

Gains from foreign investment for indigenous society in North Sumatra, 1860-1960

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Paper prepared for the XVIIth World Economic History Congress, Kyoto, 3-7 August
2015

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Introduction

'Is it too much to say that because of all this, the last decade has been one of extraordinary growth and progress in every field?' In 1917 the Governor of North Sumatra¹ S. van der Plas in his *Memorie van Overgave*² celebrated the economic development of North Sumatra in the past decade. He mentions the expansion of the road and railway network, the establishment of rubber and tea estates next to the existing order of tobacco plantations, cosmopolitanism in thriving Medan and a spectacular population growth from half a million people in 1905 to almost one million in 1917, largely due to the influx of plantation labourers from China and Java.³ These developments took place in North Sumatra largely as a result of European and American investment in estate agriculture. Yet, by ascribing this progress in 'every field' Van der Plas in his enthusiasm glanced over one issue that further on in his report is referred to as 'lamentable': the position of the local indigenous population. In his eyes their condition contrasted sharply with the prosperity of the estates and the Chinese tradesmen.⁴ The Governor was not talking about the coolie labourers, the fate of whom has been the subject of an intense discussion among historians as mentioned above. He referred to the indigenous population living in the areas surrounding the plantations, people who not seemed to be partaking in the booming development of the region. To what extent was this observation accurate? Were there no trickle-down effects from the estates to indigenous society? To which extent did foreign investment indeed contribute to indigenous economic development, and in what ways?

The question of how Indonesian indigenous society was influenced by capitalism during the colonial period, or more specifically by foreign capitalism can be placed in a broader international discourse on colonialism. This discourse focuses on the contribution by

¹ Or East Coast of Sumatra as it was then labeled.

² Reports of succession were composed by parting Governors or Residents to inform their successors about geographic, economic, social and political matters in their residency.

³ S. van der Plas (Governor), 'Memorie van Overgave van het gouvernement Oostkust van Sumatra', 1917, pp. 4-7, in: Nationaal Archief (NA) Den Haag, Ministerie van Koloniën: Memories van Overgave, 2.10.39, no. 184.

⁴ S. van der Plas (Governor), 'Memorie van Overgave van het gouvernement Oostkust van Sumatra', 1917, pp. 117-119, in: Nationaal Archief (NA) Den Haag, Ministerie van Koloniën: Memories van Overgave, 2.10.39, no. 184.

foreign investment to economic development in overseas possessions, or the lack thereof.⁵ The economic impact of foreign investment in the form of large, Western export crop plantations on the indigenous population of North Sumatra has been discussed in two academic publications that deserve close attention.⁶ Thee Kian Wie in his dissertation assessed the economic consequences of the plantations by looking at the market demand for foodstuffs and simple consumer goods generated by the plantations and the development of skills of unskilled plantation workers. Touwen assessed the growth effects of the economic activities of foreign investment on the surrounding indigenous economy in the Outer Islands. He distinguishes between two types of growth effects of the European export industry in the Netherlands Indies: backward linkages and forward linkages, the former generated by a leading-sector industry using input from other industries, whereas the latter evolve as other industries use the output of the leading-sector industry. In the case of North Sumatra he distinguishes four major effects of estate companies on the local economy:

- a. demand effects created by the estates,
- b. infrastructural development in the region,
- c. the economic role of ex-coolies who did not return to their home country,
- d. scarcity of land for indigenous smallholders.⁷

Drawing on the ideas of these authors I will make an assessment of the influence of the large-scale plantation industry on the indigenous society in North Sumatra. Using quantitative and qualitative data from the archives of the employers' organization of the rubber industry the *Algemene Vereeniging van Rubberplanters ter Oostkust van Sumatra* (General Association of Rubberplanters in East Sumatra, AVRROS) at the National Archives of Indonesia in Jakarta and those of the employers' organization for tobacco producers the *Deli Planters Vereeniging* (Deli Planters' Association, DPV) and the *Deli*

⁵ For a recent examples see: E. Frankema & F. Buelens (eds.), *Colonial Exploitation and Economic Development: Belgian Congo and the Netherlands Indies Compared* (London: Routledge, 2013), and Anne Booth, *Colonial legacies: Economic and social development in East and Southeast Asia* (Honolulu: University of Hawaii Press, 2007).

⁶ For a title from the older literature see: Jacobus de Ridder, *De invloed van de westersche cultures op de autochtone bevolking ter oostkust van Sumatra* (Wageningen: Veenman, 1935).

⁷ J. Touwen, *Extremes in the archipelago: Trade and economic development in the Outer Islands of Indonesia, 1900-1942* (KITLV Press: Leiden, 2001) 125.

Maatschappij (Deli Company) at the National Archives of the Netherlands in The Hague, I will focus on backward linkages of the tobacco and rubber industry. Topics of special interest are the final demand linkages generated in North Sumatra by members of the DPV and AVROS, one little known infrastructural backward linkage of the Deli Company and education and training provided to the indigenous population as well as their promotion to managerial functions, a backward linkage that so far has not been discussed in the literature in detail.

Local demand repercussions of tobacco and rubber plantations in North Sumatra

In 1928 the Governor of North Sumatra C.J. van Kempen referred to what he called ‘a purely demagogic attack, from the socialist camp, on the plantations at Sumatra’s East Coast in general, and the tobacco plantations in particular’⁸, published in a local newspaper in 1925. In his reaction to this newspaper article he took it upon himself to justify the presence and activities of the tobacco estates. The first point of criticism in the article was that the estates occupied an excessive area of land that would be of more use to indigenous society if planted with food crops. Mentioning the value of the tobacco harvest of recent years, around 70 million guilders, Van Kempen replied that it would be an ‘economic crime’ with severe repercussions for the national treasury, and indirectly for education and health care for the indigenous population, to use the area for anything but tobacco. The second point was that the tobacco estates brought too little money into circulation in North Sumatra, due to low wages and the fact that bonuses were hoarded or spent on imports of luxury goods. Van Kempen noted that the 71 tobacco companies spent around 18 million guilders each year on coolie wages, and procured foodstuffs locally, as well as materials for the construction of sheds and houses and foodstuffs. To this amount he added the salaries of European plantation personnel. The total amounted to 3.5 million guilders and was largely spent locally. According to Van Kempen, a large part of the yearly bonuses of 3 to 4 million guilders was spent locally, too. The total sum came to almost 26 million guilders that ended up in indigenous society, which in the words of Van Kempen, ‘speaks for itself’. Connected to the second point of criticism was the accusation that tobacco companies made too much profit. The resident reluctantly admitted that profits were high, with an average dividend rate of 8 per cent, but it was

⁸ *‘Een zuiveren demagogischen aanval uit het socialistische kamp op de cultures ter Oostkust in het algemeen, en de tabakscultuur in het bijzonder’.*

wrong to speak of unsustainable returns to investors.⁹

Governor Van Kempen presumably got his statistics from a book published in 1925 by the *Deli Planters Vereeniging* (Deli Planters' Association, DPV) and presented to the Governor-General D. Fock on the occasion of his visit to North Sumatra. Noting that tobacco companies in Deli were often reproached for extracting huge profits from the country, profits of which only little remained in Deli, the DPV provided the following breakdown of payments to indigenous society:

Coolie salaries	17,000,000
Atap	1,500,000
Supply of foodstuff and transport	925,000
Lacing up of tobacco leafs	500,000
Caterpillar collecting	500,000
Clerks	150,000
Light wood	100,000
Bamboo	100,000
<hr/> Total	<hr/> 20,775,000

To this total of almost 21 million guilders were added salaries and bonuses of European plantation personnel which the Governor claimed were spent almost entirely in Deli.¹⁰ The DPV also made another calculation of money spent in North Sumatra by the tobacco estates. The total cost price of the profits made by the 71 companies that were members of the DPV amounted to roughly 42.6 million guilders, based on an average cost price of 600,000 per company. The DPV noted that remaining profits were transferred to

⁹ C.J. van Kempen (Resident), 'Memorie van Overgave van het gouvernement Oostkust van Sumatra', 1928, 107-123, in: Nationaal Archief, Den Haag, Ministerie van Koloniën: Memories van Overgave, 2.10.39, no. 186.

¹⁰ From novels such as Székely-Lulofs' *Rubber* we learn however that one of the advantages of being a planter in Deli was that one could retire early to the Netherlands given the accumulation of bonuses.

stockholders overseas, but often returned to Deli in the form of new investments.¹¹

While there was an abundance of fertile land on offer in Deli, labourers to work that land were hard to come by locally. The area was thinly populated and the indigenous Batak and Malay population was not keen to work on the estates. The estate companies had to look elsewhere for manpower. In the late nineteenth and early twentieth century, workers were recruited from the Straits Settlements and China. Later it was realized that it was cheaper to import workers from Java. Staff personnel, however, was recruited almost exclusively from Europe. The import of large numbers of labourers from far away brought high costs for the planters, costs that had to be compensated for. A solution was offered by the government when it issued the 'Coolie Ordinance' for the Outer Islands in 1880, strikingly shortly after having abolished such legislation in Java. Up until 1931 labour relations in North Sumatra fell under this regulation, including the infamous Penal Sanction that punished a breach of contract by coolies with imprisonment, fines and/or forced labour above and beyond the initial contract that commonly had a duration of three years.¹² Labour conditions at private European enterprises in Deli acquired a notoriously bad reputation for harsh punishment, widespread violence and a ruthless exploitation of cheap coolie labour.¹³ It cannot be ignored that among the foundations of the plantation system were deep human suffering, indignity and compulsion, but at the same time it provided stable incomes for hundreds of thousands labourers from poor Javanese and South Chinese backgrounds, who often chose to remain in North Sumatra as free men after their contracts expired.¹⁴

The group of labour immigrants constituted a large part of the total population at around 220,000 in the year Van der Plas wrote his report. Considering the spending of

¹¹ Deli Planters Vereeniging, *Het Tabaksgebied ter Oostkust van Sumatra in woord en beeld* (1925) 41, 45.

¹² Stoler, *Capitalism and confrontation in Sumatra's plantation belt, 1870-1979*, 25-28.

¹³ For a full discussion of conditions of coolie labour at Western enterprises in colonial Indonesia, see Jan Breman, *Koelies, planters en koloniale politiek. Het arbeidsregime op de grootlandbouwondernemingen aan Sumatra's Oostkust in het begin van de twintigste eeuw* (Dordrecht/Providence, RI: Foris, 1987) [translated as *Taming the coolie beast. Plantation society and the colonial order in Southeast Asia* (Delhi: Oxford University Press, 1989)]. See also: Vincent J.H. Houben, J. Thomas Lindblad *et al.*, *Coolie labour in colonial Indonesia. A study of labour relations in the Outer Islands, c. 1900-1940* (Wiesbaden: Harrassowitz, 1999).

¹⁴ William Joseph O'Malley, *Indonesia in the great depression: A study of East Sumatra and Jogjakarta in the 1930's* (Cornell University, PhD dissertation., 1977) 113.

this large group of people and the demand of the plantations for food stuffs and construction materials, one would expect 'final demand linkages'¹⁵ at the estates to be substantial. However, Thee argues that due to the 'cheap labour policy' that was pursued by the DPV and AVROS it is unlikely that significant demand repercussions materialized in North Sumatra.¹⁶ It is indeed striking to see that from 1913 to 1940 wages roughly remained the same for male labourers or even decreased for female labourers (table 1).

Table 1. Average daily wages of Indonesian plantation workers in North Sumatra's tobacco plantations for selected years over the period 1913-1940 (guilders cents per day)

Year	Daily money wage		Expenses for food		Expenses for housing		Expenses for medical treatment		Total Wage	
	male	female	male	female	male	female	male	female	male	female
1913	43	33	1	1	4	4	5	5	53	43
1920	54	42	29	29	6	6	9	9	98	86
1925	52	42	2	2	3	3	5	5	62	52
1930	57.50	44	1	1	5	5	4	4	67.50	54
1935	49.13	29.65	.07	.07	2.47	2.47	3.34	3.34	55.01	35.53
1940	52.14	29.42	.39	.39	1.88	1.88	3.22	3.22	57.63	34.91

Source: Thee, *Plantation agriculture and export growth*, 99.

Despite the exploitation of cheap labour, the total amount of money paid to labourers in North Sumatra formed a considerable sum. Over the period 1927-1936 labour wages paid by DPV members on average constituted 61 per cent of their total operation costs with an average total of 18.5 million guilders per year (table 2, appendix). The average share of wages in total operation costs of AVROS members over the period 1928-1937 was higher still at 74 per cent with an annual average of 24 million guilders (table 3,

¹⁵ Effects in income distribution and consumer demand, due to input by an industry of primary production factors. Thee Kian Wie, *Plantation agriculture and export growth: An economic history of East Sumatra, 1863-1942* (Jakarta: Indonesian Institute of Sciences (LIPI), 1977) 50.

¹⁶ *Idem*, 96-102.

appendix).¹⁷ Furthermore, that there was indeed a significant demand for foodstuffs and simple consumption goods such as textile products and cigarettes is shown by the relatively high per capita import figures of East Sumatra.¹⁸

Why was the food shortage in North Sumatra after the influx of large numbers of Chinese and Javanese labourers met by importing rice and not by local production? Thee argues that through unfettered granting of land concessions to plantations by local rulers, a land shortage was created for the autochthonous population of the plantation area.¹⁹ Governor Van der Plas wrote in 1917 that 'the oldest plantation areas now experience the drawback of the granting of land concessions on too large a scale', forming 'an almost unbroken complex of plantations'.²⁰ Although the land shortage partially may explain the high per capita import of rice, it does not offer a full explanation for the failure of North Sumatra to develop industries to meet local demand for simple consumer goods. Thee sees this failure as proof of weak demand repercussions²¹, although he subsequently acknowledges the relatively high per capita import figures for North Sumatra and the fact that demand for consumer goods was met through imports from foreign countries and Java.²² Touwen has shown that imports in North Sumatra were mostly foreign in origin, with imports from Java averaging less than 20 per cent until 1934; after that year the proportion rose to almost 30 per cent (table 4).

¹⁷ It has to be noted that the wage figures of the AVROS members include wages and bonuses of European personnel that was more likely to be spent on imported luxury products or to be remised overseas.

¹⁸ Thee, *Plantation agriculture and export growth*, 107.

¹⁹ *Idem*, 111.

²⁰ S. van der Plas (Governor), 'Memorie van Overgave van het gouvernement Oostkust van Sumatra', 1917, 253, in: Nationaal Archief (NA) Den Haag, Ministerie van Koloniën: Memories van Overgave, 2.10.39, no. 184.

²¹ Thee, *Plantation agriculture and export growth*, 102.

²² *Idem*, 107.

Table 4. Imports of East Sumatra by region, 1924-1938 (as a percentage and in millions of guilders)

1924/28			1929/33			1934/38		
Interreg. imports	Foreign imports	Total imports	Interreg. imports	Foreign imports	Total imports	Interreg. imports	Foreign imports	Total imports
(%)	(%)	(mill.)	(%)	(%)	(mill.)	(%)	(%)	(mill.)
13.9	86.1	105	19.1	80.9	89	30.8	69.2	61

Source: Touwen 2001, *Extremes in the archipelago*, 354.

Note: Interregional imports are imports from Java.

The expansion of exports of primary products from North Sumatra spurred the growth of final demand linkage industries not locally but in Java and abroad.²³ Touwen notes that import substitution through local industries failed to materialize because of the foreign character of the estates and the free trade regime. It was much cheaper to import technology from other regions than to produce it locally. Moreover, the government did not pursue protective policies to stimulate the development of import-substituting industries.²⁴ In this way, trade opportunities arising from final demand linkages from the plantations in North Sumatra were mostly seized by immigrants. Governor Van der Plas gives an illuminating overview of economic activities of different immigrant groups: imports and trade in consumer goods were dominated by the Chinese, construction work at the plantations was the domain of Banjarese from Southeast Kalimantan, Indians and Bengalis traded in livestock and milk, Chettyars from India provided high interest loans, Arabs and Bombayites traded in artifacts and Japanese were active as dentists, photographers, pharmacists and hotelkeepers. Japanese women 'everywhere found their way as prostitutes or as housekeeper at European households'.²⁵ Other than through the provision of transport services, deliveries of agricultural and forest

²³ *Idem*, 133.

²⁴ Touwen, *Extremes in the archipelago*, 159.

²⁵ S. van der Plas (Governor), 'Memorie van Overgave van het gouvernement Oostkust van Sumatra', 1917, p. 60-65, in: Nationaal Archief (NA) Den Haag, Ministerie van Koloniën: Memories van Overgave, 2.10.39, no. 184.

products to the plantations and nearby markets and the renting out of land the local population did not profit from final demand linkages generated by the estates.

A common explanation for the relative lack of economic impact of the plantations on the local economy in North Sumatra is the remittance of profits overseas, also known as the 'colonial drain'. Touwen notes that a large proportion of the factor inputs of the plantations was foreign and therefore a 'good proportion' of their earnings were remitted abroad.²⁶ However, if we look at the remittances of Chinese and Javanese labourers at member companies of the DPV, we see that in the period 1927-1934 they constituted only 0.8 per cent of total coolie wages on average (table 5).²⁷

Table 5. Remittances of DPV members' plantation labourers as a percentage of total wages, 1927-1936 (in thousands of guilders)

Year	Remittances	Total wages	Percentage of total wages
1927	229	26,444	0.9
1928	218	28,052	0.8
1929	234	29,376	0.8
1930	161	26,657	0.6
1931	162	21,384	0.8
1932	111	13,850	0.8
1933	73	10,359	0.7
1934	67	10,026	0.7

Source: DPV Annual Reports.

Unfortunately we lack data on remittances by European plantation staff. Nevertheless, it is safe to say that the largest part of plantation wages was spent in North Sumatra.

Governor Van der Plas also mentioned the drain of revenues in his *Memorie van*

²⁶ Touwen, *Extremes in the archipelago*, 126.

²⁷ This number concerns the remittances registered by the DPV. It is unknown how much money was remitted through informal channels.

Overgave, stating that 'it is regrettable that profits largely leave the land'.²⁸ But how substantial was this drain of profits compared to the millions that were spent in North Sumatra? We are able to roughly calculate the profits of the tobacco plantations in the period 1927-1936 and the rubber plantations in selected years in the period 1928-1938 in North Sumatra by subtracting operation costs (tables 3, appendix and 4, above) from the total yields of annual harvests in terms of volume and value (tables 6 and 7).

Table 6. Annual yields from DPV members' tobacco harvests, 1926-1936

Year	Packs of tobacco	Price in cents per ½ K.G.	Value in guilders
1927	223,264	231	80,500,000
1928	239,110	192	71,600,000
1929	242,065	135 ½	51,200,000
1930	211,137	109	35,900,000
1931	182,472	123	35,000,000
1932	140,839	122 ½	26,900,000
1933	133,571	137	28,600,000
1934	132,702	122 ½	25,500,000
1935	121,083	149 ½	30,600,000
1936	141,766	138	30,500,000

Source: DPV Annual Reports.

²⁸ S. van der Plas (Governor), 'Memorie van Overgave van het gouvernement Oostkust van Sumatra', 89-90.

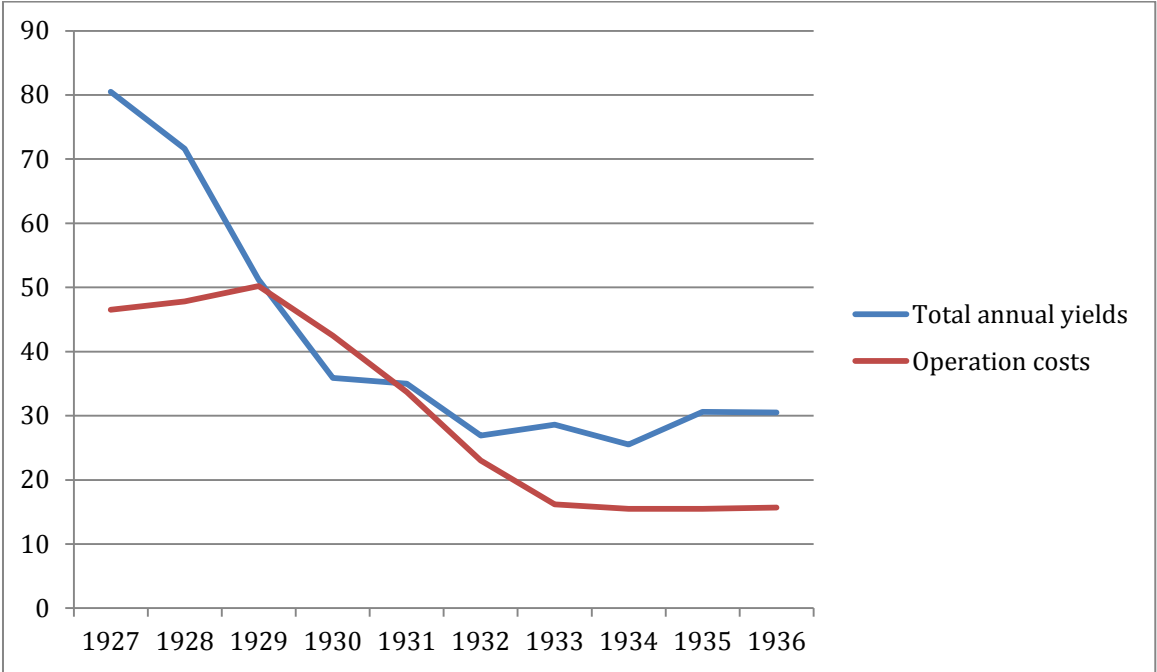
Table 7. Estate rubber exports from North Sumatra by value, 1927-1938 (in thousands of guilders)

1928	89,285
1930	55,571
1932	13,853
1934	25,857
1936	32,481
1938	36,277

Source: Touwen, *Extremes in the archipelago*, 372.

During the period 1927-1936 total earnings of DPV members' tobacco harvests was 489 million guilders, while total operation costs amounted to 307 million guilders. Total profits thus amounted to 182 million guilders while 63 per cent of total revenue was spent in North Sumatra. During the years 1928, 1930, 1932, 1934, 1936 and 1938 total yields of AVROS members' rubber harvests were valued at 253 million guilders. Total profits amounted to 61 million guilders while 76 per cent of total harvest earnings was spent in North Sumatra. Unfortunately, the time periods over which we can calculate total profits and the share of operation costs of total tobacco and rubber harvest earnings are for the greater part situated in the immediate post-crisis years and not fully representative for earlier years. Nevertheless, in the years 1927 and 1928 total operation costs of DPV members amounted to 62 per cent of total harvest earnings and in the year 1928 total operation costs of AVROS members amounted to 60 per cent of total revenues.

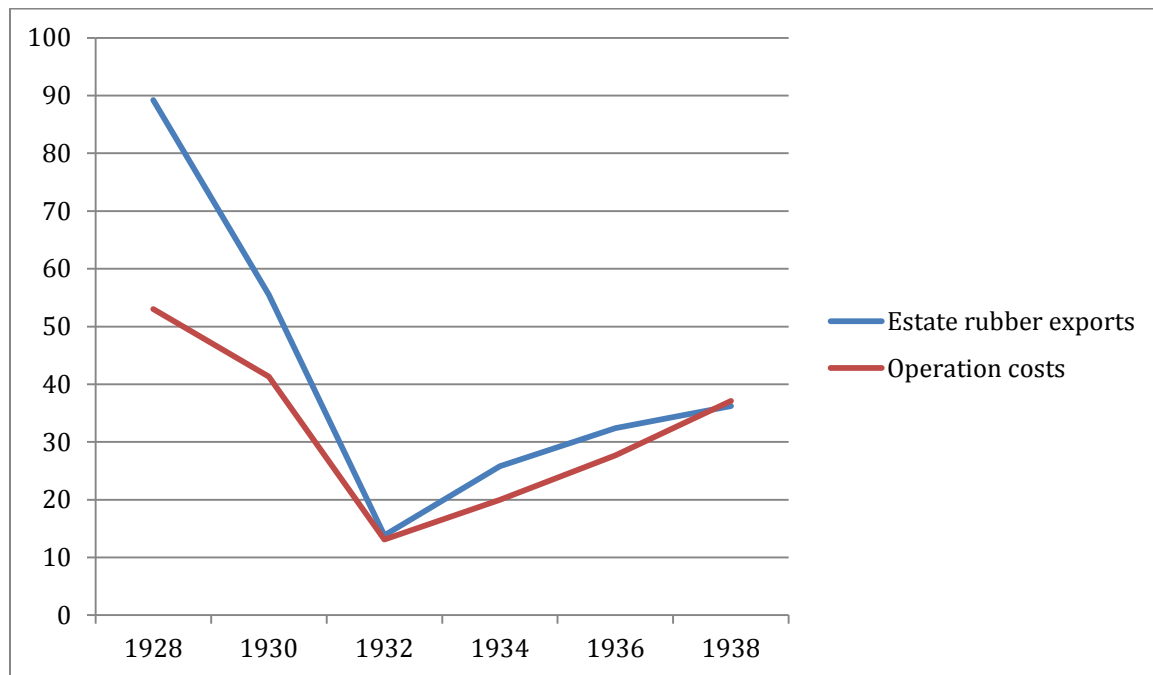
Figure 1. Total annual earnings and operation costs of DPV members (millions of guilders)



Source: DPV Annual Reports.

Considering the labour-intensive nature of the tobacco and rubber plantations it is likely that also in pre-crisis years substantial parts of total harvest yields commonly remained in North Sumatra. Profits were indeed largely remitted overseas, because without such returns to investors there would not be any foreign capital invested in North Sumatra to begin with. High dividend rates at tobacco companies during the early phase of the opening up of North Sumatra indicate that during these pioneering years profits were especially high (table 8).

Figure 2. Total value of estate rubber exports and AVROS members' operation costs
(millions of guilders)



Sources: Touwen, *Extremes in the archipelago*, 372; AVROS Annual Reports.

Although we lack statistics on profits that were reinvested in the colony, there are qualitative sources which indicate that such reinvestment was common. Van Kempen, for instance, notes that part of the profits was kept as a reserve for the expansion and improvement of the estates whereas a substantial part 'positively returned to the Indies as investment in other companies'. He cites the example of the fibre plantation Soemoet of the Kota Pinang Plantation Company, in which 3 million guilders of predominantly tobacco profits were invested.²⁹ Touwen refutes this suggestion by stating that 'much of the net gain from trade was not available for reinvestment in the colony'.³⁰

Infrastructure, education and Indonesianization

Next to conducting business with the aim of making profit, private firms in the Dutch colony on occasion took on traditional government tasks such as the development and maintenance of physical infrastructure and educational and health facilities. Such initiatives were often taken in the absence of government action. Whether altruistically

²⁹ C.J. van Kempen (Resident), 'Memorie van Overgave van het gouvernement Oostkust van Sumatra', 111.

³⁰ Touwen, *Extremes in the archipelago*, 55.

motivated or not, they potentially served needs of the general public outside the realm of the company. However, it needs to be noted that my aim is not to glorify such achievements, but rather to offset them against the gains accruing to the owners. The abuse and injustice mentioned earlier were not automatically mitigated by company contributions to local society. With this in mind, attention will now turn to initiatives by the Deli Company and plantation society in North Sumatra more in general in the fields of infrastructure, education and indonesianization of staff functions.

Infrastructural backward linkages

According to often nostalgic sources, the opening up of North Sumatra for large-scale estate agriculture dates back to 1863 when Jacob Nienhuys arrived in Deli. Nienhuys founded the Deli Company in 1870, which was to become one of the largest agricultural enterprises in colonial Indonesia. The development of North Sumatra was regarded as a crucial part of the pacification of the Outer Islands by the Dutch. Given a lack of funds, the colonial authorities decided to give 'an open field' to foreign investors to pursue their commercial interests in North Sumatra. Instrumental in this respect was the Agrarian Land Law of 1870, which allowed for long-term leases of large tracts of land up to 99 years.³¹ This became the starting-shot for Deli.

Development of the area in the pioneering days of the reclamation of North Sumatra's jungle for agricultural enterprise was almost entirely left to private capital. The cultivation of tobacco in the Deli plantation belt was set up in a thinly populated area with a poorly developed infrastructure. When the Deli Company started out in 1870, North Sumatra's rivers formed the main entrance to its fertile interior. Outrigger canoes, ox carts or carriers transported the tobacco to ports on the coast from where it was shipped to Penang in British Malaya for export. The common view in the literature is that in the absence of investment by the colonial authorities, the chief responsibility for developing the region's infrastructure rested with the estate companies.³² This is confirmed by Resident G. Schaap for much of the residency of North Sumatra, he claims that the sultans scarcely invested in the development of people and land. Yet he makes an exception for the sultans of Deli and Serdang. The Sultan of Deli provided 'important

³¹ Stoler, *Capitalism and confrontation in Sumatra's plantation belt, 1870-1979*, 15.

³² T. Volker, *Van oerbosch tot cultuurgebied. Een schets van de beteekenis van de tabak, de andere cultures en de industrie ter Oostkust van Sumatra* (Medan: DPV, 1928) 7, 21.

sums of money' for the construction of a road to the Karo Highlands and a water pipe for the Sibolangit plain. The sultan of Serdang provided funds for the irrigation of rice fields in the vicinity of Simpang Tiga.³³ Nevertheless, a very important part of the infrastructural development in North Sumatra was indeed privately funded. The Resident of North Sumatra mentions in a report from 1910 that the residency distinguished itself from other areas in the Netherlands-Indies by the 'firmness and *schwung* with which all things are handled here. Here not always that yearning for the public purse (...) If something has to be done they do it themselves.'³⁴ A prime example is the railway company *Deli Spoorweg-Maatschappij* (Deli Railway Company, DSM) and the railway network erected by the Deli Company. After its completion in 1937 the network covered 553 kilometers, with railway lines fanning out from Medan in all directions.³⁵ Apart from its main aim of serving the estates, the railway network gave a positive stimulus to the indigenous economy by providing better market access for local producers, thereby making a significant contribution to mobility in North Sumatra. In 1927, the company transported almost seven million passengers.³⁶

A less well-known example of infrastructural development by the Deli Company concerns the constructions of a water mains system. The company was praised for its initiative and the fact that its goal was not to turn the mains system into a profitable enterprise, but to 'to do the inhabitants of Medan a great service'. Before the placement of the mains system the only way for the people of Medan to obtain good and pure drinking water was by procuring artesian well water from Belawan that was delivered in tanks to Medan via the DSM railroads.³⁷ Although Resident Schaap correctly stated that the mains system was not being constructed for the pursuit of profit, it was not an entirely philanthropical deed either as we shall see.

³³ G. Schaap (resident), 'Memorie van Overgave van het bestuur over de residentie Oostkust van Sumatra', 1905, p. 61, in: Nationaal Archief (NA) Den Haag, Ministerie van Koloniën: Memories van Overgave, 2.10.39, no. 181.

³⁴ J. Ballot (resident), 'Memorie van Overgave van de residentie Oostkust van Sumatra', 1910, p. 68, in: Nationaal Archief (NA) Den Haag, Ministerie van Koloniën: Memories van Overgave, 2.10.39, no. 182.

³⁵ J. Weisfelt, *De Deli Spoorweg Maatschappij als factor in de economische ontwikkeling van de Oostkust van Sumatra* (Rotterdam: Bronder-Offset, 1972) 44-62.

³⁶ Touwen, *Extremes in the archipelago*, 154-155.

³⁷ G. Schaap (resident), 'Memorie van Overgave van het bestuur over de residentie Oostkust van Sumatra', 49.

Shortly after 1900, the Deli Company had commissioned a medical doctor, H. Dürk from Munich, to study tropical diseases, especially beriberi. In the event, Dürk identified dysentery as the largest health problem at the estates, claiming far more coolie lives than beriberi, which constituted a major loss to the Deli Company. To combat the spread of dysentery he recommended the construction of a mains system for the supply of fresh drinking-water from the springs at Rumah Sumbul, a small village to the south of Medan. The need for fresh water supply had already been recognized by management at the Deli Company, but initially it proved difficult to raise necessary funds for the establishment of a water company. Indeed, before the Deli Company the Sultan of Deli had considered the construction of a mains system in Medan, only to be deterred by the high costs of the project.³⁸ Although the Deli Company considered the construction and exploitation of a mains system for fresh water supply to be a government task, the firm decided to resolve the water problem by using its own resources.

In 1905 the concession was granted to the newly established firm Ajer Beresih (literally 'Clean Water') for the construction and exploitation of a high-pressure water pipe to supply Medan and four adjacent tobacco estates, including three owned by the Deli Company (the estates 'Deli Toewa', 'Mariëndaal' and 'Polonia'). The prospected water pipe would measure 38 kilometers running from the springs at Rumah Sumbul to the water tower in downtown Medan. A condition for granting this concession was that the water company provided 130 cubic meters of water per day to the Medan public free of charge through ten hydrants, five public drinking fountains and three public baths. Ajer Beresih was supposed to serve a total of 14,227 people in Medan. The connected tobacco estates each counted a population of about 1,000 persons. Delivery of water by Ajer Beresih expanded commensurately with the growth of population at Medan. In 1907, 283 parcels had been connected to the mains, a number which by 1930 was to reach 4,521.³⁹ Apart from the private parcels attached to the system, fresh water was also delivered to the inhabitants of Medan at 64 public hydrants. In this respect, Medan fared far better than cities of similar size, for instance Macassar in Sulawesi or Malang in East Java, where the colonial authorities assumed responsibility for the water supply. In 1930 Macassar and Malang both had a larger population than Medan, 86,000 people against

³⁸ *Idem*, 50.

³⁹ NA: Deli Maatschappij, no. 235, Annual Report Ajer Beresih 1905.

75,000. Numbers of private parcels connected to the water system were 3,938 in Malang and 2,277 in Macassar. Both cities had fewer public hydrants than Medan.⁴⁰

Both the DSM railway network and the water mains system represent infrastructural backward linkages of the tobacco industry that were intended to serve company needs, but turned out to be of benefit to the indigenous population of North Sumatra as well.

Education at the plantations

Prior to the launch of the Ethical Policy in 1901, the Dutch colonial government showed little interest in educating the indigenous population of the Netherlands Indies. An increased emphasis on education in the framework of the Ethical Policy brought some improvement, but the overall record of colonial education with regard to indigenous subjects remained in a pitiful state, which was most glaringly reflected in extremely low rates of literacy as stated in the population censuses of 1920 and 1930. The low investment in education during the late-colonial era was branded as an important 'missed opportunity' by the economic historian Anne Booth.⁴¹

During the initial years of the Ethical Policy, estate owners in the Deli plantation belt took up the challenge of educating the children of their massive labour force (Appendix V). But the momentum did not last long. The first report of the Labour Inspectorate concerns 1913 and describes the condition of the estate schools as one of stagnation. The interest of the employers in the provision of education had faded after noticing that children who learned to read and write tended to leave the estate in search of better employment.⁴² Nevertheless, from 1916 onwards, estates in Deli revived their initiatives to create educational facilities for the children of their indigenous workers. The impetus came not from within planter society but rather from the governor of North Sumatra, who convinced the planters that the estates constituted separate societies of their own for which the planters had to shoulder responsibilities such as the provision of primary

⁴⁰ *Statistical abstract for the Netherlands Indies 1930* (Weltevreden: Centraal Kantoor voor de Statistiek, 1931).

⁴¹ Anne Booth, *The Indonesian economy in the nineteenth and twentieth centuries. A history of missed opportunities* (London: Macmillan, 1998) 268-270, 289.

⁴² *Verlag van den dienst der Arbeidsinspectie en Koeliewerving in Nederlandsch-Indië 1911/13* (Weltevreden: Albrecht & Co., 1914) I, 85.

education.⁴³ The curriculum at the estate schools was offered in Malay or Javanese and similar to that of the three-year *volkschool* (village school), which prepared pupils for the *tweede klasse* (second-class) schools in the towns. The Deli Company started out with Malay as language of instruction, but later, in the 1930s, provided education also in Javanese.⁴⁴

Almost ten years after the Governor's initiative, the Deli Company had established a total of 27 schools on its estates, providing education to 1,389 pupils. By 1938 the number of pupils had risen to 2,290. The estate schools were not the only educational option for children of coolies: many among them were educated at village schools in the vicinity of the estates. However, reports indicated that only 3,300 out of a total of 50,000 estate children in the Medan and Binjai districts received education at either an estate or a village school. Furthermore, in the early 1920s, regular education at the estate schools was allegedly impeded by utilization of children for collecting caterpillars or working in the sheds of the estate.⁴⁵ Nevertheless, in 1930 the share of primary school children in total population in the estate area of North Sumatra was 5 per cent, considerably higher than in the Outer Islands as a whole (1.9 per cent).⁴⁶ Next to offering primary education, the Deli Company also ran a vocational school at its Belawan estate during a short period. The school was closed for financial reasons between 1929 and 1933. In total, 88 carpenters received their diplomas at this school.⁴⁷ The numbers above show that although children in the plantation belt of North Sumatra were more likely to receive primary education than children from other parts of the Outer Islands, the share of schoolgoing kids in the total child population at the plantations was still very low at 7 per cent.

⁴³ S. van der Plas (Governor), 'Memorie van Overgave van het gouvernement Oostkust van Sumatra', 128-129; Paul W. van der Veur, 'Education and social change in Indonesia (I)', Papers in International Studies Southeast Asia Series No. 12 (1969) 7.

⁴⁴ At first, the Senembah tobacco company was the sole employer in East Sumatra to provide elementary education in the Javanese language in the expectation that coolie children proficient in Malay might develop intellectual aspirations and regard plantation work as beneath their dignity. Deli Planters Vereeniging, *Jaarverslag 1923* (Medan: DPV, 1924).

⁴⁵ *Verslag van den dienst der Arbeidsinspectie 1921/22* (Weltevreden: Kolff, 1923) 24.

⁴⁶ Deli Planters Vereniging, *Jaarverslag 1930* (Medan: DPV, 1931); *Statistical abstract 1930*.

⁴⁷ *Gedenkschrift aangeboden aan den heer Herbert Cremer, directeur N.V. Deli-Maatschappij* (Amsterdam: De Bussy, 1941) 123.

Hierarchical labour divisions

A defining feature of plantation society was the rigid hierarchical division based on race. Europeans occupied the positions of administrator and assistant and directed the Javanese and Chinese foremen and workers. The labour force of a typical Deli plantation generally comprised one administrator and a few assistants who were in charge of a small group of Asian overseers and a large group of hundreds of labourers. Although we lack quantitative information on the amount of Indonesians in staff functions at European estates before Indonesian independence, qualitative sources provide clues that this number must have been negligible. J.H. Marinus, founder and director of the Netherlands-Indies Land Syndicate from 1910 until 1927, writes about labour relations in Deli in his memoirs. Boasting a long and solid career as a Deli planter starting in 1886, he claims that plantation society 'prided itself on its white skin, and its European style'. As such, there was no place for Asians in the management of the plantations and even not for Indo-Europeans, who had 'generally speaking no chance of succeeding at the estates', some of which would not hire staff personnel of mixed-blood in the first place.⁴⁸ Statements like these and images of plantation society as painted in novels⁴⁹ seem to confirm suggestions in the literature that racial prejudice also played a role in the maintenance of a 'color bar' at the Deli plantations and in the Dutch reluctance to promote Indonesians into staff functions after Indonesian independence.⁵⁰ Thee Kian Wie offers an alternative explanation: the division of race within North Sumatra's plantation labour force simply tended to coincide with the distinction between skilled and unskilled personnel.⁵¹

Indonesianization⁵² and its implementation in Sumatra's plantation belt

On 27 December 1949, sovereignty was transferred from the Netherlands to Indonesia after a prolonged military and diplomatic struggle, culminating in the Round Table

⁴⁸ J.H. Marinus, *Veertig jaren ervaring in de Deli-Cultures* (Amsterdam: J.H. De Bussy, 1929) 47.

⁴⁹ Lily Clerkx, *Mensen in Deli: een maatschappijbeeld uit de belletrise* (Amsterdam: AZAO, University of Amsterdam, 1960).

⁵⁰ Jasper van de Kerkhof, 'Dutch enterprise in independent Indonesia: cooperation and confrontation, 1949-1958', *IIS Newsletter* 36 (2005) 18.

⁵¹ Thee Kian Wie, *Plantation agriculture and export growth*, 86.

⁵² Sutter defines the concept as: 'a conscious effort to increase the participation and elevate the role of the Indonesian – and more particularly, the "indigenous Indonesian" – in the more complex sectors of the economy'. See: John O. Sutter, *Indonesianisasi; A historical survey of the role of politics in the institutions of a changing economy from the Second World War to the eve of the general election, 1940-1955* (Ithaca, NY: Cornell University, 1959) 2.

Conference (RTC) Agreement of November 1949. Attached to the RTC was the Financial and Economic Agreement (Finec), which offered solid guarantees for continued operations by Dutch private companies in independent Indonesia, but also provisions less conducive to the smooth functioning of Dutch enterprise that could be invoked by Indonesia in order to further its wish to propel its economy from a colonial to a national one. Article 12(d) of Finec was one such provision, obligating Dutch employers to make efforts to include Indonesians in management and staff functions (including boards of directors) of the companies as soon as possible, so that after a 'reasonable time' the majority of the supervisory staff would consist of Indonesians.⁵³

During colonialism Indonesianization had obviously not been a requirement or aspiration for Western plantations in North Sumatra, it was in the early 1950s that plantation society began to realize that the transfer of sovereignty by the Netherlands to Indonesia constituted a radical break with the past. The new era demanded a change in personnel policy, especially for supervisory staff. Already in the beginning of 1949, representatives of the *Indische Ondernemersbond* (IOB) stressed the ambition of Indonesian employees to move up to staff positions at the Western estates.⁵⁴ The tradition of reserving all higher positions at the plantations for Europeans could no longer be continued. Furthermore, European staff personnel was required to get more familiar with the customs and traditions of the Indonesian people; from now on they would legally be foreigners. In a circular to the AVROS members in October 1950, acquiring a more profound knowledge of the Indonesian language was given top priority. A better command of the Indonesian language was required not only for an improved contact with labourers, but also for contact and negotiations with unions and the authorities.⁵⁵ Apparently little progress had been made in this respect since a manual with instructions for estate assistants on how to deal with coolies, published in 1913, that stressed the importance of mastering Malay.⁵⁶

⁵³ J. Thomas Lindblad, *Bridges to new business. The economic decolonization of Indonesia* (Leiden: KITLV Press, 2008) 73

⁵⁴ Arsip Nasional Republik Indonesia (National Archives of the Republic of Indonesia, ANRI), Jakarta: AVROS, no. 162, March 2, 1949.

⁵⁵ ANRI, AVROS, no. 162, October 10, 1950.

⁵⁶ C.J. Dixon, *De assistent in Deli. Practische opmerkingen met betrekking tot den omgang met koelies* (Amsterdam: J.H. De Bussy, 1913) 8-12.

After independence the Indonesian government remained unsatisfied with the progress in the implementation of article 12d of the Finec agreement by foreign companies. At some companies Indonesians made up 11 to 30 per cent of staff, yet they occupied the lower positions. In a letter to the IOB the Indonesian Minister of Trade and Industry Sumitro Djojohadikusumo in the Natsir cabinet specifies the implications of article 12d of the Finec. He suggests that after a period of 8-10 years at least 50 per cent of the board members and management of foreign companies should consist of Indonesians. Formulated almost a year after the conclusion of the Finec, the letter ends with the somewhat menacing message that the Indonesian government would 'prefer to leave the implementation of article 12d of the Finec agreement to the companies' initiatives, so that it can refrain from taking legislative measures in this respect.'⁵⁷

Consequently, the employers' organizations *Algemene Landbouw Syndicaat* (ALS), representing companies in Java and South Sumatra, the *Zuid- en West-Sumatra Syndicaat* (ZWSS) and AVROS held an inquiry among their members to determine the progress that had been made with *indonesianisasi* of their staff one year after the transfer of sovereignty. Of special interest were measures that companies had taken or were planning to take to elevate Indonesian employees to staff positions.⁵⁸ The five largest AVROS companies that replied were the *Rubber Cultuur Maatschappij Amsterdam* (RCMA), the *Société Financière des Caoutchoucs Medan* (SFCM), Harrisons & Crosfield (H&C), the *Hollandsch-Amerikaansche Plantage Maatschappij* (HAPM) and the *Société Internationale de Plantations et de Finance* (SIPEF, also known as the Anglo-Dutch Estates Agency). Their responses to the question of how many Indonesians formed part of their staff reveal that immediately after the transfer of sovereignty the number of Indonesian staff at the responding companies was negligible. After one year ostensibly some progress had been made, especially at H&C and RCMA, where the shares of Indonesians in higher positions jumped from respectively 3 to 20% and 4 to 14%. Overall the increase in Indonesian staff seemed promising, rising from 2.5 to 12% (table 9).

⁵⁷ ANRI, AVROS, no. 162, December 30, 1950.

⁵⁸ ANRI, AVROS, no. 162, March 5, 1951.

Table 9. Indonesian and European staff in several companies in Indonesia, 1950 and 1951

	Europeans		Indonesians	
	1 January 1950	1 January 1951	1 January 1950	1 January 1951
RCMA	139	160	6	22
SFCM	91	96	-	6
H&C	69	68	2	14
HAPM	64	73	2	5
SIPEF	32	36	-	4

Source: ANRI, AVROS, no. 162.

However, these numbers become less imposing when the classifications of staff functions at H&C and RCMA are accounted for. Of the 14 Indonesians that H&C classified as staff members per January 1951, none belonged to the categories of managerial or engineering staff, 4 were estate assistants and 10 were factory/field assistants. Out of the 22 Indonesians that were part of RCMA's staff, 20 occupied lower administrative positions, while the remaining two were classified as planters. Based on this sample, the members of the AVROS performed considerably worse than those of the other employers' organizations. The share of indigenous Indonesians in management positions at member companies of the ALS was 11% in 1950. At 41% their share in positions above the rank of overseer within ALS member companies was even more impressive. At the companies represented by the *Algemeen Syndicaat van Suikerfabrikanten in Indië* (ASSI) Indonesians made up 24.6% of the total staff.⁵⁹

Furthermore, none of these five companies had launched initiatives such as training programs to comply with article 12d of the Finec agreement. This underscores the general impression that European firms lacked commitment to *indonesianisasi*. Their most common defense against such allegations was that there were simply not enough

⁵⁹ ANRI, AVROS, no. 162, September 29, 1950.

sufficiently educated Indonesian candidates,⁶⁰ although there certainly was some truth to that argument considering the abysmal state of education for the indigenous population of Indonesia.

In the early independence period, the search for suitable Indonesian candidates for staff positions at European plantations in North Sumatra was hampered by the fact that the majority of graduates from the agrarian educational institutions opted for a career as a civil servant. In response to a letter from the British management agency Harrisons & Crosfield, the principal of the *Middelbare landbouwschool Buitenzorg van het Departement van Landbouw en Visserij* noted that of the 46 soon to graduate students 31 had already signed a contract with the Department of Agriculture and Fisheries.⁶¹

In the absence of initiatives by individual companies, the management of the ALS, the ZWSS and ASSI decided to establish crash courses for the training of Indonesian staff employees in early December 1950. This was not an initiative entirely of their own accord. Several months earlier the Indonesian chair of the *Jawatan Perkebunan* had already requested the cooperation of the employers' organizations with regard to the implementation of article 12d of the Finec agreement. The AVROS board replied that a crash course would not be sufficient for Indonesian students to be considered for staff positions at its member companies. The AVROS board argued that the considerably larger size of the AVROS' members justified higher educational requirements. It was regarded as necessary that Indonesian candidates continue their education in the Netherlands.⁶²

In order to placate the Indonesian authorities the chair of the AVROS sent a memorandum to the Indonesian Minister of Education, explaining the intention of the organization's members to admit young Indonesians into staff positions at its member companies. He noted two conditions that prospective candidates had to meet: an education equal to that enjoyed by European staff employees and an ability to adapt to and feel comfortable in the social environment prevailing at the estates. To attain both qualities, it was deemed necessary that Indonesian candidates in possession of a *Hogere*

⁶⁰ ANRI, AVROS, no. 162, January 11, 1951.

⁶¹ ANRI, AVROS, no. 162, January 6, 1950.

⁶² ANRI, AVROS, no. 162, June 23, 1950.

Burger School (H.B.S.) or similar diploma would continue their education in the Netherlands, for example at the *Deventerse Landbouwschool*. Besides the presumption that theoretical knowledge of graduates from the Indonesian agricultural education institutions would be insufficient for staff positions at European estate companies, it was expected that they lacked the *savoir-vivre* necessary for standing one's ground in the planters' society.⁶³ While ostensibly adhering to the official demands, the conviction behind the initiative may be doubted, as the memorandum proposed sending only 10 candidates to the Netherlands. Moreover, in principle these candidates were expected to bear their own travel, accommodation and study costs.⁶⁴

As time progressed since the transfer of sovereignty, Jakarta became increasingly impatient with European estate companies and their efforts to promote indigenous Indonesians, or *pribumi*, into leading positions within their ranks. In order to speed up the process, the Indonesian government made it increasingly difficult for European companies to hire expatriate personnel by routinely refusing entry permits for foreigners. Furthermore, it became increasingly difficult for foreign companies to secure re-entry permits for members of their staff. The Deli Company noted in its annual report of 1953 that suitable candidates for management positions were insufficiently available in the Indonesian labour market and that the continuation of its operations was being threatened by the refusal of re-entry permits for management personnel and visa for planters trained in the Netherlands.⁶⁵

Conclusion

It is hard to provide a clear-cut answer to the question what the nature was of the impact of foreign capital on the indigenous society of Indonesia, or more specifically that of North Sumatra as this paper has sought to do. Indigenous society was influenced in different ways by the presence and activities of foreign capital, sometimes to its benefit, sometimes less so. Besides the impact on indigenous economic development, there was

⁶³ This is a point worth considering further –was there something about the ‘hyper-colonialism’ of the plantation enclaves which made them less conducive to indigenisation? The same applied to Malaysia, where plantation companies fell behind manufacturing companies, see: Nicolas J. White, *British business in post-colonial Malaysia, 1957-70: ‘Neocolonialism’ or ‘disengagement’?* (London and New York: Routledge, 2004) 72-77.

⁶⁴ ANRI, AVROS, no. 162, November 13, 1950.

⁶⁵ NA, Deli Maatschappij, no. 40, Annual Report 1953.

an impact on social relations within indigenous society and between groups of different nationalities and also an impact on political development. In this paper I have focused on both economic backward linkages in final demand linkages and infrastructure and socio-economic backward linkages such as education and the promotion of Indonesians to staff functions at European estate companies.

Despite the seemingly huge potential for economic benefits offered by the presence and activities of the plantations the indigenous population of North Sumatra does not seem to have profited fully from the final demand linkage effects emanating from the estates. This was partially due to the land shortage problem, the open trade regime and the lack of protective measures for local industries, but surely also to the low level of development that was prevalent amongst indigenous society in North Sumatra. Immigrant traders and entrepreneurs were much better equipped to pick up trade opportunities generated by the plantation system. Nevertheless, per capita imports were relatively high in North Sumatra and qualitative sources suggest that living standards of the indigenous population were generally good, improving also in the face of an outflow of profits.

Although by their nature the estates were enclaves, they contributed to the development of an infrastructure that was beneficial to indigenous society in North Sumatra. These developments might not have been inspired by pure altruism but rather by company self-interest, they however undeniably contributed to indigenous mobility and living standards in North Sumatra. It can be debated whether benefits like these somewhat offset injustices imposed in other ways upon indigenous society by the plantation system, or whether they constituted a mere palliative.

Despite official exhortations the plantations never achieved a substantial rate of primary school enrollment for estate children. Compared to other parts of the Outer Islands, North Sumatra might have fared slightly better, but the share of schoolgoing children in the total number of children living at the plantations remained disappointing. Here the prevalence of company self-interest when performing tasks that are essentially in the domain of the government becomes evident: contrary to the development of infrastructure the education of estate children was of no direct benefit to the

plantations. On the contrary, children who had received education tended to leave the plantations in search of better lives.

The last backward linkage I discuss in this paper concerned *Indonesianisasi* of staff personnel in Sumatra's plantation belt. Under Dutch colonial rule, the share of Indonesians in higher staff positions at Western plantations in North Sumatra was negligible. The explanation for this can be sought in the dismal state of education for indigenous Indonesians in the colonial period and the unwritten rules of planters' society that reserved management positions for white Europeans. By contrast to the colonial period, the estate companies operating in Deli were suddenly confronted with a government demanding changes in their personnel policies after Indonesian independence. I demonstrated that, despite governmental pressure and more successful examples of *Indonesianisasi* from other regions, individual and collective company initiatives to train Indonesians for staff positions did not take off in any great measure in North Sumatra. In comparison to other parts of Indonesia the Deli plantations subsequently underperformed with regard to the *Indonesianisasi* of their staff.

Appendix

Table 2. Operation costs DPV members, 1927-1936 (in thousands of guilders)

	1927	1928	1929	1930	1931
European salaries ⁶⁶	4,750	4,750	4,750	4,750	4,100
Coolie wages	26,444	28,052	29,376	26,657	21,384
Deliveries ⁶⁷	4,114	4,753	4,865	2,795	765
Hasil Tanah & wood retributions	519	543	571	555	488
Taxes	4,556	3,848	4,059	2,753	1,672
Medical care, losses on rice, housing	4,043	3,393	3,642	3,367	1,754
Pensions	454	510	483	504	437
Immigration costs	1,580	1,940	2,425	1,119	620
Donations	80	62	57	41	13
Total	46,543	47,854	50,230	42,544	33,719
	1932	1933	1934	1935	1936
European salaries	3,475	2,685	2,305	2,262	2,254
Coolie wages	13,850 ⁶⁸	10,359	10,026	10,085	10,189
Deliveries	765	491	689	561	703
Hasil Tanah & wood retributions	488	459	456	458	459
Taxes	1,672	509	505	705	690

⁶⁶ Calculated without bonuses and with an average salary of f 540.-, which is rather low. European salaries were for the most part spent locally.

⁶⁷ Deliveries mostly from members of indigenous society, a small portion from Chinese. Deliveries by European firms are not accounted for.

⁶⁸ Large reduction due to closure of 14 companies and decline of total labour force.

Medical care, losses on rice, housing	1,754	1,235	1,108	1,027	1,035
Pensions	437	337	294	271	263
Immigration costs	620	125	96	121	126
Donations	13	49	54	20	22
Total	23,078	16,252	15,537	15,514	15,746

Source: DPV Annual Reports.

Table 3. Operation costs AVROS members, 1928-1937 (in thousands of guilders)

	1928	1929	1930	1931	1932
Wages and bonuses	39,196	41,002	31,973	26,740	8,502
Healthcare, losses on rice	4,176	3,008	3,700	2,317	1,465
Deliveries	2,507	200	1,056	490	289
Hacil tanah, wood retribution and present tanah	1,109	941	1,142	1,240	1,153
Direct taxes	4,252	3,908	2,364	1,075	1,090
Indirect taxes	1,822	1,638	1,142	846	654
Total	53,064	50,698	41,381	32,710	13,155
	1933	1934	1935	1936	1937
Wages and bonuses	14,507	16,090	16,810	19,938	24,475
Healthcare, losses on rice	1,060	974	1,294	1,443	1,618
Deliveries	325	361	655	744	1,173
Hacil tanah, wood retribution and present tanah	1,033	1,193	1,155	1,301	1,172

Direct taxes	1,020	749	849	2,931	7,109
Indirect taxes	601	641	964	1,369	1,611
Total	18,549	20,011	21,729	27,728	37,161

1938

Wages and bonuses	24,475
Healthcare, losses on rice	1,618
Deliveries	1,173
Hacil tanah, wood retribution and present tanah	1,172
Direct taxes	7,109
Indirect taxes	1,611
Total	37,158

Source: AVROS Annual Reports.

Table 8. Dividends paid by the 'Big Four' (tobacco)

Years	Deli Company (%)	Senembah (%)	Deli-Batavia Company (%)	Arendsburg (%)
1871	20			
1872	33			
1873	60			
1874	70			
1875	80		12.25	
1876	91		11.75	
1877	113		11	0
1878	22.5		0	0
1879	37.9		0	0
1880	32.2		3.3	22.5
1881	37.3		6.4	25

1882	65		8.75	50
1883	101		45	60
1884	77.77		26	100
1885	107.5		34	100
1886	108.5		35	152
1887	109.8		62.5	120
1888	45.2		40	145
1889	35.2		35	112
1890	79.3		62	0
1891	0	35	0	0
1892	28.8	0	12	40
1893	51.4	0	10	110
1894	106.8	6.4	62	100
1895	92.4	60	60	14
1896	42.7	43	21	40
1897	29.5	29	18	95
1898	48.8	47	43	47
1899	27.21	50	10	42
1900	3	37	17.5	58
1901	34.5	38	43.5	35
1902	26	20	25.5	9
1903	30	12	30	0
1904	27	20	40	20
1905	19.1	0	20	140
1906	52.2	38	147	170
1907	53.5	55	140	40
1908	6.2	0	33	50
1909	20	22	30	4
1910	0	0	0	35
1911	33.3	60	61	55
1912	86.9	90	64	66
1913	80.1	65	36	5
1914	20	20	32	0
1915	35.5	30	18	70
1916	25	50	70	40
1917	50	65	60	0
1918	20	0	32	10
1919	50	20	38	60
1920	43.6	60	40	33.3
1921	10	15	14	0

1922	5	8	0	15
1923	20	10	24	50
1924	41	18	30	50
1925	45	42	31	50
1926	26	35	52	60
1927	28	20		60
1928	22	35		0
1929	21	25		0
1930	0	0		0
1931	0	0		0
1932	0	0		0
1933	5	0		10
1934	5	0		9
1935	7	6		19
1936	8	10		12
1937	10	12		12.5
1938	4	5		14
1939	7	0		5
1940	0	0		0
1941	0	0		0
1942	0	0		0
1943	0	0		0
1944	0	0		0
1945	0	0		0
1946	0	0		0
1947	0	0		0
1948	6	4		0
1949	6	4		0
1950	6	4		0
1951	9	0		0
1952	6	0		
1953	7	7		
1954	10	7		
1955	8	7		
1956	4	0		
1957	6	0		

Source: Theodoor Gilissen, *Sumatra tobacco companies* (Amsterdam, 1927); Annual Reports Deli Company, Senembah, Deli-Batavia Company and Arendsburg.

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