, its high growth and extensive urban-rural reach, ‘Arni rice’ was therefore moving towards being a dynamic, agro-industrial cluster. But in terms of its exploitative labour relations it is a low equilibrium cluster.

4.4. ‘Market society’ and instrumental rationality: *the roles of non-market, non-class identities in the regulation of local capital*:

Capitalist development destroys forms of authority resisting accumulation. But the process of subordinating non-market authority to market order has not taken the form of Weber’s ‘instrumental rationality’ or Marx’s ‘logic of accumulation’ . Instead, capitalism reworks those expressions of authority that can serve its interests. In the last quarter century of the 20th century, acquired identity (reliability and competence) had challenged ascribed characteristics (caste and kin). Nevertheless while the economy was driven by accumulation, relations of accumulation in turn were structured through its basic building block - the family business – and this in turn was structured through patriarchy. The largest firms were those of the biggest joint families. Gender relations in both family and firm were crucial to accumulative success. Inside the family women were used not only reputationally in a paradigm of piety, service and subordination but also materially to reproduce the family labour force. Inside and outside the family, gender is one of the harshest and most persistent of the ‘non-market’ institutions which structure labour relations and subordinate women in production and trade. Employers regard female coolie-rates as an income supplement, a ‘perq’, not a wage.

Caste has changed its role in a dual process. While the caste-stratification of occupational opportunities had weakened (from the top down), the role played by caste had been transformed. As ideology and institutional idiom it lies behind the corporatist trade associations regulating Arni’s informal economy, as Elisabetta Basile’s chapter 6 shows here.[xxxix] The rationalities of social identity are not only to be conceived as constraints on instrumental rationality. They show no signs of disappearing, and are the means through which instrumental rationality is construed.

4.5. Competence:

This transformation required massive changes in the work and politics of the local capitalist class. Its achievement suggests competence. [xl] It has happened on the basis of relatively low levels of formal education. Cost account books were soaked in ritual and contracts involved much memory work.[xli] But accumulative success rested on severe labour exploitation, and the productivity-enhancing technology so widely diffused elsewhere in India was late to be adopted in Arni. There was little productive re-investment of resources across the sectoral boundaries of the local economy, other than in rentier activities.

These aspects of local agro-capitalism suggest several kinds of limits to the competence of this fraction of the local capitalist class. One was educational: this class had not invested in formal education and this had implications for the technical knowledge needed for entrepreneurship – let alone a well 'humanly developed' workforce. The private investments in educational infrastructure lately initiated by the local political big shot suggested that this particular 'fetter' would be broken in the 21st century. Another limit was technological. There had been no investment in the processing of the lucrative by-product - bran – the supply of which required extensive logistical competences. A third was ethical / social. Capitalists in the paddy-rice sector were a part of the class whose restricted units of ethical and economic accountability stimulated a pervasive non-compliance with disciplinary interventions, notably tax.[xlii] This non-compliance was reinforced by the evident fact that most municipal resources went not into developmental investment but to current salaries (about half of which had to be allocated to 'scavengers' (SC sanitary workers)).[xliii] The local culture of evasion of tax and resistance to the state's discipline then starved the state and municipality of resources needed for the very infrastructure that would enable the local capitalist class to engage with national and international markets. The final qualifier to the productive industrial competence of the local capitalist class was the enduringly high returns to commercial and rentier modes of extracting and circulating the social surplus. These were well disguised in the biggest manufacturing firms by their increasing vertical and horizontal integration.

Political competence was expressed through collective politics. Here, lacking an MP until recently, Arni's elite could not easily use party politics.[xliv] The town's hard and soft infrastructure was so underdeveloped that private capital was being politically mobilised both privately and collectively to substitute for the state , particularly in health and education. Surplus was redistributed from local elites to local officials in the form of bribes to abet fraud, the most persistent element of which was tax evasion. Where the local unit of accountability is grounded in kinship, where there is a culture of non compliance, the weakness of public obligations to the state reinforces the need for the non-state structure of accumulation.

5. Local Agro-Capitalism in the 21st century

We can now bring this story into the 21st century..[xlv]

5.1. Rice and its production relations:

While land relations continue to be dominated and consolidated by backward castes, one dramatic development involves encroachment onto common lands. Still the source of firewood, these are being enclosing for house sites (at both ends of the social spectrum). Their resources are also being privatised and commodified (top-soil for bricks, sand for the construction industry and 'mineral water' for drinking). The dry-season water table has sunk to 160 feet in many places as bores have been drilled into the base of open wells. The cropping pattern has further diversified, adding flowers and luxury fruit crops so that rice production continues to stagnate along with its yields.[xlvi]

Rural land values are being reshaped by proximity to transport arteries and non-agricultural uses rather than in relation to irrigation status and potential yields.[xlvii] The emergence of widespread rental markets - land-lords, water-lords, machine-lords and house-lords - reveals a concentrated class-fraction of rural rentier capitalists in development. And a pauperized class of labouring petty producers dependent on them. In a region with a long history of owner-occupancy, a new class of absentee land-owners have started to share-crop on extortionate terms the land they have no intention of selling.[xlviii]

Production relations and labour markets are still grounded in the social structure of the region. Land relations are the bone of low caste contention. Dalits continue to be prevented from borrowing money, from owning or renting land. They continue to work the land and to be discriminated against in many other ways.[xlix] Agricultural labour unions work on representing them as citizens against the state in the widespread cases of infringement of their social security and welfare rights, poor infrastructure and living environments. The agricultural trade unions have failed to tackle problems of labour at work. Dalit men are rejecting oppressive practices and refuse in particular to undertake the non-contractual obligations they used to perform, by means of which the tank irrigation infrastructure was maintained. Local Panchayats have moved into the institutional void to regulate the maintenance of the irrigation infrastructure (under the National Rural Employment Guarantee Scheme – 'What for? These tanks are useless.' said a labour organiser). Panchayats sometimes also manage the privatisation and commodification of water for the bottled water market. Labour-displacing mechanisation has been introduced at harvest. Dalit men are migrating in droves to the construction industries of Chennai and Bangalore,[l] leaving dalit women vital to both paddy production and rice milling - a fact which is not reflected in their wages.

While wages have tightened by 7-8% between 2007-10, the price of open market rice has more than doubled. The calorie purchasing power of the wages of those who produce the calories has dropped dramatically, making them ever more dependent upon the state's subsidized rations.

5.2. Exchange relations:

Rice millers report that the top 25% of producers by volume no longer need to borrow money for production, others who can offer land as collateral are replacing their debts to traders by another round of loans from co-operatives, and by credit from nationalised and private banks. After more than a decade of atrophy, the Congress-dominated UDF/UPA at the centre reversed the retreat of formal banking from rural regions and agriculture.[li] Loans however are political tools, and constantly and widely expected to be amortised. ‘They are gifts’ said a miller, laconically. For petty producers, money can be obtained from reviving old sources - commission agencies and trader-money-lenders - together with new sources – teachers and officials, pharmacists, remittances from the construction industry and the army, virement from consumer durables sold on instalments through hire-purchase agreements,[lii] returns from milk production - plus a proliferation of pawnbrokers ready and waiting for those with gold and jewels as security.[liii] But the explosion of Self Help Groups (see Polzin, here) has yet to supply microfinance directly to agriculture.

With only 20% of supplies estimated by millers to remain tied through interlinked contracts with paddy *mundies*, the state has at last been able to regulate conditions for the first transaction between producer and ‘the market’ and sales have shifted to the Regulated Market yard. This severe threat to commission agents is a retaliation against their decades of delayed payments, under-weighing, caste-ist price discrimination, kind-loans in liquor, etc. In 2007, the Regulated Market yard was also incentivised by state procurement support prices for the Public Distribution System which, for the first time since its inception in 1965, exceeded open market prices. Just prior to the global price spike, ‘the market’ had slumped to unprecedented lows.[liv] Breaking with past practice, the state Civil Supplies department then procured paddy for the Public Distribution System directly from farmers in Regulated Market sites. But by 2010 this experiment had been abandoned.

Paddy for the PDS is milled locally, with rice millers acting as agents for the State Civil Supplies Corporation and the Food Corporation of India. Provided the outturn ratio and milling fee have been agreed, now that the storage laws have been relaxed, the local agro-capitalist elite has no objection to working for the state. The difference between the state-regulated outturn ratio and the real one supplies them with an informal physical supply which they can trade on the open market; and the fee itself reduces commercial risks. If any economic losses were to be incurred, they could be compensated for by collective price hoists on (non PDS) open market sales.

5.3. Agro-capital: structure and technology

Since 1995 the local rice cluster has undergone another massive increase in concentration. Arni now has 5-6 mills each capable of a physical throughput of 11,000 tonnes of paddy per year. The average is 4,500 tonnes. Barriers to entry have risen in real terms, and entry is impossible without loans from private banks. The wealth difference between the agro-capitalist elite and those who produce the paddy for it has also increased. Entry to the rental market for mills is easier than ownership (for which a background in engineering is now more relevant than in agriculture) and the proportion of firms leasing mills is rising. There remains space for petty production in rented-in mills and in the firms supplying these businesses. The agro-commercial elite is investing in land for real estate; further concentrating rice mill ownership, developing the rental market, and drawing distant kin in to the family labour force. It is developing business in stocks and shares, fleets of trucks and container (10-wheeler) lorries, supermarkets, cell-phones and consumer durables, even presciently a salt water conversion plant.[lv]

Arni's rice mills have lagged technologically behind those of North India.[lvi] But by 2007 only an estimated 2% remained as batteries of hullers. The rest had adopted rubber roll sheller technology and were on track for 'full automation' and another step-change in scale.[lvii] Husk-fired parboiling and driers are also now almost universal - husk had been commodified as a fuel. At times since 2007, however, husk has been replaced by *sugar cane* (since the co-operative sugar mill had not agreed to receive local supplies). Husk-fired driers weather-proof and speed up the system of preparation of paddy for milling. But they displace female labour. With a mechanical drier, paddy needs one sunning on the drying yard instead of three, and half the female labour force is replaced by a quarter the number of men. The average size of the mill labour force has dropped from a high of 60 in the 1980s to 20 workers in the 21st century, yet technical change and labour displacement has not lowered the cost of production.

The process-automation frontier also beckons. In 1995, it will be recalled, computers were merely a coveted status symbol. Now the internet transforms the circulation of information and the pace of transactions. Computers are routinely used for accounts (which expose their firms to public scrutiny as never before). They are also used for on-line share dealing (which elite wives and daughters can do in the secluded privacy of their homes).

5.4. The labour process:

Mill labour remains a relatively privileged sector of the informal market, male wages being 50% higher than agricultural wages while female wages are double. The adverse gender differential persists into the 21st century, women's wages being 30-40 % lower than men's. Tightening labour markets have 'opened the shop' which used to be defended by Dalit and Most Backward Caste workers. Some rice mills are able to import labour on cruel contracts from regions of labour over-supply in Orissa and Bihar. Where this has happened elsewhere in Tamil Nadu, new forms of bondage have been reported.[lviii] There is no sign of unionization and no reason to think that conditions for labour will improve with further technical changes in production.

5.5. Commodification:

The process of commodification rolls ineluctably onwards. Alongside husk, which is now a commodity - powdered to make holy pastes for some consumers, and a base for silicon chips for others - bran is traded as an intermediate good for the solvent extraction industry and also directly as cattle feed for local Dalit milk production. Other by-products are now commodified: broken rice is being fed to cattle as well as to humans and de-oiled bran cake is exported as cattle feed to the EU. While mills now buy direct from suppliers at a radius of about 60 km, new competition in central and southern Tamil Nadu [lix] has switched the bulk of Arni's branded high quality wholesale rice towards Chennai. Before the global grain price spike in 2007-8, Arni's rice was starting to be exported from Chennai to Sri Lanka, Malaysia, France and the USA. [lx]

6. Clustered Development

The Arni supply chain for rice which is clustered so conspicuously in, and around the town's new by-pass is not an 'industrial district' in the sense recognized in Italy, if only because of its small size in relation to the town's diversified economy. Stanley, here, has proposed a distinction between 'specialised' clusters which serve national or international markets and 'common' clusters which are found in most urban settlements. Arni's paddy and rice sector certainly is a common cluster, just like gold (chapter 5). A town may have both kinds of cluster – indeed, with silk, Arni is a good example of both types.

But the concept of the common cluster is not a descriptive distinction devoid of analytical content, since being common does not imply being homogeneous. Stanley shows that in the case of gold, the distribution of capital and the technological and social structuring of Arni's cluster differ significantly from those of other gold clusters such as in Chennai and Coimbatore. Alessandra Messadri's All-India comparative research on eight textiles and garment making clusters also shows the great heterogeneity in products, in technical processes and in forms of labour control between these relatively common clusters.[lxi] A given exogenous shock such as a change in policy or technological change will have a differential impact both *on* the common cluster and *within* it. Stanley's case study (chapter 5) shows this clearly both for the policy shock of deregulation and for mechanization; while Arasi's study of rural-urban relations in silk weaving (chapter 8) shows this for the liberalization of Chinese silk yarn import and for the destruction of co-operatives.

Arni's rice cluster differs from other common ones in the region by dint of its *commodity specialization* (ven purungul Ponni). The common rice cluster of Vellore is *process* specialized on wholesaling; that of Tiruvannamalai is less *spatially* concentrated; that of Polur is similar but *smaller* in assets size. All of the common rice clusters in the region of northern Tamil Nadu are far less *concentrated in assets* than the rice mills of central West Bengal where the ethnically structured system of markets differs markedly from the more caste homogeneous social relations of northern Tamil Nadu and gives rise to greater poverty and inequality.

Whether the Arni rice cluster conforms to the definition of an industrial cluster depends on the character of its collective action. Joint action in Arni is powerfully federated. The Rice Millers Association was formed defensively in order to control labour in response to efforts to unionise male casual labour. It fixes wages (subject to considerable obfuscation in implementation), arranges apprenticeships, guards and legitimates entry, organizes the ancillary labour forces, fixes proper contracts, mediates in disputes, and organizes collective bribes when they are needed. The association resists, make representations to and negotiates with the state. It also mobilizes to perform acts of re-distributivist philanthropy. It illustrates the kind of range of external collective exchanges, collective transactions costs reductions and internal regulative authority celebrated in the literature.[lxii] We can conclude that Arni's rice sector is a small, common, dynamic yet low-equilibrium industrial cluster.

7. Conclusions:

In contrast to much development economics which is driven by technique rather than theory, and in contrast to to post-modern development studies which proceeds from the position that there is no objective substantive reality, the research reported here has moved between theory and evidence, the latter ordered by the former. In investigating local capitalism it is impossible to avoid concluding that the era of transition to capitalism is long over and that the logic of capital dominates the rural economy. Despite this, the capitalist economy is far from differentiated into polar classes and the capitalist class is far from seamlessly unified. The distinctions between corporate capital and all the rest which Chatterjee and Sanyal find so fruitful[lxiii] do not have much relevance here. In this essay we have seen that capital embodies contradictions not only in relations of production but also in accumulation trajectories, it behaves retrogressively as well as progressively, fractions are in contention with each other as well as with labour, and competition does not necessarily reduce costs. Arni's agro-capitalism does not conform to the teleological assumptions of classical political economy. Elements of primitive accumulation persist alongside more advanced forms of capital including those generating petty production. Relations of capitalist production, distribution and reproduction are continually being transformed. Productive capital may even now be 'reverting' to rentier capital.

In spatial and social terms capital should always be analysed as a local phenomenon because the economy plays itself out in specific social and environmental contexts. As we have seen here, capital is path-dependent and embedded as well as revolutionising. In economic terms capital is global because it is increasingly integrated into the global economy through commodity / supply / value chains. In Arni, even though commercial capital subsumes productive activity under its wing and is far from purely mercantile, the dominant element in profit is derived from trade rather than from productive activity. And what is more, in remaining persistently construed through forms of non-market, non-state authority that are neither instrumentally rational nor confined to the economy, this 'global' capital has a distinctively local character.

7.1 Local Capitalism in the 21st century

In a remarkable U-turn, the local capitalist elite has re-assessed its low valuation of education. Higher education - the 'knowledge economy' – is fast becoming a highly profitable private capitalist service-industry in India. In Arni, the new sector has been led by the A.C. Shanmugam political-cum-business family which has invested in a school and no less than six colleges on the edge of town - as well as major medical and engineering colleges near Chennai. This capitalization is on a scale that swamps the portfolios developed from rice[lxiv] but the local rice-capitalist elite is also investing, sometimes collectively, in building and running local schools and colleges and in educating its own sons and daughters.[lxv] The latter are expected to move to the action in India's ballooning knowledge-service sector (IT and engineering).[lxvi] A Girls' Engineering College has even appeared in Arni. Arni's northern suburbs have become a private education hub.[lxvii]

Through education and skills in engineering science, the competence of local agro-capital has now consolidated itself to a point when the elite - while showing no sign of wishing to relinquish local control - is seeking pastures new. In the local capitalist class, an exit dynamic is at work. While the processes of concentration and centralisation intensify, the portfolios of local conglomerate capital have become more complex owing to a ‘rentier turn’ and the migration of their educated scions to the skilled labour force of the new service economy and, from there, entry into India’s middle class. Sons of the local rice capitalist elite have already moved successfully into software and one is a highly qualified IT scientist working abroad. [lxviii]

Meanwhile, a new class of local rural agro-capital - the village machine-lords, water-lords and landlords - is climbing the rungs of the supply chain and starting to rent-in the previous generation’s fixed investments of mills, stores and yards. Credit from private banks has become accessible to them. The new capitals that are not yet concentrated will reinforce the concentrated and ever diversified portfolios of the elite. In a burst of technological dynamism, the sector took the giant leap it was so reluctant to take earlier, adopted new milling machines, mechanical parboiling and drying technology and commodified its by-products, bran and husk. But deep contradictions remain, competition uses oppressive labour practices; contractors are even hired to import gangs of indigent migrant workers at very great distance from northern state of India to compete with local labour, to keep labour un-unionised and keep wages low. The agro-commercial elite has also done nothing about the filth of the public urban environment or the serious water crisis, both of which it has played a part in causing. In 2010 piped water was available one day in four in Arni.

7.2. The state:

What kind of project does the contemporary state have for this dynamic capitalism created mostly out of its reach in the informal economy, and resting on exploitative and oppressive labour practices?

In the era of globalisation, Arni’s rice industry is more state-regulated and state-licensed than before but only selectively state-disciplined. Its commodity contracts, the financial transactions which accompany commodity exchange and the entire labour process all come under regulation that is not enforced by the state. But the local state now maintains some of the rural water infrastructure on which the industry's raw material supply depends. It has at long last managed to regulate some of the first transactions between producer and the post-harvest system of markets and it has dipped its toes into direct procurement for the PDS. The Tamil Nadu Warehousing Corporation go-down is used for rice storage – but not by producers (its original intention[lxix]). Instead firms exploiting the mill rental market, without premises of their own use these go-downs. Warehouse receipts are collateral enough for bank loans which supplement the working capital of these firms. 'Formal' commercial credit has come within the reach of modest paddy-rice trading businesses.

While agro-capitalist productive accumulation is slowly but surely being pulled within the ambit of the state, the National Rural Employment Guarantee Act of 2005 has required the state also to intervene in rural labour markets. The right to 100 days of work self-selects agricultural labourers (in this region as elsewhere in India, mainly women). Where cultivation is assailed by drought, where land is being taken out of agriculture, where mechanization is displacing unskilled labour and where workers cannot migrate, there is no doubt that this scheme (mainly 'mud-work') is supplying a vital surrogate for unemployment benefit. And it may even affect urban production: in 2010 and 2012 urban rice millers complained that NREGS reduced the supply of workers to their drying yards.

While the bulk of the productive economy remains informal and un-state regulated, the *reproduction* of the labour force living on poverty incomes is increasingly due to state intervention. The state supplies basic wage goods at considerable cost in subsidies. It subsidises a Noon Meals Scheme for children and pensioners below the poverty line (BPL). It provides a BPL welfare state (maternity allowance, survivor benefit, sickness/disability benefit, pension etc). Without a land reform worth mentioning, it has seized culturable waste and common land for house sites for SCs.[lxx] While wood and charcoal are renewable energy and LPG is a fossil fuel, it is now extending LPG as a 'less polluting' alternative to biomass-fuelled stoves. [lxxi] It has distributed a colour TV to each house. For the first time dalit huts have locked doors. For the state of Tamil Nadu to be able to make such transfers at all depends to a significant extent on its commercial taxes and its control of alcohol retail sales which of late has been strategically diffused into the villages.[lxxii]

Political scientists have always described Tamil Nadu's politics as populist, but Tamil people have described it as 'our socialism'.[lxxiii] If it's 'our socialism', then it is one indebted to state revenue derived in no small measure from the increasingly mass consumption of alcohol.[lxxiv] These alcohol-fuelled social transfers do nothing if not aid the increasing concentration of economic assets that we have observed in the paddy-rice sector of Arni. They can be understood as the pay-off necessary to ensure the political stability to enable this process of accumulation to persist.

10k words

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Appendix 1. Mixed field methods and sources

Quantitative Information

1. Production and exchange – three rounds of village censuses and surveys (detail is given in Harriss-White and Harriss, 2007)

2. For the 1970s:
2.1. a stratified random sample survey of 200 agricultural firms in North Arcot district – of which 53% were dealing in rice (the remainder were in fertiliser and pumpsets) and a quarter were from Arni and its region. (Harriss, 1981, p32)
2.2. for the town: a 6% survey, randomly selected after stratification from functionally mapped censuses, 88 firms in 1973-4
3. For the 1980s: an urban 6% stratified random sample of 114 firms in 1983-4 (Harriss, 1991, p183) which picked up rice wholesaling, milling and retailing
4. Three sources of quantitative data for town for 1990s
4.1. a 6% stratified random sample of 275 firms in Arni town in 1994-5, now collated and systematised by Basile (2010, 2011).
4.2. a special 15% random sample survey of the paddy –rice sector in 1994 drawn from the Arni taluk supply office list – 22 firms – raw data used here for the first time. These data include: Cost accounts. Assets histories. Investment portfolios. Labour force details: numbers, costs and tasks. Commodity flows. Unsystematic information volunteered on credit. This sample of 22 firms is larger than a statistically 'small' sample but when disaggregated, the cell sizes are small. The special survey is 3 times the size of the paddy rice sector in the main 1994-5 sample and can be calibrated against the 'main' sample data, against the results from earlier rounds of research on paddy-rice, and against the subset of 9 rice firms of the 52 studied by BHW in 1994, and from field research in other regions.
It cannot be supposed that firm owners overestimated their returns. If anything businessmen lean towards concealment and considerable effort is required to reassure them about anonymity and confidentiality - and continually to cross check the estimates they give (Harriss, 1992).
4.3. A complete population survey of 67 business associations in 1997 (carried out for Elisabetta Basile (Basile and Harriss-White, 2000; Basile , 2010, 2011))

All this information is derived from carefully designed open-ended interviews but is *estimated* by the respondent and cross-checked for consistency by the interviewers (Harriss-White, 2008, App2).

Qualitative Information
1. Own field research on 52 large firms and sensitive sectors in 1994 and 1995 including 9 firms operating in the paddy rice system;
2. General field notes from that period and conversations with key respondents and with wage workers.
3. Interviews with officials, policy 'stakeholders' and lawyers.
4. Official data; Municipality; Goverment of Tamil Nadu departments; agriculture; credit, banking and finance; administration (revenue and expenditure); utilities and service providers (police, justice, fire brigade, education and health, sanitary workers and refuse collectors).
5. A short revisit to Arni and two villages in April 2007 and conversations with 5 urban businessmen and 2 groups of urban labour and with 4 agricultural producers and 2 'focus groups' of petty producers and agricultural labourers.
6. A revisit in March 2009 by M.V. Srinivasan.

7. A revisit in March 2010 with interviews of a rice mill owner, two local organisers of agricultural labour from the Agricultural Workers' Welfare Board, several goldsmiths, a pawnbroker and a power-loom silk merchant.

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[i] This essay is based on a book (2011) *Local Capitalism and the Foodgrains Economy in northern Tamil Nadu, 1973-2010*, New Delhi, Three Essays Press in which the detailed empirical evidence and analysis is to be found.
[ii] Khan, 2004
[iii] Harriss-White, 2003
[iv] Chatterjee, 2008; Sanyal, 2007
[v] Saez, 2002; Bandhyopadhyay, 2004; McCartney 2010 a and b; Basile, 2010;
[vi] Hodgson, 2001; see Basile here
[vii] See Hodgson, 2001; Harriss-White, 2003; Meagher, 2010.
[viii] 'Health' requires food, nutrition, water, sanitation and shelter.

[ix] Wolf, 2007
[x] Harriss-White, 2003
[xi] '(W)hat is needed is a theory of the role of the capitalist class in determining what kind of outcome occurs'. (Leys, 1994, pp15-16).
[xii] See chapters by Basile, Roman and Arasi here
[xiii] See the chapter by Stanley
[xiv] Bernstein, 1995
[xv] To argue merely that this reflects poverty misses the flexibility of this form. Petty production has a range of internal logics (varying from fixed income objectives and self-exploitation to thinly disguised wage-work) and a range of reproductive dynamics (varying from simple amoebic multiplication to exchange relations which prevent accumulation).Harriss-White, 2010, 2012
[xvi] Wanmali and Ramasamy, 1994; Chapman and Pathak, 1997; Harriss-White, 2003
[xvii] See Basile (2010 and here) on Beccatini's theories of industrial districts, and Schmitz et al's adaptations to the contexts of development.
[xviii] Cadene and Holmstom, 1999
[xix] Schmitz, 1995
[xx] Harriss-White, 2011, Appendix 2 Tables 1 and 10 giving numbers of firms and average gross output and using deflators from Appendix 3.
[xxi] Harriss, 1981
[xxii] We have not used archival resources.
[xxiii] Harriss-White and Janakarajan 2004 esp ch 1-1
[xxiv] ibid
[xxv] J Harriss 1982
[xxvi] See detailed evidence in Harriss-White, Janakarajan and Colatei, 2004
[xxviixxvii] About petty production and disguised wage labour, there is a debate initiated by Banaji, 1977 and Adnan, 1985, revisited in *Development and Change* ('Arena') 2014
[xxviii] Sanitary and carcass work occupy lowest position in the status hierarchy of work.
[xxix] For rice production and exchange in the 1970s see J Harriss 1982; for markets in the 70s, B Harriss 1981. For the 80s: for production, see Hazell and Ramasamy 1991; for markets: Harriss, 1991. For the 1990s, on production, see Harriss-White and Janakarajan, 2004; for markets: ibid; Janakarajan, 1996; Harriss-White, 2011.
[xxx] Harriss-White, 2003; for a macro economic analysis, see McCartney 2010 b.
[xxxi] In West Bengal, there were also three strata in the markets for rice (Harriss-White, 2008, chapter 4). In the mid 1990s, the exchange rate was Rs50 to the £ and 35 to the $. Current rice prices, a major element in inflation for the labour classes, were twice what they had been ten years previously, and those of 1985 were 2.5 what they had been in 1973 (Harriss-White, 2011).
[xxxii] A case has been reported of a single contract between a producer, a commission agent and a bullock carter on five markets (transport, information, money, fertiliser and paddy) – Janakarajan, 1996.
[xxxiii] Urgent loans to borrowers without collateral, however, would always fetch annualised rates in excess of 100% (Colatei and Harriss-White, 2004).
[xxxiv] Das, 2006
[xxxv] Flows expanded in value by a factor of 15 in current Rs and 4 in constant Rs. Sample flows of raw/intermediate materials in current Rs were Rs27 lakhs in 1973; Rs 116 lakhs in 1983 and Rs 400 lakhs in 1993.
[xxxvi] Harriss and Harriss, 1984
[xxxvii] Harriss-White, 2006
[xxxviii] Bores at 200 feet hit brackish water.
[xxxix] Also see Basile and Harriss-White, 2000
[xl] We have little evidence of risk, losses, instability and the collapse of firms though we know this all happens particularly to small firms.
[xli] Contracts were the verbal substance that had to be mystified in the accounts.
[xlii] Harriss-White and White 1996
[xliii] This is not a universally valid perception. The local Agriculture Department for instance spends 15% of its budget on salaries, the remainder going to subsidies on fertiliser for demonstration plots, HYV seed, bio-fertiliser and weedicides (D.A.O., Pers Comm, 1995).

[xliv] The professional standards of the town's local judiciary were widely thought to be declining.
[xlv] A revisit to two villages and the town in April 2007 and March 2010, and an update by M.V. Srinivasan in 2009 have enabled us to do this. See http://www.southasia.ox.ac.uk/resources-greenhouse-gases-technology-and-jobs-indias-informal-economy-case-rice
for more systematic new research on the gaseous waste produced by the production-distribution system for rice in and around Arni.
[xlvi] Locally estimated at 2-2.5 tonnes of paddy per acre in 2010.
[xlvii] Whereas the price difference between wetland and dryland is 2:1, that between road side and off road is 3 or 4:1.
[xlviii] The Dalit share-cropper bears all the costs of production. At harvest the entire crop is given to the owner who mills it and returns 50% of the rice, keeping all the husk and bran.
[xlix] In the 1990s we gathered evidence that drinking water hand-pumps are caste-segregated; that SCs construct their own temples due to being barred from entry into village ones. SC children are barred from entering main village schools, the sites of Noon Meal disbursements are awkward to access by them and staffed by members of the locally dominant MBCs rather than by SCs. Despite the closed shop of sanitary work (where SCs, stripped in 2002 of their hereditary rights to this kind of state employment, nevertheless vigorously guard this work since they can earn Rs 5,000/m gross (though Rs 1,500/m was reported as the actual 'net' take-home pay)), there are acute entry barriers to the non farm economy such that SCs work in the fruit and vegetable trades (because these goods have skins that will be transformed before consumption) and the smallest 'bunk' shops. Banks are reported not to extend credit to SCs, though SCs were reported - in earlier rounds as able to borrow from banks. Urban restaurants persist in using banana leaves as plates to avoid other patrons having to use (i.e. be contaminated by) utensils used by SCs.
[l] A very few have used savings from teaching or the army to set up in business: tea-shops, fruit and vegetables or pumpsets. It is 'urban dalits' who have 'pulled' away.
[li] Fouillet, 2009. Banks have also accepted jewel loans for at least 15 years.
[lii] See Polzin, here
[liii] See Stanley, here, on local pawn-broking.
[liv] Low prices are due to the impact of world market prices to which the domestic economy is now open; plus the effect of bumper harvests in 2006-7, prior to the global price spike.
[lv] The biggest private financier is a dalit who accumulated through vegetable trading and labour contracting – and who runs a *kutta* panchayat (an informal dispute resolving institution, generally using private protection power to enforce decisions) (M.V. Srinivasan, 2009, Pers. Comm.).
[lvi] Kaur, Ghosh and Sudarshan, 2007 on Punjab
[lvii] Gathorne-Hardy, 2013
[lviii] Breman, Guerin and Prakash, 2009. Though the kind of bondage they report is close by, it has not yet been seen in Arni.
[lix] From growing rice processing clusters at Kangeyam, Kallakurichi, and Ayodhyapattinam near Salem.
[lx] Western consumers can no longer displace and exoticise the production relations of the region but are directly involved in exploiting them.
[lxi] Messadri, 2010
[lxii] See Schmitz , 1995, on collective efficiency
[lxiii] Chatterjee, 2008; Sanyal , 2007
[lxiv] As do those of the bus owners and the Laskhmi Saraswati textile mill which is north of the river defining the town's boundary at some remove from the town (and never part of the long-term research) but which has now been engulfed by suburbs.
[lxv] Arni's Muslim sweets dynasty whose rurally sited Teacher Training Institute had fallen on hard times due to malpractices, has re-opened it, doubled its landholding and opened two private schools.
[lxvi] M.V. Srinivasan reports that a private school has been set up by some 14 paddy-rice business families, and staffed by teachers, some of whom moonlight from government schools.
[lxvii] Harriss-White and Rodrigo, 2013
[lxviii] In Tiruppur too there is a rentier turn and not confined to the accumulation of employers. ' 'Local' workers are no longer workers. Instead (some) have become rentiers of various kinds – labour contractors, building single room row houses for migrant workers and living off rents, entering as rentiers services that feed into knitwear production' (M. Vijaybaskar, Pers. Comm. March 2010).
[lxix] Harriss, 1984

[lxx] It also supplies free - or heavily subsidised - agricultural electricity.

[lxxi] As with so much of our machine society, it embodies a contradiction. At the micro-level it improves the kitchen atmosphere and reduces health risks. At the global level it increases CO_2.

[lxxii] J. Harriss, 2007, p161

[lxxiii] Harriss, 2001

[lxxiv] Kim, 2008. Whereas in the 1990s alcohol was retailed under strict regulation in a handful of shops in the town, by 2010 there were retail outlets in villages.