2 The colonial legacy

Colonial exploitation: some definitions

As was the case in many other former colonies, in Indonesia many people in the immediate post-independence era blamed most, if not all, of their problems on the legacy bequeathed to them by the colonial power. Many politicians, civil servants, academics and journalists took it as axiomatic that the Dutch had 'exploited the wealth of the Indies' and that this exploitation was the reason for the country's poverty. But what was meant by colonial exploitation? Landes (1961) suggested that a useful definition would link colonial exploitation to coercion, which leads to the employment of workers at wages lower than would prevail in a free labour market, or the purchase of products at prices lower than would obtain in free markets. More generally, according to Landes, colonial exploitation must imply constraints on the free operation of markets within the colonial territory.

This is a definition which has in fact been widely used in the literature in the decades since Landes suggested it; its relevance to Indonesia will be further discussed later. It can be extended to include the use of colonial markets as protected outlets for the surplus production of industries in the metropolitan countries. By the end of the nineteenth century, radical critics of Western colonialism attributed it at least partly to the need of industrial capitalism for ever larger markets. Metropolitan politicians wanting to justify colonial adventures to sceptical domestic electorates often used the argument that colonies could serve as captive markets for home produce (Landes 1998: 429–30). To what extent industrialisation in the metropolitan economies depended on colonial outlets remains a contested issue, with some economic historians denying the importance of colonial markets as an important factor in the industrial growth of the metropole (Bairoch 1993: Chapter 6; Lewis 1978: 30).

What seems more certain is that in most colonies, the metropolitan powers had little interest in fostering industrial growth, and indeed often pursued policies which led to de-industrialisation. The most famous

https://doi.org/10.1017/CBO9781316271438.002 Published online by Cambridge University Press

example is the demise of the textile industry in India in the nineteenth century, which lost not only most of its domestic market to foreign competition, but also its export markets. Williamson (2011: 64–5) has argued that similar de-industrialisation occurred in the Ottoman Empire, Indonesia and Mexico. Williamson, along with other economic historians, has analysed the impact of de-industrialisation on the terms of trade of tropical colonies. In most cases they became exporters of a narrow range of tropical commodities and importers of industrial goods. Thus they became very vulnerable to downturns in world prices of their major export commodities. In the Indonesian context, fluctuations in the prices of key commodities such as sugar, rubber and petroleum have had major consequences for economic performance, both before and after independence.

A further definition of colonial exploitation concerns the burden of taxation. Many pre-colonial governments in Asia and elsewhere taxed their populations heavily in labour and kind, as well as in money. Some defenders of European colonialism in Asia have argued that it brought about a rationalisation and lowering of tax burdens on the local populations, and thus curtailed the predatory nature of the state. But others have argued that colonialism simply replaced one form of fiscal predation with another. It has been argued that the imposition of cash taxes was frequently used as a means of forcing indigenous cultivators into the wage labour market, or into producing crops for sale. Following Landes, it has been asserted that, when workers were forced into wage labour to pay taxes, the wage rates were manipulated to benefit the main employers of labour, often large corporations domiciled in the colonial metropole. If they grew crops for sale, prices were often depressed below world market levels by export taxes or by state marketing boards.

Heavy taxation of indigenous populations could perhaps be justified if colonial governments used the revenues from taxes and non-tax revenues to provide infrastructure, education, health care and other modern services, which pre-colonial governments had neglected or been unaware of. Many studies in both Asia and Africa have stressed that colonial governments spent few resources in any of these areas. Infrastructure spending, when it took place, was usually skewed towards roads, railways and ports required by foreign enterprises in order to export agricultural and mineral products. For a range of reasons, little was done to provide either education or modern health services to indigenous populations; schools, hospitals and clinics, where they existed, were frequently provided by missions. To what extent did fiscal policy in colonial Indonesia conform to this pattern?

Another issue which has triggered a very large literature in the context of India, as well as in other colonial territories, concerns the 'drain' of capital out of the colony through the balance of payments. The argument is quite straightforward: metropolitan powers held back colonial development by implementing policies which led to substantial surpluses on the current account of the balance of payments, which in turn financed large and sustained outward flows of capital. The surpluses were the result of large surpluses of commodity exports over imports, which were not compensated by imports of services. Even where it could be demonstrated that the surpluses on the current account of the balance of payments were smaller than the trade balance, or even negative because of large deficits on services, the counter argument was that the service sector in most colonies was dominated by firms from the metropole, who often had monopolies over the provision of shipping, banking, insurance and other services and charged high prices. These debates have continued in studies of the economic history of many parts of Asia and Africa, but a consensus does appear to be emerging that at least some colonial economies did experience significant outflows of capital which were, in part at least, the result of large profits earned by companies based in the metropolitan power. We now examine this argument in the Indonesian context.

Economic development in Indonesia in the nineteenth century: the cultivation system

Virtually all discussions of Dutch policy in Indonesia in the nineteenth century focus on the system of forced cultivation of export crops, which was known in Dutch as the *cultuurstelsel*, and is usually translated into English as the cultivation system (CS). It was introduced by the Dutch government after the rather disappointing results from their attempts in the years from 1815 to 1830 to persuade private cultivators to produce crops for export (van Niel 1992: 137ff; see also Emmer 1998: 167, and van Zanden 2010: 159–62). Faced with a reluctance on the part of Dutch and other European capitalists to invest in agricultural plantations, the Dutch Governor-General, van den Bosch, persuaded the Dutch monarch to try a different approach to the cultivation of export crops which involved the imposition of government demands on individual villages to grow specific crops. It was argued that, given the fertility of the soils in Java, a family could produce enough rice and other foods for their own needs with only 120 labour-days. The Dutch plan was to coerce the population to use their 'surplus' labour time to produce export crops, such as sugar and coffee.

To begin with, the CS appeared to be successful. The growth in exports from Java accelerated rapidly and over the decade of the 1830s export growth was around 13 per cent per annum, and growth in per capita GDP was also positive (van Ark 1988: 114; van Zanden and Marks 2012: 50). The main reason for this success was that the principal political and commercial elites in Java (Dutch officials, the indigenous Javanese ruling class and the Chinese merchant community) all benefited from the system, and had an interest in making it work (van Zanden 2010: 163). But after 1840, growth of export production slowed considerably and never regained the dynamism of the 1830s. As a consequence, growth in GDP also slowed.

In addition, it became evident that the CS was having a detrimental impact on native welfare in at least some parts of Java. The Dutch authorities expected that the system would lead to a lightening of the tax burden on cultivators compared with the land tax imposed by Raffles, who headed the British administration in Java from 1811 to 1816 (Booth 1998: 19). It was therefore expected that the system would lead to an improvement in native welfare. But the reality was rather different. The 1840s were marked by growing food shortages and indeed famines in some parts of Java (Elson 1994: Chapter 4). A considerable proportion of the money paid out in crop payments was taken back by the government in the form of taxes, especially the land rent. Some money did stay in the villages; certainly the entire period seems to have been characterised by quite rapid growth of the money supply in Java (van Laanen 1989). But increasingly it was clear that the main beneficiaries of the CS were the indigenous ruling class, Dutch officials and the home government in the Netherlands.

The development of the CS had important implications for the Dutch economy, which several economic historians of the Netherlands have discussed. Van Zanden and van Riel (2004: 143) have described the growth of a 'colonial complex' in which industries such as shipbuilding, sugar refining and textiles in the Netherlands benefited from the growth in trade between the Netherlands and Indonesia. In the case of textiles, the Dutch limited exports from Britain into Java in order to protect the market for Dutch products (Booth 1998: 138). The budget of the Netherlands also benefited from the *batig slot*, which was the term used for the remittances on government account to the home budget. Van Zanden and van Riel (2004: table 5.1) estimate that in the 1830s, the remittances already accounted for around 32 per cent of tax income in the Netherlands, rising to 53 per cent by the 1850s, which was almost 4 per cent of Dutch GDP.

Given the benefits which the metropolitan government derived from the CS, not least in terms of a substantial contribution to the home budget, it might seem surprising that by the 1860s pressure was mounting in the Netherlands for a reform of the system. While moral outrage at the exploitation of native labour might have been one reason for this pressure, another was the realisation that a system based on coercion was expensive to maintain, especially as, with growing population, free wage labour was becoming more abundant (Boomgaard 1990). Van Zanden and van Riel (2004: 181–2) argue that one consequence of the growth of exports from Java after 1830 was that a rising merchant class became more influential, and by the 1860s they were confident that they could manage export agriculture more efficiently and at less cost to the budget than the increasingly discredited system of forced labour.

By 1850, the population of Java has been estimated to be 14 million, compared with 7.5 million in 1800 (Boomgaard and Gooszen 1991: 82). Part of this growth was probably due to higher birth rates, and part to public health measures, especially vaccination against smallpox, which reduced death rates. Some historians have argued that the higher birth rates were the direct result of intensified labour demands made on rural households although the evidence for this is contentious (White 1973; Alexander and Alexander 1971). The CS was formally terminated, at least in Java, with the liberal reforms of the 1870s but the legacy lasted well into the twentieth century. In particular, as Furnivall (1944: 174–5) argued, the idea that the colony was a business concern (*bedrif*) became entrenched in the minds of Dutch politicians, and the post-1870 reforms were significant mainly in that they admitted more shareholders. While the remittances from the colony to the Dutch budget had dwindled to nothing by the end of the nineteenth century, private enterprise and private individuals continued to remit profits until the end of Dutch colonial rule. It was the expectation of the liberal reformers that free markets for land and labour, as well as goods, would replace coercion, but in fact the indigenous populations of both Java and other parts of the country remained subject to coercion until well into the twentieth century.

Some Dutch historians have been harsh in their evaluation of the impact of the CS, both on the colonial economy and in the Netherlands. Emmer (1998: 169) argued that 'the cultivation system retarded the introduction of a modern market economy in Java and it also retarded the adaptation of the Dutch economy to the competitive capitalism of the 19th century'. Van Zanden and Marks (2012: 72) claim that it was 'arguably the most extreme example' of an extractive institution to have been introduced in any non-settler economy. These views, which have also been echoed by other writers, conflict with the much more optimistic assessment of Elson (1994: 305) that the CS 'promoted a previously unknown level of general prosperity among the peasantry'. This argument is based on an assertion that living standards in many parts of Java were very low before the CS began, which is not easy to prove or disprove. The national income data assembled by van Zanden and Marks (2012: 50) indicate that per capita GDP in Java grew only quite slowly between 1815 and 1840, and fell between 1840 and 1860. Household consumption expenditures probably fell in per capita terms. These figures do not suggest that living standards on average improved significantly as a result of the CS, even if they were low before the system began. There were gainers and losers within indigenous society, but the net impact on incomes and living standards of the majority was probably negative.

The liberal and ethical eras

The CS was followed by a number of liberal economic reforms. These were intended to allow market forces a stronger role in the economy, although the agrarian legislation in fact imposed controls on the sale of land owned by indigenous cultivators to other parties, including Chinese. The legislation was also intended to facilitate the long-term leasing of land to estate companies. One of the most important consequences was the growth of large estates in Java and Sumatra, especially in the area of northern Sumatra around the town of Medan. But after more than two decades of liberal policies, there was increasing concern about the direction of colonial policy. Growth rates of GDP per capita in Java were barely positive in the decades from 1860 to 1880, although they accelerated to around 1 per cent per annum between 1880 and 1900 (Van Zanden and Marks 2012: 50). Van der Eng's estimates for Indonesia show a slower growth in per capita GDP of around 0.5 per cent per annum over these two decades, although export volume did accelerate in the last fifteen years of the century (van Ark 1988: 115–16). There was considerable real growth in expenditures on public works between 1880 and 1900, especially on irrigation and railways (de Jong and Ravesteijn 2008: 66).

The progress in construction of public works was not enough to stem the criticism of the colonial system by influential commentators in both Indonesia and the Netherlands. They were concerned that, far from benefiting the indigenous population of Java, the liberal reforms had actually led to declining living standards. Falling per capita availability of rice in Java was a particular worry. The population of Java had continued to grow, and by 1900 was estimated to be around 30 million. There was a growing fear that, with finite supplies of arable land, it would not be possible to accommodate more people in agriculture in Java, or indeed in some of the more densely settled regions outside Java. The Calvinist-Catholic coalition, which came to power in the Netherlands in 1901, announced a new approach to colonial management which became known as the ethical policy (Penders 1977: 61).

The ethical policy was motivated mainly by a concern over living standards, especially in Java. Cribb (1993: 227–9) has argued that there were three main strands in Dutch policy. The first was a desire to provide administrative and legal protection to the indigenous population, especially against the powerful interests of Western capitalism. The second was to provide more educational opportunities for indigenous Indonesians, while the third was to intervene directly through government initiatives to improve the productivity and incomes of indigenous Indonesians. Dutch policy emphasised agricultural intensification through improved irrigation, which would lead to more double-cropping of rice land. There was also a recognition that more off-farm employment opportunities were needed for the indigenous population. In order to provide a range of government services, Departments of Public Works, Health and Education were created or expanded, and both expatriate and indigenous officials were recruited to staff them (Boomgaard 1986; de Jong and Ravesteijn 2008).

But some officials still worried that such policies would not by themselves be enough to stave off the threat of a Malthusian catastrophe in Java. Even if new land could be brought under cultivation, and existing land cultivated more intensively, it was still unlikely that a continually growing population could be accommodated in agriculture in Java. The obvious solution, especially at a period when large numbers of Europe's 'surplus populations' were moving across the Atlantic to settle in parts of North and South America, was to encourage more Javanese to settle in those parts of the archipelago where the Dutch thought that the agricultural potential was being held back by small populations and a lack of agricultural labour. Javanese had in fact been moving to Lampung at the southern tip of Sumatra for many decades. The Dutch plan was to accelerate movement to new agricultural settlements, in both Sumatra and Sulawesi through ambitious land development schemes. In addition, many Javanese were encouraged to move to northern Sumatra to meet the demand for wage labour on the agricultural estates. After 1900 the Dutch began to impose controls on in-migration from other parts of Asia, especially China. The Javanese were persuaded to move through a system of indentured labour contracts which some critics considered coercive.

The coercion of workers to move to Sumatra was supposed to have stopped after 1870, after which date the out-migration of Javanese was considered to be voluntary. But there was considerable controversy about the treatment of indentured workers on Sumatran estates. Particularly controversial was the Coolie Ordinance with its penal sanction clause, which permitted the criminal prosecution of workers who ran away from their employers.[1] The Ordinance was only repealed in 1931 (Lindblad 2002: 103–4). Those who moved from Java to Sumatra were often from families who owned little or no land, but the landed families in Java were not spared government coercion. As sugar production grew, the sugar companies used coercive tactics to secure the rental of land from native landowners. They almost always demanded that the better irrigated *sawah* land was rented to them, although in fact sugar cultivation could have taken place on rain-fed land, if the planting had coincided with the monsoon season.

By 1930, the impact of population movement in Indonesia was clear from the results of the population census of that year. More than 31 per cent of the population of the north-east coast of Sumatra was born in Java, as was over one quarter of the population of Lampung (Pelzer 1945: 260). Hugo (1980: 110) estimated that by 1930 there were almost 1.14 million people of Javanese descent living outside Java. This ethnic mixing caused some problems, both before and after independence, but it did help to create the idea of Indonesia as a single national entity. Although Javanese migrants still used their own languages among themselves, the *lingua franca*, Malay, became more widely used, especially after its adoption as the language of the independence movement in 1928. The independence movement itself consisted of people from various parts of the archipelago, with Sumatrans as well as Javanese playing a prominent role. Although Dutch policy was to encourage the use of local vernaculars in the expanding education system, the increasing use of a common language was an important factor in spreading the 'idea of Indonesia' among increasing numbers of people (Elson 2008: 64–5).

An important reason for the growth of nationalism in the early decades of the twentieth century was a widespread conviction among many indigenous Indonesians that neither the liberal reforms of the last part of the nineteenth century nor the ethical policies after 1901 had brought them much benefit. Influential merchant groups in urban Java, such as the *Sarekat Dagang Islam*, resented competition from the Chinese (Kahin 1952: 67–70). The better-off farmers in Java, who controlled irrigated rice land, resented the enforced renting of land to the sugar companies. Most of those involved in the growing nationalist movement, including growing numbers of indigenous business people, would probably have agreed with the judgement of a later economist that 'the developmental effort under the ethical system was too little and too late to be effective in raising levels of living of the Indonesian people' (Higgins 1968: 693).

[1] For a discussion of the debate over the treatment of workers and the role of the Labour Inspectorate, from the viewpoint of one of the main participants, see Breman (2002).

Table 2.1 *Annual average growth in GDP, 1900–1938: Indonesia, the Philippines, Thailand, Taiwan*

Country	1900–1913	1913–1929	1929–1938	GDP* (per capita, 1938)
Indonesia	2.5	2.6	1.1	1,175
Philippines	2.9	4.3	4.1	1,522
Thailand	2.4	1.7	2.9	826
Taiwan	4.7	4.3	2.6	1,302

* GDP in 1990 international dollars; the figure for Taiwan is probably too low.
Sources: van der Eng (2013); Hooley (2005); Sato et al. (2008: 382); Sompop (1989); per capita GDP: Maddison (2003: 182–3).

Is this a fair criticism? Defenders of the ethical policy argued that it did lead to sustained real growth in government expenditure after 1900, and a shift in the composition of expenditures away from administration and defence towards public works (Booth 1990: 224–9). There was also an acceleration in both export and GDP growth after 1900: export volume almost doubled between 1900 and 1913, and then almost trebled between 1913 and 1929 in spite of the fact that export prices began to fall after 1920 (van Ark 1988: 116–17). Between 1901 and 1913, GDP grew at around 2.5 per cent per annum, and accelerated to 2.6 per cent per annum between 1913 and 1929. Output growth was faster than in Thailand, although probably slower than in the Philippines and Taiwan (Table 2.1). But did the policies adopted after 1900 lead to improved living standards for the indigenous population, which was after all the key aim of the ethical policy? Although the years from 1901 to 1914 saw some improvement in food availability in Java, the post-1914 period brought worrying developments. Inflation accelerated, leading to sharp increases in the prices of food and non-food staples.

The growth in public sector expenditures after 1900 had been partly funded by borrowing, leading to a growth in the debt servicing obligations, which caused official concern in both the colony and the Netherlands (Booth 1998: 144–6). If spending on infrastructure, health, education and land settlement projects outside Java was to be sustained, more revenues would have to be raised from taxation. But a report published in 1921 found that the indigenous population was already being ‘taxed to the utmost limit’ (Penders 1977: 96).

Dutch authorities feared that further taxation of agriculture would have been met with stiff resistance from the rural population. In fact, the land tax in Java fell in terms of nominal guilders per hectare of arable land between the 1870s and the 1910s, although it increased over the 1920s.

As a proportion of value added in farm agriculture, it fell continually until the end of the 1920s (van der Eng 2006: 42). From 1870 until 1920, the land tax in Java was a lower percentage of value added in agriculture than in Japan, although it was higher between 1920 and 1940. The land tax was not assessed outside Java, Bali, Lombok and a small area in South Sulawesi before 1942, but other taxes including export taxes fell on indigenous producers. The export tax levied on smallholder rubber producers in an attempt to curtail smallholder production led to considerable unrest in parts of Sumatra in 1935, and was subsequently removed (O'Malley 1979: 239–45).

After 1920, the Dutch authorities, facing criticism from powerful commercial interests at home about the trend towards welfare colonialism, tried to rein in budgetary expenditures. In 1920, budgetary expenditures per capita were higher than in most other parts of Asia, and were only surpassed by the three components of British Malaya and Taiwan (Booth 2007: table 4.4). But thereafter they fell in terms of nominal dollars, and relative to several other colonies including the Philippines. Expenditures on capital works were cut sharply, especially after the world depression began to affect revenues in the early 1930s. The comparative study of public finances in Southeast Asia carried out by Schwulst (1932) in 1930/1931 found that Indonesia was spending a lower percentage of the total budget on agriculture and public works, and a higher proportion on defence than any other colony, and about the same as independent Siam. But in spite of the fiscal austerity, the government debt continued to cause official concern; in 1935 it was still higher in per capita terms than in other parts of Asia, excepting British Malaya (Table 2.2).

Increased government expenditures, especially in the early years of the ethical policy, did produce improved infrastructure. By the 1930s, Java had a highly developed system of roads and railways, even more extensive

Table 2.2 *Public debt per capita (US$)*

Country	1935	1955
British Malaya	18.21	27.39
Indonesia	15.45	3.79
India	12.11	17.64
Philippines	4.99	23.87
Thailand	2.76	4.15
Egypt	31.62	NA
Portugal	60.21	41.93

Source: Booth (2013b: table 5).

than in Taiwan (Booth 2007: table 4.7). Irrigation development had also progressed further than in most other parts of monsoon Asia, and this in turn permitted greater double-cropping of rice land. The numbers of professional engineers working for the government more than quadrupled between 1878 and 1928. The majority were trained in Delft in the Netherlands, although by 1930 there were 45 who had been trained in Bandung (de Jong and Ravesteijn 2008: 60). The Dutch administration was very proud of its engineering achievements in Indonesia, but most of the infrastructure was concentrated in Java and a few export-producing regions in Sumatra. Most other regions outside Java had few roads, and rail development was restricted to northern and southern Sumatra. A plan to build a trans-Sumatra rail line was shelved after 1930. There was no rail, and only very limited road development in Kalimantan, Sulawesi or the eastern islands.

Another trend which attracted adverse attention after 1900 was the persistent current account surplus on the balance of payments. The current account surplus had fallen after the termination of the CS, partly because remittances to the Dutch budget ended, but also because of the growth of military expenditures associated with the war in Aceh. The surplus began to grow again after 1900 (Booth 1998: 212–13). For much of the period from 1900 to 1930, it amounted to between 2 and 5 per cent of GDP. During the CS, the surplus was used to finance subventions to the Dutch budget; after 1900 the outflows were mainly private. They were the result of higher levels of savings, both personal and corporate, part of which were remitted abroad. Defenders of Dutch policy over these years claim that, on average, private firms in Indonesia were not earning unusually large profits and that even if profits were remitted abroad, the colonial economy still benefited from the development of private enterprise whether in agricultural estates, mining, manufacturing, transport or banking and financial services. These enterprises paid taxes into the colonial budget and employed local workers. Debates over the cost and benefits of foreign investment were to continue after independence.

Defenders of Dutch colonial trade policies also argued that after 1900 the Dutch share of imports to, and exports from, Indonesia steadily declined (van der Eng 1998a: table 1). The Netherlands was not using its colonies as captive markets for high-cost home producers of manufactures to the same extent as France was doing after 1918.[2] Indeed it suited the interests of many Dutch and other investors in Indonesia that their workers could purchase low-cost wage goods. After 1920 that

[2] A good discussion of the economic aspects of French colonial policy can be found in Thomas (2005: 98–118).

https://doi.org/10.1017/CBO9781316271438.002 Published online by Cambridge University Press

increasingly meant imported manufactures from Japan, especially cotton textiles, garments and household goods. The increase in Japanese imports into colonial Indonesia was also assisted by the Dutch decision to stay on the gold standard after 1930, which caused a substantial real appreciation of the guilder relative to the yen. In 1934, the Dutch authorities, worried more by the political than the economic ramifications of Japan's growing penetration of the colonial market, began to impose quotas on Japanese imports, although Indonesia remained an important market for Japanese textiles until 1942 (Booth 1998: 219–20).

In 1936, the Netherlands government moved the Dutch guilder off the gold standard, and with it the Netherlands Indies guilder. The devaluation followed the adoption of policy measures intended to encourage the growth of the traded goods sectors, including large-scale manufacturing. Until the 1930s industrial growth was largely centred on agricultural processing. The new policy encouraged foreign investment in a number of sectors including automobiles, rubber tires and tubes, soaps and cosmetics, batteries, cigarettes, electrical appliances and brewing (Shepherd 1941: 73). A measure of protection was granted the domestic textile sector, mainly by placing quotas on Japanese imports.

Encouragement was given to small-scale weaving through the distribution of improved handlooms (Palmer 1972: Chapter 2). Attempts to regulate production in small-scale enterprises were often frustrated by the sheer number of establishments, although the government persisted in its attempts until 1942. Official concern about 'cut throat competition' led to the formation in 1937 of a Regulation Board. The increase in what one French observer called 'administrative tyranny' was an important legacy to post-independence governments (Bousquet 1940: 51). Writing almost thirty years later, Higgins (1968: 693) claimed that over the 1930s there was a shift from a relatively free to a highly regulated economy, although the relatively free economy of the years from 1870 to 1930 was itself a reaction against the *dirigisme* of the years from 1830 to 1870.

Whatever the merits of greater government regulation, the industrial sector (mining, manufacturing, utilities and construction) recovered from the depression and grew in real terms by 85 per cent between 1934 and 1941. In 1941, it accounted for 17.6 per cent of GDP (van der Eng 2013). Some observers saw the greater attention to industrial policy in Indonesia as part of a wider trend on the part of colonial regimes in Asia to take industrial policy more seriously in the 1930s (Shepherd 1941: 110). Dutch officials, like the French in Vietnam, could hardly have been unaware of the efforts by the Japanese to promote industrial growth not just in Japan but also in Taiwan, Korea and Manchuria. Increasingly they realised that if living standards were to improve, employment

https://doi.org/10.1017/CBO9781316271438.002 Published online by Cambridge University Press

opportunities outside agriculture would have to increase. Labour-intensive manufacturing was an obvious candidate for official support.

Economic recovery after 1934 was not accompanied by greater political freedom. By the mid-1930s the Dutch had managed to stifle the nationalist movement by incarcerating most of the leadership in remote parts of Eastern Indonesia.[3] But by then the idea of Indonesia as a unified nation, and by implication a unified economy, had gained widespread support among educated elites both in Java and elsewhere. The Malay language was also being used more widely across the archipelago and after independence became the official language for government and increasingly in legal and commercial transactions, and in the media. Last but by no means least, the great majority of Indonesians shared a common religion in Islam, even if there were considerable variations in the degree of commitment to Islamic values and practices. With the ignominious defeat of the Dutch at the hands of the Japanese in 1942, and the release of key leaders from Dutch prisons, the nationalist movement rapidly recovered its strength, and by 1945 was ready to assert itself as the legitimate government for the whole country.

Living standards in Indonesia during the last decade of Dutch rule

By 1941, in spite of the ravages of the depression, per capita GDP in Indonesia had surpassed the level achieved in 1929 (van der Eng 2013). But Indonesian per capita GDP was below that in British Malaya and the Philippines, as well as that in Taiwan and probably Korea.[4] Indonesia was also ranked well below most other parts of Southeast Asia in terms of infant mortality rates, crude death rates and educational enrolments. The last indicator placed Indonesia below all other Asian colonies except French Indochina (Furnivall 1943: 111). Even as late as the 1930s, infant mortality rates among indigenous Indonesians in Batavia were estimated to have been 300 per thousand, although they were lower in Bandung (Table 2.3). The very high mortality rates in Batavia, and other coastal

[3] The Governor General in the latter part of the 1920s, de Graeff, was committed to reconciliation between the colonial government and the 'moderate' (i.e. non-communist) nationalists. But his attempts failed, and he was forced into harsher measures (McVey 1965: 355). Ricklefs (2001: 231) argued that some nationalists had imbibed socialist and Marxist views of imperialism in the Netherlands, although on their return from the Netherlands they were often in conflict with more doctrinaire Marxists who had been trained in the Soviet Union.

[4] See Maddison (2003: 182). It should be noted that his estimate for Taiwan is almost certainly an understatement; see Fukao, Ma and Yuan (2007).

Table 2.3 *Infant mortality rates in Southeast Asia by ethnic group, 1930s*

	Indigenous	Chinese	European	Indian
SS (1934)	235	154	25	145
Kedah (1928)	112	137	NA	263
FMS (1936)	149	139	NA	136
Batavia (1935/1937)	300	150	50–60	NA
Bandung (1935/1938)	145	111	35	NA
Saigon (1936)	250	220	NA	NA

Notes: SS, Straits Settlements; FMS, Federated Malay States.
Sources: Booth (2012b), table 6.

towns and cities, were attributed to the unhealthy climate, and also to a lack of parental knowledge regarding the causes of infant and child deaths (Booth 2012a: 1167–8).

As has been noted, government expenditures per capita fell in terms of nominal dollars after 1920. Government revenues also declined in per capita terms, especially over the decade of the 1930s, although by the late 1930s, Indonesia had a more diversified revenue structure than most other Southeast Asian colonies. Tax revenues comprised over 60 per cent of all revenues, with income taxes, both personal and corporate, accounting for over 20 per cent of total revenues. But in 1938 total revenues per capita were lower than in the Philippines, Taiwan and the three components of British Malaya, and indeed lower than in several British colonies in Africa (Booth 2007: table 4.3). While at least some Dutch officials might have wanted to increase expenditures in sectors such as health and education in the latter part of the 1930s, they were constrained by limited revenues, and a reluctance to increase government borrowing.

One reason for poor health indicators would have been poor nutrition. The evidence indicates that rice availability per capita in Java was, by the inter-war years, low in comparison with many other parts of Southeast Asia. It was almost certainly low in many regions outside Java as well, with the exception of the less densely settled rice-producing regions such as Aceh, West Sumatra and South Sulawesi. Van der Eng (2000: table 6) has estimated that, for Indonesia as a whole, by the 1930s only around 40 per cent of total calorie consumption came from rice. Given the paucity of data outside Java, these figures must be treated with caution but it is probable that in many regions outside Java, as well as in Java, corn, sago and root crops played an important role in the diets of many people.

Cassava was eaten in several forms: many poorer families in Central and East Java consumed it in dried form (*gaplek*) in the *paceklik*, or months before the main rice harvest. Studies using the household survey data from 1970 found that *gaplek* was an inferior food, consumed largely by the lower income groups (Dixon 1984). This would also have been the case before 1940. Fresh roots were also widely consumed, usually with some form of sauce to make the taste more palatable. Cassava, whether consumed fresh or dried, was a cheaper source of calories than rice and indeed cheaper than corn or sweet potatoes (van der Eng 1998b: table 7). But in spite of the availability of cheap supplements to rice, average calorie consumption per capita in Java by the 1930s was, for most population groups investigated by Dutch officialdom, well below 2,000 calories per day, which in modern times would be considered a minimum intake, especially for people engaged in physical labour.

Protein consumption was under 50 g per day (van der Eng 2000: table 4). The sample of farmers living near estates investigated in the final report of the Coolie Budget Commission in the late 1930s found that average daily calorie consumption was only 1,391, and protein consumption per capita around 35 g. Plantation factory labourers living off the plantation were consuming about the same, while field labourers were consuming less (van Niel 1956: 108–11). This report also found that calorie consumption rose with increased household incomes, especially among those living off the plantation. This finding appears to hold also for the sample of rural households investigated in the Kutawinangun study in Central Java in the early 1930s, which found a strong positive correlation between income per capita and calorie consumption. Nonetheless, the medical experts who participated in the Kutawinangun study found the state of health and nourishment of the entire village to be 'most satisfactory' (de Langen 1934: 405).

One possible explanation for the reasonable state of health in such a densely settled area was that those households which owned little land cultivated their house gardens very intensively. The Kutowinangun study, and other studies carried out in Java in the inter-war years, found that as average holding size decreased, the amount of land allocated to house gardens, and the intensity of planting, increased (Ochse and Terra 1934: 355). This tendency for those households where land availability per capita was low to exploit their gardens more intensively was to persist into the post-independence era. The Kutowinangun study found a significant negative correlation between land owned per capita, and the percentage of household income derived from 'sideline' occupations, which suggests that land-poor households were able to get at least some income from off-farm activities, and this income helped them to maintain an adequate diet. On the other hand, the Kutowinangun data showed that there was a significant positive correlation between household income and calorie and protein consumption, for both agricultural and non-agricultural households. The correlation coefficient between income per capita and calories intake was 0.86 (and even higher for protein intake).[5] What the household earned determined what the household ate.

Elsewhere in Java, there was evidence of more severe malnutrition in the latter part of the 1930s, especially in regions where cassava was a staple food, and where opportunities for earning extra cash income were limited. In 1939, the Director of Public Health instructed the National Nutrition Institute (*Instituut voor Volksvoeding*) to carry out a dietary survey in the Bojonegoro region in north-eastern Java where the food situation was causing grave concern (Penders 1984: 131). In five villages selected for detailed fieldwork, it was found that most families were receiving well below the stipulated minimum of 1,500 calories per day. Poor diet made the population more prone to malaria, which in turn made hunger oedema more widespread.

The governor of the province of East Java, Charles van der Plas, argued that effective programmes to combat hunger oedema across East Java would cost millions of guilders, and the money might be better spent on other policies including improved irrigation and agricultural extension in poor areas, and better education about child nutrition. Other senior officials such as H. J. van Mook argued that the situation in Bojonegoro was extreme, although it was widely acknowledged that the growing dependence on cassava as a source of calories was causing dietary problems in other parts of Java, and that, given the expected growth in population, out-migration and the provision of more non-agricultural employment would have to play a greater role in improving living standards on Java (Penders 1984: 142).

Social stratification at the end of the colonial era

Detailed village studies such as the one in Kutowinangun revealed that, by the 1930s, access to land in rural Java was skewed with only a small proportion of villagers owning more than one hectare of irrigated *sawah*. Indeed some scholars have argued on the basis of surveys carried out in 1904/1905 and in the 1920s that Javanese society was already quite polarised in the early part of the twentieth century, with at least one-third of the agricultural population owning little or no land (Alexander

[5] Data refer to twenty households surveyed; fifteen agricultural and five non-agricultural.

and Alexander 1982: 601–5). Their main source of income was as agricultural labourers, working either for farmers who owned land, or for agricultural estates (Husken and White 1989: 240–1). The breakdown of the 'native population' of Java given by Meyer Ranneft and Huender in 1923 and subsequently used by Wertheim (1956: 96–7) showed that wealthy farmers comprised only 2.5 per cent of the indigenous population, with middle-class farmers a further 19.8 per cent and poor farmers 27.1 per cent. Although there was less pressure on arable land outside Java, a study carried out in West Sumatra also found a skewed distribution of land, with 13 per cent of household heads owning 82 per cent of the land, and the remaining 87 per cent owning less than one hectare.

The 1930 population census for the first time in colonial Indonesia provided detailed information on the structure of the labour force. The results showed that in Java around 30 per cent of the labour force was in non-agricultural employment, although some of those classified as 'other' may have been at least partly engaged in agriculture. There was also a sharp difference between the male and female data, with little more than half the female labour force engaged in agriculture and around one-third in manufacturing and trade.[6] The 1930 census also produced surprisingly high female labour force participation rates, especially in some parts of Java. In Yogyakarta almost 60 per cent of women were found to be gainfully employed, compared with 46 per cent in the neighbouring province of Central Java. For Java as a whole female participation rates were 37 per cent. These figures were much higher than in much of Europe, including the Netherlands, at the same time (de Vries 2008: 212).

The census data also showed that indigenous workers comprised a very high proportion of the non-agricultural labour force, especially in comparison with other Asian colonies (Table 2.4). The increase in employment in government occupations, which resulted from the ethical policy, meant that by 1930 well over 90 per cent of all workers in government and the professions were indigenous Indonesians. This was a higher proportion than in other parts of colonial East and Southeast Asia with the exception of the Philippines and independent Thailand (Booth 2007: 121–8).

Wertheim (1956: 128–9) pointed out that over the 1930s, there was a tendency for the number of 'European' posts in the civil service to

[6] For a detailed discussion of the labour force data from the 1930 census, see Mertens (1978). He stresses the rather different results in Tables 18 and 19 in Volume 8, especially as they refer to female non-agricultural employment. See in particular Appendix Table 1.6 in his paper.

Table 2.4 *Indigenous workers as a percentage of the labour force in manufacturing, commerce, professions and government service*

	Indigenous workers as percentage of the labour force		
	Manufacturing	Commerce/trade	Government and professions
Indonesia (1930)	95.3	84.3	93.6
SS (1931)	7.2	3.9	20.5
FMS (1931)	3.0	2.4	32.9
Burma (1931)	80.8	73.3	86.7
Philippines (1939)	97.6	82.7	96.5
Thailand (1937)	55.2	60.6	95.2
Korea (1930)	89.7	85.1	59.8
Taiwan (1930)	78.5	86.9	49.2

Notes: SS, Straits Settlements; FMS, Federated Malay States. Data for Taiwan refer to male workers only.
Sources: Booth (2007), table 6.4.

decline. Between 1928 and 1938 the percentage of technical, administrative and financial posts occupied by indigenous Indonesians rose. This was partly done for budgetary reasons; Indonesian staff were paid less. But whatever the reason, many thousands of Indonesians had by the late 1930s been brought into the world of public administration. Some went on to occupy senior posts in the bureaucracy after 1949. The 1930 data also showed that indigenous workers were a majority in commerce and trade, although these were the occupations where most of the Chinese were engaged, and there was often direct competition between the two ethnic groups. Wertheim used the evidence from the 1930 census, and earlier surveys, to take issue with Kahin (1952: 124–5) who argued that a class of indigenous business people never really emerged in the late colonial era, mainly because of increased Chinese competition. Wertheim (1956: 125) considered that the evidence pointed to the emergence of an 'incipient native middle class', which broke through the 'old traditional order of society' and was beginning to exert a more individualistic influence on the behaviour of at least a minority of indigenous Indonesians.

But as more Indonesians moved into the world of trade and commerce, as well as into the public sector, resentment against both European and Chinese dominance of the non-agricultural economy grew. Movements such as *Sarekat Islam*, which was dominated by Moslem traders, assumed a strong anti-Chinese orientation. *Sarekat Islam* was important in the early phase of the independence movement, which became, from its inception, hostile to 'foreign Asians' and especially the Chinese. Reid (2010: 61) has argued that the anti-Chinese orientation of the nationalist movement in Indonesia could be contrasted with the situation in the Philippines, where the nationalist movement began earlier, and embraced many Filipinos of mixed Spanish and Chinese descent. The fact that so few Chinese were Moslems caused further divisions in the non-agricultural economy which persisted after 1949.

A colonial balance sheet

Drawing up a balance sheet for the colonial era in Indonesia is no easier than for many other former colonies, and debates continue over the costs and benefits of Dutch policies. On the benefit side, Dutch engineers undeniably provided modern infrastructure both in Java and in some regions outside Java, although most regions of Kalimantan and the eastern islands were neglected. In Java, infrastructure development, including roads, railways and irrigation, proceeded further than in most other parts of colonial Asia (Table 2.5). Length of roads relative to area was higher than in any other Asian colony, including Taiwan and Korea. Irrigation development in Java was also more advanced than in most other parts of colonial Asia. By the early twentieth century, administrative structures reached deep into indigenous society in Java, and these structures survived largely intact after independence. Their purpose was partly to control the indigenous population, but increasingly after 1900, the various layers of regional and local government assumed responsibility for service delivery as well. Java also benefited from the development of government credit systems, including the district and village banks and the pawnshops; their influence on post-colonial credit policies will be examined in more detail in Chapter 7.[7]

Outside Java, the Dutch made greater use of local traditional rulers to maintain law and order and to ensure that Dutch and other foreign companies obtained access to land for the development of mines and estates. After independence some of these local rulers were viewed as little more than tools of the Dutch and were removed from power. In Aceh and North Sumatra, the post-1945 attacks on the old aristocratic elites led to considerable violence. But elsewhere, especially in Eastern Indonesia, the old elites remained powerful players in post-independence regional and

[7] The credit system developed rapidly after 1910, and attracted studies by several foreign experts including Henry (1926) and Furnivall (1934a, 1934b). More recent evaluations have been less positive; see Alexander and Alexander (1991), Boomgaard (1993) and Cribb (1993).

Table 2.5 *Infrastructure endowments, late 1930s*

Country/year	Roads (km per thousand km^2)	Railways (km per thousand km^2)	Electricity* (installed capacity)
Taiwan (1937)	94.4	43.3**	38.32
Korea (1940)	107.2	25.7	29.05
Manchuria (1938)	35.6	7.0	NA
Philippines (1939)	70.5	4.5	4.76
Indonesia (1940)	27.7	3.9	2.97
Java	171.9	40.5	3.01
Outer Islands	17.0	1.1	2.86
Indochina (1936)	38.8	3.9	3.82
British Malaya (1938)	100.1	12.5	36.06
Burma (1938)	45.2	3.4	3.69

* Data refer to installed capacity in kilowatts per 1,000 population for the following years: 1938 (Philippines), 1937 (British Malaya) and 1940 (Indonesia, Korea and Taiwan). For Burma the data refer to the capacity of the large plants with an estimate for smaller plants.
** Data exclude 2,098 km of special track for the transport of sugar.
Sources: Philippines: Bureau of Census and Statistics (1947: 279, 304–7); Indonesia: CBS (1947: 56, 97); Indochina: Robequain (1944: 94–7, 285); British Malaya: Department of Statistics (1939); Burma: Andrus (1948: 226, 237); Korea: Kim et al. (2008: 488, 608); Taiwan: Grajdanzev (1942: 118–19); Barclay (1954: 42); Manchuria: MYB (1941: 575, 595).

local governments. For the most part they lacked either the knowledge or the financial resources, or the inclination, to develop modern infrastructure, or services including education and health care. Some education and health care was provided by Christian missions in some regions outside Java, but elsewhere such services were neglected.

The land tax system, and with it the development of land cadastres and individual property rights in land, was extended from Java to Bali and Lombok and a small part of South Sulawesi in the early twentieth century, but not to Sumatra, Kalimantan or Eastern Indonesia. Recent scholarship has viewed the development of secure individual property rights as a pre-condition for accelerated economic growth, although the rapid growth of smallholder agricultural production often took place in those regions where traditional tenure systems were in place. These seemed to have functioned quite well, especially for tree crops, which take some years to mature. Smallholder producers of tree crops such as rubber, coffee and pepper would not have made considerable outlays in terms of both time and money if they had not thought that their rights to the income from the mature trees were guaranteed by local laws and customs.

By the 1920s, many millions of Indonesians, both in Java and elsewhere, were working in the monetised economy, either as producers of agricultural products and manufactures for sale, or as wage workers or as traders. Lack of infrastructure, formal credit or individual land rights did not prevent the rapid growth of smallholder production of export crops, especially rubber, in both Sumatra and Kalimantan. Marketing networks developed to get rubber to coastal ports, to the Singapore entrepot, and ultimately to destinations in the USA and Europe. Although these networks were often dominated by Chinese traders, indigenous Indonesians were also involved in large numbers.[8] To some observers, both Dutch and foreign, this diversification of the indigenous economy seemed to vindicate the original aims of the ethical policy.

But others were disappointed with the results of the ethical policy, and argued for a change in the direction of policy. Probably the best-known critique was that of Boeke (1927: 296) who argued that 'the population of Java has reacted to all these welfare policies in only one clear way: by growing like a flash flood'. Boeke and other Dutch officials were aware that population growth in the Netherlands had been quite rapid through much of the nineteenth century; fertility rates had remained quite high although mortality had fallen. But by the early twentieth century, fertility in the Netherlands, as in other parts of northern Europe, was falling. But this did not seem to be the case in Indonesia. Modern demographers would argue that one reason for the persistence of high fertility was the high infant and child mortality in many parts of the country. Some Dutch officials might have agreed with this but Boeke (1927: 298) argued that what was needed was a new development strategy which moved away from 'welfare socialism' and encouraged differentiation in native society by 'concerning itself with the vigorous, energetic, advanced elements'.

As Wertheim (1964: 265) later suggested, this was a policy of betting on the strong, which in fact some colonial agencies had already adopted by the latter part of the 1920s. Wertheim considered that the rural development policies, including the credit system, which were implemented in the final decades of Dutch rule in Indonesia effectively reached only the top 10 per cent of the rural population. This was also the case with education policies. Here the achievements of the Dutch were modest, especially when compared with the Americans in the Philippines. As late as 1940, only a small number of indigenous Indonesian children were able to progress beyond a few years in a rural school which taught a limited number of subjects in a vernacular language.

[8] Thomas and Panglaykim (1976) analyse the development of rubber marketing networks in South Sumatra and discuss the reasons for Chinese dominance.

Very few Indonesian children managed to secure places in the Dutch-language schools. In 1939/1940, 47,282 students were enrolled in the European elementary schools, of whom 5,150 were indigenous Indonesians and a further 1,281 foreign orientals. The proportion of non-Europeans in the European schools had in fact been falling since the peak in 1920 when 20 per cent of enrolments were non-Europeans. Chinese children were able to gain a Dutch-language education in the Dutch-Chinese schools of which there were several hundred. In 1939/1940 these schools enrolled almost 25,500 pupils most of whom were ethnic Chinese although there were small numbers of students from other ethnic groups (Govaars 2005: 257). Govaars (2005: 91) estimated that very few Chinese or native children were able to progress to the academic-track secondary schools. Even if they had wanted to continue their studies, places in the academic-track secondary system were limited, and many parents were unable to afford the fees. A small change in a family's financial position often meant the end of a child's school career (Booth 1998: 272–3).

Given that many subsequent scholars have equated colonial exploitation with distortion of markets, to what extent did the final decades of the Dutch era lead to freer markets? Although the policy changes of the 1870s were intended to end forced cultivation of crops, and usher in an era of free markets, the reality was rather different. In Java, smallholders had little option but to rent their rice land to the sugar estates, regardless of whether or not they had more profitable alternative uses. While taxation in labour and kind did end in some parts of the country, it was still in use in parts of the outer islands until well into the twentieth century. In Java a range of cash taxes fell on the indigenous population, which pushed them further into either the wage labour market or other cash-earning activities. These imposts might have been tolerated if indigenous Indonesians were able to see benefits from increased expenditures on agricultural development, credit facilities and other services including health and education. But the trickle-down effect was for many very limited, especially for those owning little or no land.

There was also the vexed issue of large private sector remittances, which in the eyes of many nationalists resulted from the fact that foreign companies were exploiting Indonesia's resources and remitting most of the profits, with little benefit accruing to the indigenous populations. While it was probably true that many Dutch and other foreign businesses operating in Indonesia did not make large profits, some certainly did. Royal Dutch Shell, formed in 1907 as a result of a merger between a Dutch and a British oil firm, was very profitable, and was able to use profits from Indonesia to finance its expansion to other parts of the world (van Zanden and Marks 2012: 87).[9] In their defence, Dutch investors argued that they brought new technologies and management expertise to the country and took risks in developing new commodities for world markets. Their profits were thus a fair commercial return. Most nationalists in Indonesia in the colonial era did not agree with this argument, and the resentment against foreign exploitation carried over into the independence era.

[9] Henri Deterding, the CEO of Royal Dutch Shell used his considerable influence in the Netherlands to lower taxes which he considered detrimental to Shell's profitability in Indonesia (Van Zanden and Marks 2012: 127).