

# Supplying 'Juteopolis': Dundee and Bengal Jute, c.1850-1914

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## Supplying ‘Juteopolis’: Dundee and Bengal Jute, c.1850-1914

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The inhabitants of the brightest jewel in the British crown are brought into closer contact with their brethren in Britain: and not the least factor in linking together the eastern and western families of the Aryan race is the humble plant the ‘jute of the natives’.<sup>1</sup>

Raw jute became a major item in international commodity trade in the decades after 1850, a significant part of the general internationalisation of the Indian economy. Expansion was driven by the extraordinarily rapid growth of general global trade in commodities, many of which were carried in jute sacks and bagging.<sup>2</sup> In this period the great bulk of the world’s jute was grown in East Bengal, from where it was used by the age-old domestic handicraft industry scattered mainly across Bengal or by the rapidly growing Calcutta factory industry; or exported to other manufacturing centres abroad.<sup>3</sup> Raw jute (alongside jute manufactures) formed a key part of the internationalisation of the Indian economy in this period.<sup>4</sup> While jute manufacturing in this period grew fast in the USA and in some European countries, the biggest centre for the production of jute goods outside India before the Great War was the port city of Dundee – which combined experience in, and machinery for, manufacturing another coarse fibre (flax into linen), and ready access to whale oil from the city’s whaling industry for softening the fibre.<sup>5</sup> This paper analyses the supply of raw jute to this port – how it was organised and with what significance for our understanding of the impact of global commodity trading in this period of imperial globalisation.

Many aspects of the history of the jute industry have gained scholarly attention. Factory production of jute was one of the key pioneer industries of nineteenth century India, and figures substantially in general accounts of Indian economic development in this period.<sup>6</sup> Recent work has also recognised the continuing important role of the handicraft industry, which sustained a

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<sup>1</sup> ‘Jute in Transit’, *Chambers Journal*, London, 2 January 1892.

<sup>2</sup> C. Roul, *The International Jute Commodity System*, New Delhi: Northern Book Centre, 2009.

<sup>3</sup> The first official report by the British Indian authorities on Bengal jute seems to be H. Kerr, ‘Report of the cultivation of and the trade in jute in Bengal’, *House of Commons*, C.982 II (1877), which suggested that large-scale jute growing began in Bengal in the 1840s.

<sup>4</sup> T. Roy, *India in the World Economy*, Cambridge: Cambridge University Press, 2012, pp.158-169. Raw jute made up a greater share of the value of Indian exports than jute manufactured products until just before the Great War: food grains and raw cotton were more valuable export products, but were not mainly exported to Britain: B. Tomlinson, *The Economy of Modern India 1860-1970*, Cambridge: Cambridge University Press, 1993, p.52.

<sup>5</sup> There was by this time very little jute manufacture in the UK outside Dundee, though there were attempts to establish mills in Glasgow in the 1860s: J. Forbes Munro, *Maritime Enterprise and empire: Sir William Mackinnon and his Business, 1823-93*, Woodbridge: Boydell Press, 2003, pp.93-4. Mackinnon’s were involved in the more successful Ganges Manufacturing Company in jute (Munro 2003, pp.237-8).

<sup>6</sup> D. Buchanan, *The Development of Capitalistic Industry in India*, New York: Macmillan, 1934.

significant place as both a producing but also exporting sector through that century.<sup>7</sup> The factory manufacture of jute has also underpinned key works on labour history and gender history in India.<sup>8</sup> Alongside general works, the Dundee industry has been analysed in most detail by labour historians, and because (as in Calcutta) its workforce was unusually female-dominated, it was also the basis of pioneering work on Scottish gender history.<sup>9</sup> The imperial dimension of jute has been explored from a variety of angles: Stewart focuses on the Scottish ‘jute wallahs’ in Calcutta; Cox is especially concerned with the comparative labour history of the two manufacturing industries; and Tomlinson addresses Dundee’s response to Calcutta competition in its imperial context.<sup>10</sup> Sethia has analysed the industry from a global history perspective, while Ali’s recent work has added a major new understanding of the relationship between the global expansion of jute and its impact on the lives of the Bengal peasantry.<sup>11</sup>

This paper focusses on the trade in raw jute from Bengal to Dundee, seeking to draw together disparate material to give a distinctive sense of how it affected this port city, and with what ramifications. The first section situates the discussion in the broader historiography of jute. The second looks at the growth of the trade into Dundee, while the following part analyses how Dundee responded to the challenges of this trade. A key theme that arises is the asymmetry involved between the vital role of raw jute in the prosperity of Dundee, and the city’s inability to much affect the terms on which the product was traded. A further asymmetry was between the market power of the Calcutta merchants and the very limited bargaining power of the jute growing peasantry.

## Trading jute

Unlike tea, India’s other key commodity export in this period, jute was a peasant not plantation product. Its expansion in the late nineteenth-century had a major effect on much of Bengal’s agriculture involving “a thorough reorganisation of peasant life: of the rhythms of work of work and leisure and of abundance and scarcity”.<sup>12</sup> Between the 1850s and the early 1900s the

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<sup>7</sup> Indrajit Ray, ‘Struggling against Dundee. Bengal jute industry during the nineteenth century’, *Indian Economic and Social History Review* 49 (2012), pp.49-105; more broadly on Indian handicraft textiles: G. Riello & T. Roy (eds), *How India Clothed the World: The World of South Asian Textiles, 1500-1850*, Leiden: Brill, 2009; and T. Roy (ed.), *Cloth and Commerce. Textiles in Colonial India*, New Delhi: Sage, 1996.

<sup>8</sup> D. Chakrabarty, *Rethinking Working-Class History. Bengal 1890 to 1940*, Princeton: Princeton University Press, 1989; S. Sen, *Women and Labour in Late Colonial India. The Bengal Jute Industry*, Cambridge: Cambridge University Press, 1999.

<sup>9</sup> W. Walker, *Juteopolis. Dundee and its Textile Workers*, Edinburgh: Edinburgh University Press, 1979; E. Gordon, *Women and the Labour Movement in Scotland 1850-1914*, Oxford: Oxford University Press, 1991. There is also interesting Foucauldian work on the industry: E. Wainwright, ‘Dundee’s jute mills and factories: spaces of production, surveillance and discipline’, *Scottish Geographical Magazine* 121 (2005), pp.121-40.

<sup>10</sup> G. Stewart, *Jute and Empire. The Calcutta Jute Wallahs and the Landscapes of Empire*, Manchester: Manchester University Press, 1998, and ‘The strange case of jute’ in B. Glass and J. MacKenzie (eds), *Scotland, Empire and Decolonisation in the Twentieth Century* (Manchester: Manchester University Press, 2015, pp.65-85; A. Cox, *Empire, Industry and Class. The Imperial Nexus of Jute, 1840-1940*, Abingdon: Routledge, 2013; J. Tomlinson, *Dundee and the Empire. ‘Juteopolis’ 1850-1939*, Edinburgh: Edinburgh University Press, 2014.

<sup>11</sup> T. Sethia, ‘The rise of the jute manufacturing industry in colonial India: a global perspective’, *Journal of World History* 7 (1996), pp.71-99; T. Ali, *A Local History of Global Capital, Jute and Peasant Life in the Bengal Delta*, Princeton: Princeton University Press, 2018.

<sup>12</sup> Ali (2018), p. 17.

acreage devoted to jute multiplied around 80 times, and by 1906/7 it was grown on from 10-22 percent of the cultivated area in the seven major jute-growing districts.<sup>13</sup> How this transformation is best understood is part of a much wider debate about the nature and effects of colonial capitalism.<sup>14</sup> Jute expansion was part of a broader commercialisation of Bengal's agrarian system, but it did not lead to a thoroughgoing transition to capitalist agriculture. Peasant households, with land holdings typically between 2 to 4 acres, using wage labour only sparingly at harvest time, often continued to combine jute production with the production of rice, the balance between these strongly affected by relative prices.<sup>15</sup> This has led some to argue that the increased demand for jute weakened the reliability of food provision and so contributed to periodic hunger and famine in Bengal.<sup>16</sup>

In a 'surplus extraction' framework, East Bengal in this period seems to have experienced relatively low taxation and rents, so that most of the extraction was by credit, with peasants typically paying very high rates of interest on usually short-term loans.<sup>17</sup> Of course, looked at differently, credit was a vital resource for peasant cultivation, a necessary condition of its existence.<sup>18</sup> Falling productivity of the land accompanied increased sub-division and greater reliance on jute; and this trend, given that jute is more expensive to cultivate than rice, led to higher levels of indebtedness.<sup>19</sup> This emphasis on the role of credit contrasts with a strong tradition of Indian economic historiography, which has generally emphasised the extractive importance of tax and rents in agriculture.<sup>20</sup>

Complex and severe indebtedness in Eastern Bengal often meant that the jute was sold before harvest, and creditors took 20-25 percent of the farm value of the product.<sup>21</sup> However, debt was not usually a mechanism of land loss and transfer, so that in that sense the expansion of jute cultivation was not transformative of social relations in the countryside.

How did the jute get from the peasant farm to the Dundee mills? Most jute, whether bound for the Bengal mills or for export, was transported to Calcutta. After the building of the Assam Bengal railway in the 1870s, some was diverted to Chittagong for export, but this usually

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<sup>13</sup> Ali (2018), p.2; S. Bose, *Peasant Labour and Colonial Capital: Rural Bengal since 1770*, Cambridge: Cambridge University Press, 1993, p.27.

<sup>14</sup> For an important recent discussion of a key Bengal commodity in the preceding period: I. Ray, *Bengal Industries and the British Industrial Revolution (1757-1857)*, Abingdon: Routledge, 2011, which deals in detail with indigo, pp.206-44.

<sup>15</sup> Goswami is emphatic about this responsiveness, seeing its existence as crucial to undermining stories about the passivity of the peasant, against both colonial stories about the peasantry as fatalistic other worldly creatures or anti-imperialists who "transformed the cultivators into mindless slaves of the outside world": O. Goswami, *Industry, Trade and Peasant Society. The Jute Economy of Eastern India, 1900-1947*, Delhi: Oxford University Press, 1991, fn. p.239.

<sup>16</sup> Ali (2018), pp.32-6. For earlier discussion of such issues, B. Chaudhuri, 'Rural credit relations in Bengal', *Indian Economic and Social History Review* 6 (1969), pp.203-57; and 'Growth of commercial agriculture in Bengal 1859-1885', *Indian Economic and Social History Review* 7 (1970), pp.25-60.

<sup>17</sup> Goswami (1991, pp.30-2) suggests rates of around 35-40 per cent were typical.

<sup>18</sup> P. Hill, *Development Economics on Trial. The Anthropological Case for the Prosecution*, Cambridge: Cambridge University Press, 1986.

<sup>19</sup> Ali (2018), pp.30-1.

<sup>20</sup> Bose (1993, p.120) argues that relatively low rents followed from government support for peasant rights in order to make commercialisation sustainable, both to maintain the supply of products like jute and provide a market in the countryside.

<sup>21</sup> Bose (1993), pp.124-5.

counted for no more than a small percentage of the material that made its way to Dundee: by 1913/14 only 6 out of 45 ships arriving that year were from Chittagong.<sup>22</sup> When the first jute arrived from Chittagong in 1878 local opinion in Dundee anticipated that this would become the primary port of embarkation, leading to the belief that this would cheapen transport of the raw material. But this ignored the strength of the merchanting route through Calcutta;<sup>23</sup> so despite claims that Calcutta is “one of the most costly ports at which a cargo can be loaded”, the predominant pattern of jute movement remained Calcutta to Dundee, so that we can observe some parallel to the Glasgow/Bombay ‘inter-connected synchronicity’ in the relationship between the jute ports.<sup>24</sup>

Railway construction was hugely important in Indian economic development after 1850.<sup>25</sup> It displaced a large proportion of the river-borne freight in Bengal, including in jute. By 1912 two-thirds of all the jute that went from the producing districts to Calcutta went by rail.<sup>26</sup>

Although most jute handling between peasant household and Calcutta was in Indian hands, Europeans were active in the Bengal countryside, establishing markets and presses for jute in the small towns, especially as the railways expanded in the Province.<sup>27</sup> At this early stage a distinction was already often in place between jute destined for export and that for Indian use. The former was pressed into bales of approximately 400 lbs, and this bale became the staple unit of international trade in the commodity. Jute pressing was also an important activity in Calcutta, mainly using steam presses imported from Liverpool.<sup>28</sup>

A major feature of South Asian economic history in this period is the role of managing agents, through which European interests played a key role across ‘modern’ sectors ranging from coal, tea plantations, cotton and jute manufacture.<sup>29</sup> The supply of raw jute was an important issue for Indian mills controlled by these managing agents, and the case of the one such agent based in Dundee, Thomas Duffs, provides an interesting study about how the purchase of raw jute could be integrated with the manufacturing process.<sup>30</sup> But these agencies played no significant role in supplying raw jute to Dundee mills.

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<sup>22</sup> Glasgow University Archive (GUA) UGD131/1 32/1 Ellerman lines ‘Direct jute imports Calcutta and Chittagong to Dundee’.

<sup>23</sup> *Dundee Year Book (DYB)* 1878, p.24; Ali (2018), pp.72-3.

<sup>24</sup> S. Hazareesingh ‘Inter-connected synchronicities: the production of Bombay and Glasgow as modern ports, c1850-1880’, *Journal of Global History* 4 (2009), pp.7-31. On the import side, most jute came into Dundee directly from Calcutta, though London and Liverpool had a small share in the trade: *DYB* 1878 p.19 showed 114 out of 128 thousand tons imported coming directly to Dundee. Until the late 1850s rail predominated over direct imports of jute into Dundee, but thereafter 80-90 percent came directly: A. Warden, *The Linen Trade. Ancient and Modern*, London: Charles Alexander, 1867, p.633.

<sup>25</sup> Roy (2012), pp.159-164.

<sup>26</sup> C. McCleod, ‘The Indian jute industry’, *Journal of the Royal Society of Arts* 64 (1915), p.110.

<sup>27</sup> Ali (2018), pp.72-4.

<sup>28</sup> T. Woodhouse & P. Kilgur, *The Jute Industry: from Seed to Finished Cloth*, London: Pitman, 1921, pp.17-18. Physically a bale was approximately 4ft 1 inch by 1ft 6 by 1 ft 4.

<sup>29</sup> B. Kling, ‘The origin of the managing agency system in India’, *The Journal of Asian Studies* 26 (1966), pp.37-47; G. Jones, *Merchants to Multinationals. British Trading Companies in the Nineteenth and Twentieth Centuries*, Oxford: Oxford University Press, 2002; S. Jones, *Merchants of the Raj. British Managing Agency Houses in Calcutta Yesterday and Today*, Basingstoke: Palgrave, 1992.

<sup>30</sup> A. Wearmouth, ‘Thomas Duff & Co and the Jute Industry in Calcutta, 1870-1921; Managing Agents and Firm Strategy’, PhD thesis, University of Dundee, 2015. Most managing agencies were based in Glasgow.

A key participant in the international trade in raw jute was the Greek firm of Ralli Brothers, which was a purely trading concern, unlike managing agencies with their manufacturing interests. Ralli's had a range of interests in India, including a large role in the huge business of importing cotton piece goods from Lancashire. But "as the leading exporter of cash crops it built up an unparalleled upcountry organisation for buying raw produce".<sup>31</sup> Alongside grain, cotton, groundnuts and oilseeds, from the 1870s they built up a significant jute-trading infrastructure, with offices in five of the principal jute markets in Bengal, two warehouses and a showroom in Dundee, and an office in London. In this role Ralli combined the advantage of ready access to the London money market with working closely with native merchants in Bengal to limit credit risks in its purchases, though it seems to have been staffed largely by Greeks rather than employing Indians directly.<sup>32</sup>

One Dundee jute company that used a different strategy in relation to raw jute was Cox's.<sup>33</sup> In 1868 they created the Camperdown Pressing Company Limited "for the purpose of packing goods for and on the employment of Cox Brothers, Dundee, and all other merchants employing the said pressing company".<sup>34</sup> Initially a sterling company with a head office in Dundee, in 1882 it was reconstituted into a Rupee company, with most shares still held by members of the Cox family, but a significant shareholding by Biswambhar Sikdar, a Calcutta merchant. When a further corporate restructuring took place in 1910 other Indian shareholders were listed, alongside Britons resident in both the UK and India. But Cox's continued to control the enterprise after 1910 by making Cox Brothers the managing agency for the Camperdown enterprise.<sup>35</sup> This seems to have been a successful venture for Cox's, with raw jute exports from the pressing company reaching 16,000 tons by the 1880s, and at the time of the 1882 restructuring the shares were expected to yield an 18 percent dividend.<sup>36</sup>

The great bulk of the jute trade within India was handled by Indians, with a complex hierarchy of traders between the peasant grower and the arrival of the jute in Calcutta. At the core of this hierarchy were credit relations, much of this based around long-standing indigenous commission agencies and the use of bills of exchange.<sup>37</sup> There was a sharp separation between the formal banking arrangements used at the top of the hierarchy by the big agencies and the informal networks which operated at village level – the latter, as already noted, being characterised by highly disadvantageous terms for peasant producers. The predominant group in the middle and top part of this hierarchy of traders were increasingly Marwaris (originally from Marwar, a region in Rajasthan in North-West India), Hindus who became a dominant element not only in the raw jute trade but eventually in jute factory manufacturing via shares in

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<sup>31</sup> R. K. Ray, 'The bazaar: changing structural characteristics of the indigenous section of the Indian economy before and after the Great Depression', *Indian Economic and Social History Review* 25 (1988), p.312.

<sup>32</sup> Ray (1988), pp.283,285-6, 310, 312.

<sup>33</sup> William Cox was responsible for this initiative, as a result of his dissatisfaction with the "cumbrous and expensive arrangements for buying in London and Liverpool": Obituary, *DYB* 1894 p.85. For Cox's see <https://mcmanus168.org.uk/Messrs.CoxBrothers.Manufacturers>.

<sup>34</sup> Dundee University Archives (DUA) MS66/XI/6/2 'Documents relating to the property of the Camperdown Pressing Company Limited'. (Camperdown was the name of the Cox's factory in Lochee, Dundee).

<sup>35</sup> DUA MS66/II/10/37 'Memoranda and Acts of Association Camperdown Pressing Company'.

<sup>36</sup> O. Graham, 'The Dundee jute industry 1828-1928', PhD thesis, St Andrews University 1930, p.74; DUA MS66/XI/6/2 'Documents'.

<sup>37</sup> Ray (1988).

managing agencies.<sup>38</sup> An important measure of their growing role in the raw jute trade is the fact that when the Jute Bailers Association was founded in 1892 it was dominated by Europeans, but by 1903/4 a majority were Marwaris.<sup>39</sup>

A sophisticated market for raw jute grew in Calcutta, with hedging and futures markets being established by 1905/6.<sup>40</sup> However, there was no Indian presence in the shipping of raw jute from there: “the only important shipping and steamer companies controlled by Indians before and after the First World War were registered in Bombay”.<sup>41</sup> From the time of the first direct carriage of raw jute from Calcutta to Dundee, on the *Selma* in 1840, the trade was in the hands of the British merchant marine.<sup>42</sup> There is no evidence that Japan had the kind of success in penetrating this trade as it had done, for example, in opium.<sup>43</sup>

**Table 1. Raw jute imports into Dundee 1851-1913**

Source: B. Lenman et al., ‘Dundee and its Textile Industry’, *Abertay Historical Society Publication* 14 (1969), p.105

Year	Raw jute imports (tons) <sup>44</sup>
1851	16,928
1856	26,964
1861	35,716
1866	52,179
1871	94,608
1876	117,540
1881	160,089
1886	153,453
1891	344,720
1896	340,649
1901	321,331
1906	369,789
1911	300,959
1913	350,916

Sailing ships were increasingly challenged by steam ships, especially after the opening of the Suez Canal in 1875, with sailing times falling sharply. But steam did not immediately replace sail in the raw jute trade, because while freight rates overall were coming down, steam

<sup>38</sup> G. Oonk, ‘The emergence of indigenous industrialists in Calcutta, Bombay and Ahmedabad, 1850-1947’, *Business History Review* 88 (2014), pp.48-57; T. Roy, *A Business History of India. Enterprise and the Emergence of Capitalism from 1700*, Cambridge: Cambridge University Press, 2008, pp.49, 95-8; Goswami (1991), p.85.

<sup>39</sup> Oonk (2014), p.53.

<sup>40</sup> Goswami (1991), p.85. The JIMPA protested at ‘Bhitar Bazar’ as involves ‘gambling in jute’. Dundee University Archives (DUA) MS83/1/4 JIMPA Annual Report 1914. The idea that the ‘problem’ in jute is speculative middlemen was an important trope in Dundee discussions.

<sup>41</sup> A. Bagchi, *Private Investment in India 1900-1939*, Cambridge: Cambridge University Press, 1972, p.263, fn 7.

<sup>42</sup> N. Robins, *Scotland and the Sea. The Scottish Dimension in Maritime History*, Barnsley: Naval Institute Press, 2014, p.251. The voyage took 156 days.

<sup>43</sup> F. Harcourt, ‘Black Gold: P&O and the Opium Trade, 1847-1914’. *International Journal of Maritime History* 6 (1994), pp.1-83.

<sup>44</sup> A ton of jute equalled five bales.

was initially more expensive than sail.<sup>45</sup> What told against sail in the long run was not only the longer passage, which meant capital tied up in the raw material for longer, but the greater likelihood of quality deterioration during the sea voyage round the Cape.<sup>46</sup>

While raw jute mainly came directly to Dundee, London or Glasgow were major ports for exporting jute manufactures, sent by railway from Dundee. Thus Dundee as a port had a heavy imbalance of imports over exports, and was especially reliant on the one import of jute (Table 1), along with flax to feed into the still important linen industry in the city.<sup>47</sup> Other imports from Calcutta included linseed, castor oil, oil cake, bones, guano, saltpetre and tea, though Dundee never gained a significant share of this last (huge) trade.<sup>48</sup> There were strong trading links with the USA, with exports of both jute and linen manufactures and imports of grain figuring heavily.<sup>49</sup> Because of the imbalance in trade into the port, many ships left Dundee empty, going coastwise to pick up a cargo of coal for transport to coaling stations on the route back to Asia.<sup>50</sup>

The network of interests around the import trade in jute was less extensive than the networks in Glasgow discussed by Hazareesingh.<sup>51</sup> Unlike in the case of Glasgow, the local economic network only involved a limited number of shipping lines, and these were largely confined to sailing ships. Dundee was the home of David Bruce and Company's Dundee Clipper Line, which had eleven sailing ships built for the jute trade between 1874 and 1878. Barrie's Dundee-Calcutta Line, later known as the Den Line, was another significant local shipowner. Initially this line was also based on sailing ships (including *Juteopolis*, a steel-hulled sailing ship built by W. B. Thompson in Dundee and delivered in 1891), but from the 1890s made the transition to steam.<sup>52</sup> But it was difficult for a relatively small owner to compete in the long-distance steam shipping business.<sup>53</sup>

This business was affected by the fact that steamships not only got larger but also faster, so that the increase in effective capacity outpaced the simple rise in tonnage; and from the 1870s that capacity rose faster than demand.<sup>54</sup> This put considerable downward pressure on freight

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<sup>45</sup> The last sailing ship arrived with jute in 1905, but none had arrived in the previous three years: Glasgow University Archives (GUA), UGD131/1 32/1 Ellerman lines 'Direct jute imports Calcutta and Chittagong to Dundee'. Moore, 'Maritime trade' in R. Coull et al., *Scottish Life and Society*, Edinburgh: John Donald, 2008, p.518, suggests the prevalence of whaling and jute imports may have slowed the introduction of steamship building in Dundee, compared with Glasgow.

<sup>46</sup> Graham (1930), p.73.

<sup>47</sup> In the decade of the 1870s the value of imports ran at 4-5 times the value of exports: *DYB* 1879, p.56.

<sup>48</sup> *DYB* 1878, p.25. Tea imports in that year amounted to 354 chests.

<sup>49</sup> *DYB* 1879 p.34; *DYB* 1896, p.38.

<sup>50</sup> *DYB*, 1886, p.31. A poignant example was the *Bonanza* which sank near Barry in 1873 whilst en route from Dundee to Newport to pick up coal to be taken to the Cape of Good Hope. The ship was 20/64ths owned by the Dundonian merchant and shipowner J. B. Anderson: <https://mcmanus168.org.uk/>. The availability of return cargoes was probably a major influence in sustaining a minority of raw jute imports into ports other than Dundee, because in such ports export cargoes were more likely

<sup>51</sup> Hazareesingh (2009).

<sup>52</sup> Robins (2014), pp.98, 251-2. These steamers usually had Scottish officers and Indian crews.

<sup>53</sup> Only one jute manufacturer seems to have been directly involved in the ownership of shipping, George Gilroy, but this was a short-lived connection: Obituary, *DYB* 1892 p.66.

<sup>54</sup> B. Deakin, *Shipping Conferences. A Study of their Origins, Development and Economic Practices*, Cambridge: Cambridge University Press, 1973, pp.15-21.

rates.<sup>55</sup> The result was the formation of cartels by the shipowners (called ‘conferences’) to try and limit competition by price-fixing and controlling the entry of ships into the business. The first of these was the UK-Calcutta conference in 1875, which was made up of seven major British lines, none of them based in Dundee.<sup>56</sup> So most jute came into Dundee in the ships of shipping lines based elsewhere in the UK. In the early twentieth century the lines involved were the Brocklebank and the City Lines, with P&O entering in 1908 (tramp shipping was also involved in this trade).<sup>57</sup>

Dundee’s most long-lived shipping line was the Dundee, Perth and London, which as its name suggests was mainly concerned with the coastal trade, though this did involve some transport of jute from London.<sup>58</sup> Historically Dundee had been a significant shipbuilding centre, but the scale of the industry was shrinking for much of our period. The industry had grown up on the basis of making wooden ships, especially for the significant whaling activity which operated out of Dundee.<sup>59</sup> But whaling was declining, and though some shipbuilders made the transition to steam propulsion, the size of these ships remained relatively small, and few were for use in the jute trade. In that trade ships tended to get larger and typically significantly larger than the ships built in Dundee.<sup>60</sup> Sailing ships were being built into 1890s, but the industry reached its peak output in 1908, at which point Gourlay Brothers was shut down, leaving only the Caledon yard as a substantial producer.<sup>61</sup>

Dundee was a significant port in the middle ages, but its relative position declined in the early eighteenth century as trade switched to the west coast ports.<sup>62</sup> By the later eighteenth century the city had developed a range of economic activities that relied on exports and imports, such as blubber boiling, sugar processing, hide tanning and liquor distilling.<sup>63</sup> Most direct international trade was with the Mediterranean and Baltic, and the latter boomed in the late eighteenth century as imported (mainly Russian) flax was increasingly used to feed the local linen industry.<sup>64</sup> Disrupted by the Napoleonic Wars, the trade revived after 1815, at the same time as control of the harbour passed from the Town Council to a Harbour Commission (a Trust from 1830), inaugurating a period of simultaneous harbour expansion and trade growth.<sup>65</sup> In the

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<sup>55</sup> A. Angier, *Fifty Years Freights*, London: Fairplay, 1920.

<sup>56</sup> Deakin (1973), pp.23-4.

<sup>57</sup> GUA UGD131/1 32/1 Ellerman lines ‘Direct jute imports Calcutta and Chittagong to Dundee’.

<sup>58</sup> G. Somner, *A History of the Dundee, Perth and London Shipping Company Limited and associated Companies*, Dundee: World Ship Society, 1995.

<sup>59</sup> G. Jackson, *The British Whaling Trade*, London: Adam & Charles Black, 1978.

<sup>60</sup> Graham (1930), p.74 suggests that the average sailing vessel entering Dundee harbour was 1,250 tons in 1872, the average steamer 3,500 tons by 1912.

<sup>61</sup> W. Thompson, ‘Shipbuilding and marine engineering in Dundee’ in British Association, *Handbook and Guide to Dundee and district* (Dundee, 1912), pp.294-5.

<sup>62</sup> G. Jackson & K. Kinnear, *The Trade and Shipping of Dundee 1750 to 1850*, Dundee: Abertay Historical Society, 1991.

<sup>63</sup> C. McKean & C. Swan, ‘Maritime Dundee and its harbour c.1775-1820’ in C. McKean et al. (eds), *Dundee. Renaissance to Enlightenment*, Dundee: Dundee University Press, 2009, p.269.

<sup>64</sup> At this time Dundee’s trade links with the Empire in North America (a major market for linen goods) was significant but largely conducted via London and Glasgow; the town’s economic connection with the Indian empire was not much directly in trade but via deep engagement with the multifarious financial and merchanting activities of the East India Company: A. McKillop, ‘Dundee, London and the Empire in Asia’ in McKean et al., 2019, pp.160-85.

<sup>65</sup> The Harbour Trust model was exported to Calcutta: F. Broeze et al., ‘Imperial ports and the modern world economy. The case of the Indian ocean’, *Journal of Transport History* 7 (1986), pp.1-20. On the development of

first half of the nineteenth century a close interdependence was developed between the local textile industry and harbour development.<sup>66</sup> In the period 1810 to 1849 total imports of textile raw materials grew fifteen-fold, but within this total jute expanded relative to flax, a trend accelerated by the interruption of flax supplies by the war with Russia in the Crimea in the 1850s; in 1858 the weight of jute imported exceeded that of flax for the first time.<sup>67</sup> Whilst linen long remained an important local industry (with many companies using both raw materials), it was from the 1850s that Dundee became known as ‘juteopolis’.

The desire to expand imports of jute was the main driver of harbour improvements in the period after 1850. How far the pace of harbour improvement slowed the growth of the local industry is unclear, though harbour provision was a frequent source of complaint at the Dundee Chamber of Commerce. Certainly, the town lacked a deep water quay until the 1880s, though the new Camperdown dock opened in 1865 and the Victoria and East Graving in the 1870s.<sup>68</sup> But landside improvements in handling were also important in lowering costs, with hydraulic jiggers reducing ship turn round times to as little as thirty hours by the 1880s.<sup>69</sup>

### **The view from Dundee**

On the eve of the Great War Dundee had claim to be the most globalised port city in the world. But its position was, and was recognised to be, precarious. From the 1880s Dundee jute producers were increasingly aware of the impact of the competition from Calcutta production. There were several responses. Some successful moves were made to shift up-market and find alternative uses for jute away from basic sacking and bagging where Calcutta competition was most acute. Carpeting and floor-covering are the most significant examples.<sup>70</sup> Dundee also seems to have been more competitive in yarn production than in finished products.<sup>71</sup>

The employers focussed a lot of their attention on domestic labour costs, hence taking a tough line on wages, and they bolstered the standard employer claims about the unaffordability of increases with reference to the threat from low wages in Calcutta.<sup>72</sup> They also attempted to raise Calcutta’s manufacturing wage costs by calling for improvements in the Indian Factory acts to bring them into line with the British Acts.<sup>73</sup> This pressure had little effect.

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Indian ports see also U. Bosma & A. Webster (eds), *Commodities, Ports and Asian Maritime Trade since 1750: the Foundations of the Modern Asian ‘Economic Miracle’?* Basingstoke: Palgrave, 2015.

<sup>66</sup> McKean & Swan (2009), pp.284-7; L. Miskell & W. Kenefick, ‘“A flourishing seaport”: Dundee harbour and the making of the industrial town, c.1815-1850’, *Scottish Economic and Social History* 20 (2000), pp.176-98; W. Kenefick, ‘The growth and development of the port of Dundee in the nineteenth and early twentieth centuries’ in C. Whatley et al. (eds), *Victorian Dundee. Image and Realities*, Dundee: Dundee University Press, 2011, pp.29-44.

<sup>67</sup> Miskell & Kenefick (2000), p.187; Warden (1867), p.633.

<sup>68</sup> Miskell & Kenefick (2000), p.185; Kenefick (2011), p.35; *Dundee Advertiser* 17 August 1875.

<sup>69</sup> Graham (1930), p.75; *DYB* 11.

<sup>70</sup> See, for example, the discussion of the Grimond company’s switch in this direction: *DYB* 1884, pp.64-6.

<sup>71</sup> *DYB* 1906, p.17.

<sup>72</sup> Nominal wages in the jute industry were highly cyclical, but in line with most urban workers, real wages did increase on trend in the 1870s to 1890s period due to falling prices, especially of imported foodstuffs.

<sup>73</sup> J. Tomlinson, ‘Orientalism at Work? Dundee’s response to competition from Calcutta, circa 1870-1914’, *Journal of Imperial and Commonwealth History* 43 (2015), pp.807-30.

Like many industrial employers in late-Victorian Britain Dundee's jute capitalists became increasingly sympathetic to protectionism. There was much complaining about the way in which protection in Germany and elsewhere in Europe had eroded Britain's share of world markets. But the relevance of protection to competition from Calcutta jute manufacturers was limited. Unlike in cotton, the problem for British employers was not the threat of lost markets from protection of the Indian home market, but the loss of markets elsewhere in the world. In these circumstances the only protective device which gained much support was for an export duty on raw jute which would only be paid by non-Empire purchasers – a measure which would aid Dundee vis-a-vis Europeans but not in the competition with Calcutta. In this schema, the export tax would be matched by an excise duty on Indian purchases of the raw material so as not to increase Calcutta's competitive edge, but such a proposal would potentially reduce total demand for the commodity, to the disadvantage of the peasant producer. No such policy was introduced, but Dundee reacted angrily in 1910 when it was proposed that there be an export duty (without an excise duty) to raise revenue for the improvement of Calcutta.<sup>74</sup>

Overall, Dundee's attempts to exert political pressure to directly help its competition with Calcutta were limited in scope and insignificant in effect. The concentration of jute in Dundee reduced the political significance and hence bargaining power of the city – the town had two (non-marginal) parliamentary seats, whereas Lancashire's famous cotton lobby was linked to between sixty and seventy much more volatile seats. But in any event, imperial politics told against much influence being exerted from Dundee. For an imperial politician the interests of a small city weighed little against those of one of India's most important (and politically well-organised) industries.<sup>75</sup>

How much of a sphere of action did Dundee have on the question of raw jute? Economically we know this trade was vital to the survival of the Dundee industry, not only in the obvious sense that there was no alternative source of supply, but also because the price of raw jute was crucial to the industry's profitability, making up more of the final price of output than wages.<sup>76</sup> As historians of Dundee have noted: "the industry really made its profits before manufacture began, by speculating in the fluctuating raw jute market, where accurate forecasting of supply was virtually impossible."<sup>77</sup> As a result, much attention was paid in Dundee to all those factors likely to affect this supply, from monsoon conditions in the sub-continent, and the organisation of production and distribution of the raw product in Bengal, to the costs of shipping.

The collective body most concerned with the importing of raw jute was the Jute Importers Mutual Protection Association (JIMPA), though the Dundee Chamber of Commerce (DCC) also intervened occasionally on this issue, as it did on other matters affecting the city's

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<sup>74</sup> Dundee City Archives (DCA) GD/CC/4/9 Chamber of Commerce AGM 1910.

<sup>75</sup> J. Tomlinson, 'Churchill's defeat in Dundee, 1922, and the decline of liberal political economy', *Historical Journal*, forthcoming; J. Tomlinson, 'The political economy of globalization: the genesis of Dundee's two "united fronts" in the 1930s', *Historical Journal* 57 (2014), pp.225-46.

<sup>76</sup> The same was true for the Calcutta industry, though of course mills there did not face the added complication of the costs of shipment to Europe: GUA 91/11/6/1 Finlay Muir 'Draft history' 1886/90 section, p.8; Bagchi, *Private Investment*, p.271.

<sup>77</sup> Lenman et al. (1969), p.40; see also Stewart (1998), pp.44-5,51-4,

dominant industry.<sup>78</sup> JIMPA's main activities were concerned with the establishing and policing of contracts for raw jute. Key issues concerning the quality of the jute involved the application of quality marks, the 'watering' of the product and other sources of deterioration. The watering issue was especially problematic, as the harvesting of jute in the countryside required an initial softening by 'retting': the application of water to make possible the separation of the useable fibre.<sup>79</sup> So some moisture was inevitably present in the product delivered in Dundee. JIMPA believed that because raw jute was bought by weight, they were being taken advantage of by excessive moisture content being included in the bales (a bale weighed around 400 lbs). So concerned were they on this issue that deputations were sent to the India Office in London, and representations also made to the Lieutenant Governor of Bengal.<sup>80</sup>

The authorities responded in conciliatory terms to such complaints but argued the manufacturers could do more to help themselves. When the Lieutenant Governor visited Dundee in 1904 he responded to claims from the Chamber of Commerce that the "price of jute has risen fabulously" even though the crop size was allegedly at a peak, by arguing that the problem was that the peasant was not getting the benefit of rising prices, and that Dundee manufacturers should get in touch directly with the peasant, and cut out the middleman.<sup>81</sup>

Some official action was taken in India. An enquiry in 1904/5 noted that laboratory experiments on jute had been previously pursued, but that now more action needed to be taken. The enquiry focussed on the problem of watering, in the belief that this had become recently much more severe with the sharp rise in price of raw jute. The aim of the research was to establish standards, with a view to possible legislation on the matter.<sup>82</sup> In addition, a number of experimental jute farms were established to try and improve quality.<sup>83</sup>

On matters of jute quality JIMPA also sought the co-operation of the Calcutta Baled Jute Association, the main representative body of raw jute exporters. It was joint pressure between the two bodies that initiated the enquiry noted above.<sup>84</sup> They also sent the Association monthly reports on ship damage, and later agreed to send samples of raw material of appropriate quality to be used to set a standard for future supplies.<sup>85</sup> Quality concerns also led to JIMPA to try and tighten contractual conditions, a process which was resisted by the Jute Balers on the grounds of the penalties for non-compliance being excessive.<sup>86</sup>

Another major issue for JIMPA was the forecasting of jute supplies, with obvious implications for prices. The Bengal government supplied such forecasts from 1887, based on acreage sown and expected yields, but the quality of these forecasts was often decried in Dundee. In 1904, for example, the forecasts seem to have been particularly adrift, and

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<sup>78</sup> DUA MS 83/1/1-3 Annual Reports of the Jute Importers Mutual Protection Association 1892-1917; DCA GD/CC/4/3-9 Minutes of Dundee Chamber of Commerce, 1856-1918.

<sup>79</sup> This was the process which gave women a significant role in jute cultivation.

<sup>80</sup> DUA MS 83/1/3 JIMPA Annual Report 1906.

<sup>81</sup> *Dundee Courier* 4 September 1904. The Dundonians were also assured that the Indian Government was pursuing the expansion of flax growing, given concerns about over-reliance on Russia.

<sup>82</sup> R. Finlow, 'General Report on Jute in Bengal for 1904-05' Government of Bengal, Calcutta 1906, pp.2-5.

<sup>83</sup> DUA MS 83/1/3 JIMPA Annual Report 1903.

<sup>84</sup> Finlow (1906), p.1.

<sup>85</sup> DUA MS 83/1/3 JIMPA Annual Report 1900, 1908, 1909.

<sup>86</sup> JIMPA Annual Report 1901.

improvements were promised, but the issue recurred in 1910 and then in 1911, with further representations to government authorities in Bengal.<sup>87</sup>

One recurrent theme arising from Dundee's concerns about Bengal jute was the idea of growing the raw material elsewhere in the Empire. In the early 1890s the Chamber of Commerce had backed the colonisation of Uganda (taking direct control from the East African Company) in order to encourage the growth of jute.<sup>88</sup> In the 1900s JIMPA became enthusiastic about the prospects for jute in West Africa, notably in Sierra Leone, with the idea that seed from Bengal could be used to begin this cultivation.<sup>89</sup> None of this activity appears to have had significant effects. Climatic and topographic conditions, along with the flexibility of Bengali peasant production, seem to have given the region a competitive edge in producing and selling raw jute in the pre-1914 years.

### **Asymmetric relationships?**

From a Dundonian perspective raw jute mattered enormously. Its importation was life blood of the city, making possible the large number of jobs in manufacturing, while also directly underpinning many more in the port and ancillary trades, and underpinning much of the city's commercial activity. Even at the beginning of this period in the 1860s, a large proportion of the merchants of the city were involved in the trade, as shown in detail by the unique data available from the analysis of the two hundred odd subscribers to the Albert Museum at the beginning of that decade.<sup>90</sup>

But we should be careful to note that most of the ship movements into Dundee were coastal (Table 2). This does not take account of tonnage, and would include ships bringing jute from London, although by this time most jute came directly.

Furthermore, Table 3 shows how if we look at the tonnage of vessels entering during the peak period of Dundee's role as a jute importer, most of the arrivals were *not* from Asia, and therefore did not consist of raw jute. So, jute's role in the port was complex: it was undoubtedly the single most valuable import, but did not constitute a majority of the goods brought in. On the other hand, the import of jute was a *sine qua non* of the town's key economic activity, and in that way underpinned the incomes which could be spent on other imported commodities.

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<sup>87</sup> JIMPA Annual Report 1904, 1910, 1911.

<sup>88</sup> *Dundee Advertiser*, 23 November 1892.

<sup>89</sup> JIMPA Annual Report 1904, 1905, 1906. When in the 1850s the problems of continental flax production were shifting the city towards jute, the Chamber of Commerce tried to persuade the new Imperial government to encourage the growing of flax in India. DCA: DCC GD/CC/4/3 AGMs 1858, 1859, 1860 and 1861. In the 1860s, by contrast, the growth of cotton was at the centre of attention, as Lancashire sought alternative sources for the supplies interrupted by the American civil war: S. Beckert, *Empire of Cotton. A New History of Global Capitalism*, London: Allen Lane, 2014, pp.242-73.

<sup>90</sup> <https://mcmanus168.org.uk/>. The entries on this website make clear how often merchanting and manufacturing were combined, as well as the continuing importance of flax and linen to commercial activity long after 'juteopolis' was established. Cox Brothers, whose Indian jute interests have been outlined above, and owned the biggest jute works, was described in 1867 as "merchants, flax and jute spinners, power-loom linen and jute carpet manufacturers, bleachers, dyers and calenderers."

**Table 2. Number of coastal and foreign vessels entering Dundee, 1873-1913**

Source: Moore (2008), Table 3.2

Year	Coastal	Foreign
1873	1103	486
1893	954	308
1913	1119	276

**Table 3. Vessels entering Dundee, 1906**

Source: Moore (2008), Table 3.2a

Arrivals	Tonnage of vessels
Northern Europe	146,508
Asia	21,425
Southern Europe	67,802
North America	7,506

In some respects, the rise of jute *reduced* the density of economic networks in the city. When flax was the biggest raw material import a significant number of flax merchants were also shipowners, involved in importing from the Baltic. Most prominent of these is the Riga-born George Armitstead, who became one of the town's Liberal MPs; but a number of others with similar overlapping roles can be identified.<sup>91</sup> As noted above, some jute merchants and manufacturers did own ships, but this combination had largely disappeared by the 1890s.<sup>92</sup>

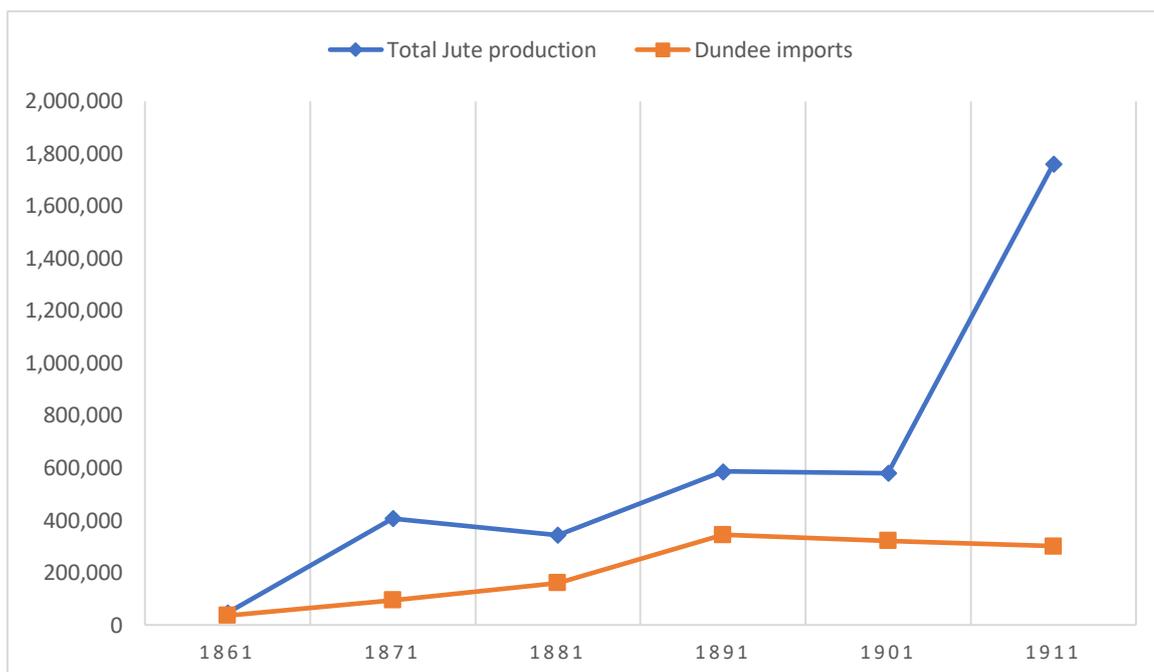
From the perspective of a Bengali jute-growing peasant the global expansion of the jute manufacturing industry in our period was of immense importance, making possible an extension of cultivation and generating a substantial if precarious prosperity.<sup>93</sup> The ultimate driver of this expansion was global demand for the finished product, but this demand was increasingly supplied from India, so that the trend was towards proportionately less of the raw material being exported; more was domestically consumed than sold abroad from the First World War.<sup>94</sup> As figure 1 shows Dundee's demand as a share of total raw jute production fell, particularly sharply after 1901.

<sup>91</sup> <https://mcmanus168.org.uk/>. entries for George Armitstead; Patrick Anderson; Messrs Banks and Mitchell; Gilroy Bros. and Co.; William Halley and Sons.

<sup>92</sup> Gilroy Bros and Co. followed a seemingly 'typical' Dundee trajectory, shifting partly from linen to jute in 1848, fully shifting from 1872, owning overall eleven ships from the 1850s, but giving the last of these up around 1890: <https://mcmanus168.org.uk/> Gilroy Bros. and Co.

<sup>93</sup> Ali (2018), pp.21-66.

<sup>94</sup> Bose (1993), p.56.



**Figure 1. Jute Production and Dundee Imports, 1851-1911 (tons)**

Sources: B. Lenman (1969); Woodhouse & Kilgur (1921), p.22.

In sharp contrast to the preceding period of indigo cultivation in Bengal, the expansion of jute involved only a limited government role. That expansion was largely driven by market processes. As Ali so clearly shows, this governmentally uncoerced ‘globalisation’ enabled the Bengal peasantry not only to sell in global markets, but also to buy imported consumer goods. In this way they become connected to global ‘modernity’.<sup>95</sup>

How much did it matter to Dundee that raw jute was an imperial commodity? Rhetorically this was important in Dundee, with the constant refrain of jute as an ‘imperial resource’.<sup>96</sup> But in so far as the price and quality of the product was concerned, imperial power had little direct significance. The idea of restricting the supply or raising the price of raw jute to non-Empire countries never gained any support in government circles. The key to these matters of price and quality was the bargaining power between the producers and the Indian merchants. In this relationship, as already noted, the structure of the provision of credit was central. Also crucial was the monopsonistic power of the Calcutta buyers, effectively organised into the Indian Jute Mills Association.

Dundee did seek to encourage the expansion and improvement of jute cultivation by the agency of the imperial government. The Bengal Agriculture Department did take on a developmental role which included such policies. But it should be noted that similar pressure for agricultural expansion was coming from other producers, such as those in France, and it is not clear that we should see this response in too ‘imperial’ terms. Once committed to the

<sup>95</sup> Ali (2018), p.5.

<sup>96</sup> Unsurprisingly this refrain became especially common during and after the Great War, when it was linked to attempts to squeeze the German jute industry: DCA GD/CC/4/9 EGM 20 January 1916; AGM 29 March 1917.

expansion of the industry with a global market, the imperial government had every incentive to intervene to try and sustain the jute boom.<sup>97</sup>

The ability of the Calcutta manufacturers to shape the market grew rapidly in our period, as handicraft production in India declined, and the relative weight of Dundee also diminished. Increasingly Dundee was a 'price taker' in the world market for raw jute. Though Dundee's conceit was that Calcutta was 'the Dundee of India', the truth was that however important jute was to Dundee, to the global jute industry and especially the growers of jute, Dundee was of sharply decreasing significance. Those peasant growers also faced a clear lack of bargaining power in the global commodity trade in jute. After the collapse of the post-war boom of 1919-21, Dundee manufacturers and Bengali jute growers alike were to suffer a prolonged period of low prices and economic downturn; while, at least for part of the inter-war period, merchants and manufacturers in Calcutta found some relief from these problems by collective action.<sup>98</sup>

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<sup>97</sup> Ali (2018), pp.81-5 notes that there were calls for improvement from Dunkirk in 1874 and Paris in 1903, alongside more persistent representations from Dundee.

<sup>98</sup> B. Gupta (2005) 'Why did collusion fail? The Indian jute industry in the inter-war years', *Business History*, 47 (2005), pp. 532-552

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**Commodities of Empire** is a joint research collaboration between the University of London's **Institute of Latin American Studies (ILAS)** and **School of Oriental and African Studies (SOAS)**. These two institutions form the nucleus of a growing international network of researchers and research centres. Commodities of Empire is a British Academy Research Project

The mutually reinforcing relationship between 'commodities' and 'empires' has long been recognised. Over the last six centuries the quest for profits has driven imperial expansion, with the global trade in commodities fuelling the ongoing industrial revolution. These 'commodities of empire', which became transnationally mobilised in ever larger quantities, included foodstuffs (wheat, rice, bananas); industrial crops (cotton, rubber, linseed and palm oils); stimulants (sugar, tea, coffee, cocoa, tobacco and opium); and ores (tin, copper, gold, diamonds). Their expanded production and global movements brought vast spatial, social, economic and cultural changes to both metropolises and colonies.

In the Commodities of Empire project we explore the networks through which such commodities circulated within, and in the spaces between, empires. We are particularly attentive to local processes – originating in Africa, Asia, the Caribbean and Latin America – which significantly influenced the outcome of the encounter between the world economy and regional societies, doing so through a comparative approach that explores the experiences of peoples subjected to different imperial hegemonies.

The following key research questions inform the work of project:

- 1) The networks through which commodities were produced and circulated within, between and beyond empires;
- 2) The interlinking 'systems' (political-military, agricultural labour, commercial, maritime, industrial production, social communication, technological knowledge) that were themselves evolving during the colonial period, and through which these commodity networks functioned;
- 3) The impact of agents in the periphery on the establishment and development of commodity networks: as instigators and promoters; through their social, cultural and technological resistance; or through the production of anti-commodities;
- 4) The impact of commodity circulation both on the periphery, and on the economic, social and cultural life of the metropolises;
- 5) The interrogation of the concept of 'globalisation' through the study of the historical movement and impact of commodities.

<http://commoditiesofempire.org.uk/>

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