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World Silver Flows and the Formation of the Forced Cultivation System in Java：1800-1840

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Ⅰ Introduction

This paper argues that the international environment is an essential condition for the formation of national and/or local economic institutions, such as the Cultivation System in Java during the 19th century (Kultuulstelsel:1830-1870), although few previous studies have examined the international environment as a condition for the formation of this Cultivation System（Bosma et.al. 2007）.

According to previous studies and textbooks, the Cultivation System introduced into Java in 1830 was a colonial system that exploited people there for cash crops by utilizing the traditional relationship between chiefs and people. However, from the beginning of the 19th century, the noteworthy amounts of cash crops in Java, that is, coffee, sugar and pepper, were produced by private estates and contracts. While the Dutch colonial government couldn't control the activities of the private estates and the local societies including clandestine trade, the forced delivery systems, which were prototypes of the Cultivation System and conducted in some parts of Java from the middle of the 18th century, were becoming withered. Based on this logical gap between the results of the previous studies, this research starts from a simple question: Why did the local societies in Java accept the implementation of the forced cultivation system by the Dutch Colonial government just after they had enjoyed "free cultivation" of cash crops for the world market in the 1820's? In order to explain their acceptance of the colonial government-enforced Cultivation System, this paper investigates the international politico-economic environment of Java.

During the 1820s the British Empire started reorganizing the regional trade system in Southeast Asia, and the formation of the Cultivation System in Java can be seen as one of the responses in Southeast Asia to that structural change. In order to analyze the international environment from this perspective, this paper describes the environment in three levels: the Global or inter-regional level, the Regional level (Southeast Asia or South China Sea area), and the Local level (Java and Madura, or a residency) (See Figure 1-1).

Figure 1-1 Three levels for analyzing the international environment

Global or inter-regional level	Inter-regional trades and politics, Empires, and Incidents whose impacts were inter-regional
Regional level (Southeast Asia or South China Sea area)	European colonies dependent upon the British Empire, Indigenous polities, Chinese and other regional trade networks
Local level (Java and Madura, or a residency)	Local societies

The Dutch colonial government had to cope with those factors and actors. Following this Introduction, Section II describes the global and regional trade environment between 1780 and 1830, which the Netherlands and the Dutch colonial government in Java suffered. Section III analyzes the policies of the colonial government and the economic situation in Java during this time. Section IV discusses the formation of the Cultivation System, and Section V answers the research question, that the international environment was an essential condition for the formation of the Cultivation System in Java in the mid-19th Century.

II Global and Regional Environments

1) The Global or Inter-regional Environment

In the period between 1780 and 1830 the Dutch economic dominance finally declined and the British free trade empire was established. Around 1830 the Netherlands, with an old mercantile economic system, experienced a financial crisis, which was the result of a series of political and economic changes. The main changes were as follows:

(1) England conquered the Dutch colonies of Ceylon, Cape Colony, Malacca and Java between 1781 and 1811. Although Java and Malacca were returned in 1816 in the Congress of Vienna, the Netherlands lost its control over inter-regional trade networks forever (Harrison 1963: chapter 12 and 13).

(2) In the European market, the prices of Dutch tropical products such as coffee, cloves, sugar and pepper, declined sharply during the 1820s[1]. The price of coffee declined to one third of the price in the 1810s (Figure 2-1-1). The price of cloves declined to one sixth of the price in the 1810s (Figure 2-1-2). The Dutch colonies had formidable competitors in both of these products and the prices never recovered. After the independence of some countries in Latin America (mainly 1820-22), they started to increase coffee exports, among which

[1] The price of tea was static during the 1820s.

Jamaica and Brazil became the biggest producers in the world from the 1820s (Clarence-Smith 2003: 30-31).Zanzibar and other parts of East Africa began to export cloves from the 1820s. The prices of sugar and pepper didn't show such a dramatic decline, but decreased 10-30% of their prices in the 1810s (Bulbeck 1998: 84-85,136). In the peace after the Napoleonic war, many producing countries of agricultural commodities supplied their excessive volumes of products to the world market, and this seemed to some extent to be the cause of the silver shortage in the world (mentioned in (3), below).

(3) The standard of Spanish silver coins (known as "reals"), which had a function as the best coinage of international settlement in the world, fragmented after the independence of the Latin American countries, because the new countries started to mint various standards of silver coins (Irigoin 2009). At the same time, a drain and shortage of silver coins for international and inter-local settlement was reported in some regions in the 1820s (China, India, Java, Vietnam etc)(Glahn 2010: 38-49 ; Wakimura 2009: 124)

(4) An economic depression was observed in some regions such as China and India in the 1820's, although the causes of this depression seem to have been multiple and different from each other (Glahn 2010: 56; Wakimura 2009: 124 and an interview).

Under these circumstances Belgium declared its independence and freed itself from heavy taxation by the Dutch in 1830. The Netherlands thus became one of the smaller agricultural countries in Europe, and was obliged to expect the colonial government in Java to transfer its profits in order to cover the fatherland's financial deficit.

2) Regional Environment

The regional economic environment of Java was becoming difficult for the finances of the colonial government in the 1820s. Between 1780 and 1830, Batavia, which had been the main entrepot of the Southeast Asian trade networks, slipped out from those networks and the Island of Java became rather isolated in the latter half of the 1820s.

In the fourth Anglo-Dutch War (1781-1784), the Dutch East India Company lost its control over the maritime trade in what is the Indonesian sea area today, even along the coasts of Java, while England gained its own trade route to China and was vigorously promoting that trade in the 1820s. With the development of this trade, Singapore, which England had founded in 1819, became the center of Southeast Asian trade (Harrison 1963: Chapter 12 &13). Then, Java became an unprofitable destination for the traders in this region after 1823. In addition to the decline of the prices of coffee, cloves, sugar and pepper, ports in Java lost their importance as entrepots for cloves and nutmeg from the Spice Islands, because those spices became available in the western part of

the Indian Ocean and West Indies. Furthermore, the trade networks of the Fujians in the South China Sea, who had closer connections with the Dutch, seem to have become weaker than those of the Cantonese, who were close to the British Empire.

About the economic situation of Java, the Governor General Du Bus pointed out in his report in 1828 as follows:(1) Because the prices of products in Java had declined, the foreign trading houses on the island could not realize a profit but rather suffered losses from the trade and were moving to other places or were bankrupted (Du Bus 1827:33). (2) Before the decline of the prices, Americans had brought silver coins. However, after the decline the balance of the trade was in deficit, and gold and silver coins were exported considerably from the island[2] (Du Bus 1827:31-33). (3) Many sugar enterprises run by Chinese and Europeans suffered hardships or were bankrupted, so that they needed government financing (Du Bus 1827: 15-18).

What Du Bus reported is supported by the statistics. The period between 1823 and 1833 can be called a period of trade- and financial-crisis for the government.

The value of the export commodities decreased notably up to 1831, and the volume of the products decreased for several years after 1823, especially those of coffee for export, which declined sharply (Figure 2-2-1). The price of coffee at the Batavian market had reached its peak, 54.5 guilders per picol (about 60 kilogram) in 1821, but then started to fall in 1823 and fell to 24 guilders per picol, less than a half of the price of 1821 within 5 years (Figure 2-2-2).

Those low prices and fall of the value of exports caused an unfavorable balance of the trade in Java. The years 1827, 1828, 1829, and 1830 experienced an excess of imports over exports in value (Figure 2-2-3). The import of silver coins, mainly from the United States, decreased and the export of coins to China and the Outer Islands did not decrease much (Figures 2-2-4; 2-2-5). Du Bus reported that the Spanish silver coins were sold at a high price in Canton (Du Bus 1827:33). In the period between 1825 and 1829 the serious deficit of silver and gold coins happened in 1826 and 1827. The amount of the deficit in the period was 889,047 guilders in value and the government could not recovered from this deficit in the next 5 years (Figure 2-2-6).

From the statistics that are available, we learn that the number of foreign ships that visited Java Island decreased (Figure 2-2-7). In addition, a report in 1824 tells that the ships from China lessened year by year (Kemp 1916:13).The author has not found statistics on the bankruptcy of the

[2] The colonial government recognized that considerable amount of the coins exported to China by Chinese(Kemp 1916:323).

foreign entrepreneurs; however, several Dutch documents mentioned that phenomenon. (Hoofdkommissie van Landbow 1829:13-14; Niel 2005: 391; Fernando 1982:61; Elson 1994:37).

During the 1820s, Java was being marginalized in the regional system and was joined directly to the Netherlands market. The Netherlands Trade Company (de Nederlandcshe Handel Maatchappij) was founded by a Netherlands government initiative in 1824, and it was given the role of sending the products of Java to the fatherland. In the middle of the 1830s more than 93% of the coffee, 85% of the sugar, and 95% of the indigo of Java were sent to the Netherlands (Figure 2-2-8). This policy turned out to be successful and profitable for the Netherlands. However, the difference of monopolies between the Dutch East India Company and the Netherlands Trade Company is worthwhile emphasizing. The former maintained the monopoly with its naval supremacy and the latter transported almost all the government products in Java because of few other choices of transportation.

In addition, up until 1832, the unfavorable balance of trade brought the colonial government a financial crisis. In spite of the Netherlands' expectation, it had to send silver to Java, and Du Bus wrote in his report that Java was becoming the financial cancer of the Netherlands (Du Bus 1827: 37).

III The Local Situation of Java in the 1820's

1) The Period of Financial Crisis: 1823-1833

The financial crisis of the Dutch colonial government from 1823 is clearly shown in the statistics. The finances of the Dutch colonial government were still so dependent on the sale of cash crops in which the government invested, mainly coffee, and on customs payments, that the unfavorable balance of trade was a formidable threat against their finances. The serious deficit of the finance situation continued from 1824 to 1833 (Figure 3-1-1).

The government issued policies to improve the balance of the trade during the 1820s, but its policies were limited to a change of customs regulations and a prohibition against unfavorable trade for the government, such as the export of silver and gold and the import of cotton goods and copper coins (Staatsblad 1820-1829). Generally, these policies were not effective to improve the balance. Only the volume and value of cotton goods imported, especially by foreign ships (Figure 3-1-2) and the number of ships from China were decreased.

In order to improve the financial balance, the Dutch colonial government also had to enact a

series of economic policies inside Java.

2) The policies of the Dutch Colonial Government and the impacts on the local societies

a. The aim of the policies

Not so many previous studies have analyzed the financial policies of the colonial government and the impacts on the local societies in the 1820s. Based on the results of previous studies and the documents that I have found thus far, it is most practical to hypothesize that the main aim of the government in issuing the policies related to financial matters was to obtain as large a number as possible in black ink by using silver and gold coins.

b. The targets of the policies: local societies

As the targets of these policies, the inhabitants of Java can be divided into three groups in the 1820s. The first group was the native chiefs and their people who produced agricultural products, such as coffee and pepper, for the world market under the government's direct investment and instructions. Usually the chiefs received advances from the government. Then they gave a small advance to the people with copper coins and mobilized their people's corvee labor for the production. The chiefs also collected the products and paid copper coins to the people. Finally, the chiefs delivered all the products to the government and received percentages. The products were exported in the ships of the government or private traders (Ohashi 2010). The second group was the chiefs and their people who produced agricultural products for the world market, such as sugar and coffee, under the Chinese and European entrepreneurs' investments or contracts, as well as for the Chinese and European entrepreneurs themselves. The chiefs contracted with the entrepreneurs and leased their lands and people with rents received in advance. The entrepreneurs invested their own capital to the leased land and people, and mobilized their people's corvee and wage labor for the production. The entrepreneurs sold the products to private traders or to the government. Thus, they depended deeply on the profits from these exports. The entrepreneurs bought imported industrial goods and paid taxes with silver coins, while they invested and paid copper coins to the people (Neil 2005: Chapter 5; Deventer 1865-1866: Carey 1986). The third group was the chiefs and their people who didn't produce agricultural products for the world market, but had the obligation to pay land rents and some taxes to the government. For paying the land rent and taxes in cash as they were required, usually they sold their products to Chinese merchants or received money in advance from those merchants (Carey 1986).

c. The monetary system in 1818

When the Netherlands restored the Java Island in 1818, the colonial government kept the *gulden* as a monetary unit. Legally one *gulden* in the Dutch East Indies had the same value as one guilder in the Netherlands, and one *gulden* (usually a silver coin) had the same value as 100 *duit*s (copper coins) in Java. Coins of *guldens* and *duits* were in circulation. However, there were several other kinds of coins, including Spanish *piasters* (Carlos Peso) and *Sicca=Ropy* circulated in Java, and they had their own exchange rates in the markets. Some coins such as Spanish *piasters*, *Sicca=Ropy* also had their legal exchange rates(Mees 1851: 22-23;Laanen 1980:16).

d. Policies by Van der Capellen

From the beginning of the restoration in 1818, the Dutch colonial government faced a shortage of silver and gold coins as the means of international monetary settlement. The Netherlands government sent silver and copper coins to Java and also minted copper coins in Java (Bree 1928: 147-148). The colonial government prohibited the importation of any copper coins by private traders in 1822, and during the1820s the government issued that prohibition several times (Staatsblad). It was profitable for the government to mint coins from copper metal imported from Japan (Figure 3-2-1)[3] and to circulate them. In addition, the government raised port duties of the ships with Chinese flags from 1818, because these Chinese ships that were bound for China were suspected of carrying large amounts of silver coins to China (Kemp 1916:323). However, in spite of the policies, silver coins became about 20% higher in value in the markets than their legal exchange rates or face value before the decline of the prices in 1823 (Laanen 1980:16),

In 1823 when the prices of the agricultural products began to decline, the financial balance of the colonial government became in the red within this year. The values of silver and gold coins soared. Even copper coins became scarce and received a premium of between 6 and 15%, while copper coins became devaluated around 20% compared to silver coins. In order to improve the financial balance, the Governor General Van der Capellen was obliged to conclude a loan from an English private company, and to order the chiefs who had leased their land and people that the chiefs would have to cancel the leases and pay back the rents to the entrepreneurs. This latter policy was issued for increasing the amount of land rent (Furnivall 1944: 92-94).

From 1824, the financial balance was in the red for the total year, and the government's high officials felt that silver and gold coins had almost disappeared from Java. In 1825 and 1826, the

[3] From the 1840s copper coins were imported from the Dutch Fatherland.

government supplied a huge number of copper coins that were imported from the Netherlands by the Netherlands Trade Company and minted in Java from Japanese copper. At that time silver and gold coins were not only the means of international monetary settlement but also the domestic means of commercial exchange. The drain of the coins meant that an insufficient volume of currency circulated in Java, so that the government had to supply the currency in Java. However, the government oversupplied copper coins as well as paper money, and the operation ended with a devaluation of copper coins and paper money in the markets (Laanen 1980:16-17).

It was unlucky for the inhabitants in the central part of Java and the Governor General that the drought continued between 1821-1825 there in Java, and this period also saw a series of eruptions of Mount Merapi, among which the eruption in December of 1822 was the most spectacular one. The chiefs and people experienced huge economic difficulties from the decline of prices, the government order, and the natural disasters (Carey 1986:131). Furthermore, the soaring value of silver coins and the fluctuation of the exchange rate of copper coins for silver coins brought a loss for Chinese merchants, who were pushed to exploit the people for their own survival. The grievance to the Chinese and the frustration of the chiefs and people increased, until finally a war, named the Java War, broke out in 1825 and continued to 1830 in the central part of Java(Carey 1986:131).

e. Policies by Du Bus

Because of the ineffectiveness of those policies, the Governor General was changed for Du Bus and the new Governor General arrived in Java in early 1826. Within this year he introduced the Netherlands monetary system into Java, but the introduction seems to have caused further economic confusion, although further investigation is needed. In 1826 the Netherlands guilder coin became the standard coin in the Netherlands East Indies. Under this system, legally one *gulden* as a unit of money still had the same value as one guilder. However, in practice one *gulden* as a coin in the Netherlands East Indies was devaluated by 16.7%, which was the real value of one *gulden* coin in the markets, while other silver coins kept the rate of 1818. One *gulden* as a coin was also devaluated to the same value as 100 *duits*, down from 120 *duits*, which had been the exchange rate before 1826(Mees 1851: 27-32; Laanen 1980:16)

Payments to the government of more than 10 *guldens* had to be paid in silver coins, but land rents and some other taxes of this amount were allowed to be paid in copper coins. The aim of this last instruction seems to have been to facilitate the land rent and tax payments. In 1827 the

government founded the Java Bank, and this bank started to lend and exchange money; however, because of the scarcity of silver and gold coins, the Bank over-issued paper and copper moneys in circulation, which again devaluated copper and paper money in the markets(Laanen 1980:16-17;Niel 2005:333).

The aim of these operations seems to have been to save the government's finances. In theory, with this policy the government could facilitate the land rent payments and decrease the government payments to the government officials, the native chiefs, and the people. In addition, the government raised the prices of their goods, which had been devaluated by this policy. However, whether the policy was effective or not is another question. The new monetary system seems to have been too complicated for the local chiefs and the people to understand and these confusions were mentioned in the government reports. For example when the people were ordered to deliver chickens for 12 *duits*, they began to deliver chickens for 10 *duits* (Kemp 1916:113).

f. Impacts of the policies on local societies

It is not sure that the government foresaw the impacts of the policy. However, those operations were hazardous for the Chinese and European entrepreneurs as well as for the chiefs and their people who cultivated the products such as sugar cane under those entrepreneurs' operations. They experienced the inflation of the imported industrial goods that were necessary for their production, cost inflation of the products derived from the currency devaluation, and the loss from the exchange rate of copper for silver, as well as the decline of prices, the natural disasters, and the war. Those factors seem to have been sufficient causes of the bankruptcy of many sugar industries in 1826 and 1827 along the northern coast of Java (Hoofdkommissie van Landbow 1829: 13-16)[4].

For the chiefs and their people who didn't produce agricultural products for the world market, the devaluation of copper coins in 1823 meant an increase in the total amount of prices of commodities that they had to buy. When the *gulden* was devaluated in 1826, copper coins kept the value before 1826 and the amount of land rent did not decrease. Instead, the highest official of the Chirebon residency reported the increase of the amount of land taxes year by year. The worst impact on the chiefs and the people can be considered the harder exploitation by Chinese merchants derived from the fluctuation of the exchange rate of copper coins for silver coins, because the chiefs and people depended on those coins from the Chinese merchants in order to make tax payments to the government.

[4] Further investigations of specific local cases are needed.

For the native chiefs and their people who produced agricultural products for the world market under the government's direct investment and instructions, those operations had the least negative impact. The advancement by the government was reduced as well as the prices of some necessities such as salt. However, those amounts of money were not so large and the people had other ways to get those necessities (Ohashi 2010).

In addition, they didn't depend on Chinese merchants when they paid taxes. Among those areas, the Priangan Residency experienced economic development. The amount of coffee delivery recovered to the level of 1810 (Figure 3-2-2), wet rice cultivation spread widely with the construction of an irrigation system by the government, and the population increased. The residency accepted many refugees from the Java War. Luckily, no drought happened in the area and no disturbance happened during the Java War, even in 1823 (Ohashi 2010). This system turned out not to be influenced by the fluctuation of market prices and changes in the monetary system[5].

In is not clear whether those government operations followed the wide confusion of the production system, but it is clear that a new situation emerged in which the collection and payment of land rents in kind was more endurable for almost all groups in Java than the older situation with silver and copper coins.

IV Implementation of the Cultivation System

When the colonial government prevailed in the Java war the government found that the Europeans and Chinese in the north coast were experiencing a shortage of capital and buyers for their products constantly, and they also found economic development in Priangan. The new Governor General Van den Bosch, who arrived in Java in 1830, implemented a system of agricultural production under the government's direct investment and instructions to the whole Island of Java

The government bought almost all the cash crops, such as coffee, sugar, pepper, and indigo, at low prices and offset the people's land rent. In addition, the government invested huge sums of money in copper. The government did advance payments with copper coins to the chiefs and people for cultivation and transportation. In some areas, the land tax was exempted for a few of the people

[5] The Pasuruan residency also experienced the development of sugar cultivation (Elson 1984: Chapter 1).

who started to cultivate those crops. The government also invested in the European and Chinese owners of sugar factories. The government constructed the irrigation system and transportation facilities such as roads (Deventer 1865-1866: II Hoofdstuk 15; Niel 2005: Chapter 9). For those investments, the Governor threatened the Java Bank by a revocation of its charter to issue paper money changeable for copper *guldens*. Thus, from 1832 there were four types of *gulden*: a form of silver coin, a form of banknotes or prescribes payable for silver or gold coins, a form of copper coin (a one gulden copper coin), and a form of banknotes or prescribes payable for copper coins. Five silver *guldens* could be exchanged for six copper *guldens* (Laanen 1980:17-19). This monetary system also caused currency inflation, but this inflation did not have such a negative impact as what had happened in the 1820s.

To the European and Chinese owners of sugar factories in the North coast of Java, the government also supplied land and labor cheaply by way of its administrative tools

(Collectie J.C. Baud 469,470).

By supporting the factories with everything monopolistically, the government incorporated the sugar factories into its non-capitalistic economic system. However, those policies also can be seen as the first policies for the government in Batavia to support capitalistic private industries.

The Cultivation system in Java seems to have worked well, because Java was not affected by the severe shortage of silver in East and Southeast Asia after 1834 when the United States adjusted its exchange rate and silver became more valuable than before.

V Conclusion

The international environment was an essential condition of the formation of the forced Cultivation System in Java during the 19th Century. The economic boom in the 1810s and a depression in the 1820s prepared favorable conditions for that formation. The boom spread cash crop cultivation, and the depression brought an accumulation of production stock and a shortage of capital, coins and traders, which the colonial government could then supply relatively easily. The inflation also prepared the conditions so that collection and payment of taxes in kind was easier to endure for almost all groups in Java than were those systems using silver and copper coins, which were difficult to endure in the early part of the 1820s. These conditions enabled the colonial government to adopt monopolistic policies, which the government had been implementing for more than 100 years in Java. The government had succeeded in incorporating the private enterprises and

networks of Chinese merchants into their own production system, although from another perspective this was the first time for the government in Batavia to support the activities of private industries positively.

The Cultivation System was also a device to bypass silver coins as a means for international monetary settlement. Under the system, the colonial government departed from the silver standard coinage and pragmatically introduced a managed currency system. In addition, there was a huge public investment with paper money and copper coins in the fields of production process, the infrastructures of transportations, and social welfare in the time of depression 100 years before the Great Depression. The Dutch colonial government could do this with copper mainly imported from Tokugawa Japan.

The Cultivation System can be said to have been a colonial device of re-locating the Dutch colonial government and local societies in Java into the new political and economic environment, although the impacts on local societies need further investigation.

Takashi Shiraishi has argued that the formation of the state apparatus of the Dutch East Indies, the Spanish Philippines, and the British Malaya started from the 1820s. We can hypothesize that these formations/centralizations in Southeast Asia were influenced by the depression and the efforts of re-linking themselves with the new regional systems led by the British Empire. This also needs wider comparative studies.

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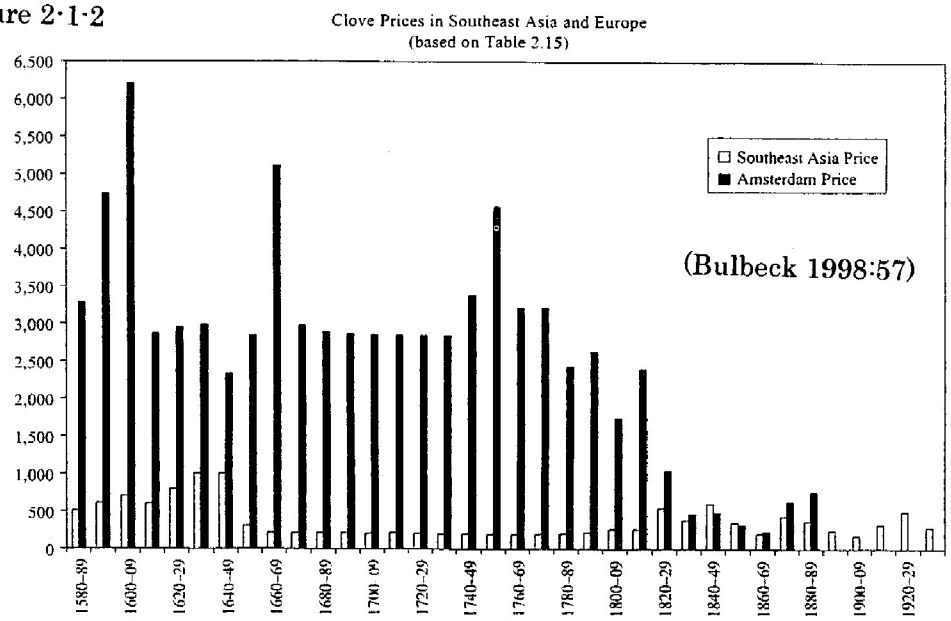
Figure 2-1-1

Coffee Prices in the Netherlands*

Year[1]	Guilder/*Pond*	Equivalent Dollar/Ton	Cf. Southeast Asia Price[2]
1720–29	0.89	679	212.0
1730–39	0.68	521	99.4
1740–49	0.57	432	99.4
1750–59	0.58	443	98.0
1760–69	0.53	403	96.0
1770–79	0.49	372	95.5
1780–89	0.50	381	95.5
1790–99	0.82	628	60.0
1800–09	1.03	786	50.0
	Guilder/100 kg		
1810–19	205.9	777	130
1820–29	96.7	365	212
1830–39	69.1	308	178
1840–49	55.3	247	112
1850–59	65.0	290	176
1860–69	82.3	367	257
1870–79	96.9	407	322
1880–89	74.2	300	252
1890–99	96.8	392	358
1900–09	67.0	275	246
1910–19	120.5	494	364
1920–29	93.5	353	331
1930–39	38.2	194	144

(Bulbeck 1998:170)

Figure 2-1-2



(Bulbeck 1998:57)

Figure 2-2-1

(Van Niel 2005:328)

Value and Volume of Crops Exported from Java, 1823-1832[78]
Value in *f*1,000 Volume in Metric Tons

Year	Value of Export Crops	Value of Export COFFEE	Value of Export SUGAR	Volume Export Crops	Volume Export COFFEE	Volume Export SUGAR
1823	16,157	14,759	677	23,944	17,611	2,875
1824	9,066	7,733	575	19,110	14,958	2,650
1825	9,630	8,583	269	19,197	17,146	1,010
1826	7,726	6,724	377	23,296	21,002	1,223
1827	8,196	7,148	482	27,912	24,677	1,990
1828	8,882	7,831	442	27,912	25,703	1,598
1829	6,675	4,852	1,242	22,690	17,376	4,557
1830	6,317	4,552	1,575	24,807	17,833	6,710
1831	6,913	4,815	1,637	26,489	18,472	7,430
1832	11,668	8,512	2,815	35,406	19,404	15,185

Figure 2-2-2 Coffee prices at Batavia

(Guilder)

Year	Market	Government
1817	22	?
1818	44	14.25
1819	49.5	33.5
1820	42.7	30
1821	54.5	30
1822	49	35
1823	43.3	35
1824	31	33.5
1825	28.25	23.5
1826	24.8	23.5

(Bree 1928:113)

Figure 2-2-3 Import and Export of Java (Total Value)

(Guilder)

Year	Import	Export	Balance
1825	14317090	17888361	3571271
1826	14232997	15273502	1040505
1827	17656201	17165957	-490244
1828	17976094	17508341	-467753
1829	16755273	15902658	-852615
1830	15631978	14501779	-1130199
1831	14478402	14702149	223747
1832	13071291	22002751	8931460
1833	17864577	23343328	5478751
1834	18743655	30232505	11488850
1835	17865805	32494467	14628662
1836	18524898	41216487	22691589
1837	21787231	43201829	21414598
1838	24181877	43340227	19158350
1839	24961012	57674934	32713922
1840	28873893	74230553	45356660

(Calculated from Bruin Kops I &II)

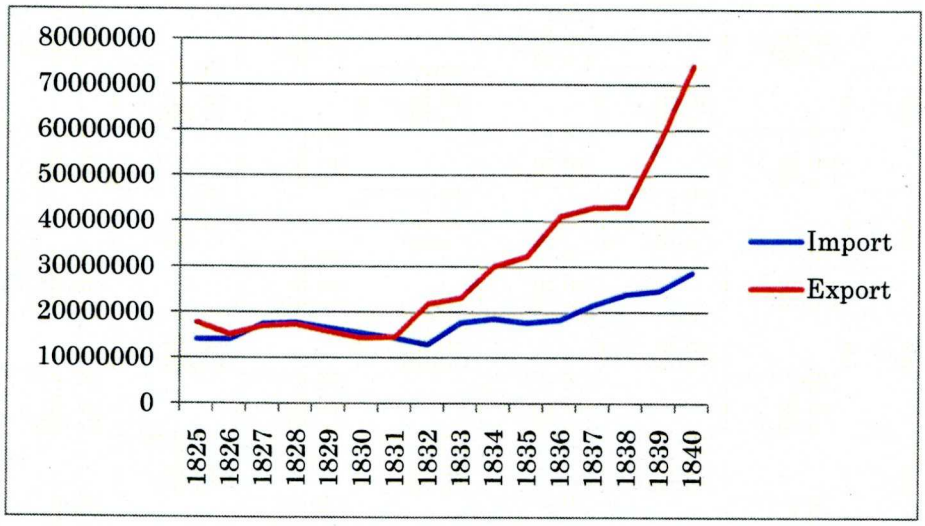


Figure 2-2-4 Value of Gold and Silver Species: imported from

(Guilder)

Year	The Neth.	China	Brit. India	England	The U.S.	East Islands
1825	61630	0	0	0	1499003	227194
1826	2656289	88306	0	0	770131	248830
1827	3072322	10200	39600	0	600780	405090
1828	1001913	5408	10200	0	697210	793346
1829	758083	0	0	0	267320	802503
1830	0	380	31110	2366	303884	171957
1831	24143	0	3570	51000	860819	170303
1832	0	10567	0	0	695922	171934
1833	121302	74398	0	0	528056	171911
1834	345512	53877	0	0	391055	267286
1835		20400	0	5865	1613994	220777
1836	71500	41351	0	0	440258	122021
1837	0	96328	750	0	116637	212630
1838	0	54060	0	40800	543295	124350
1839	473850	0	0	8775	118398	232770
1840	1986159	0	0	0	3797	324955
	(Calculated from Bruin Kops I& II)					
1817	339198	0	0	202400	961930	0

Ministerie van Kolonien (2.10.01 3018)

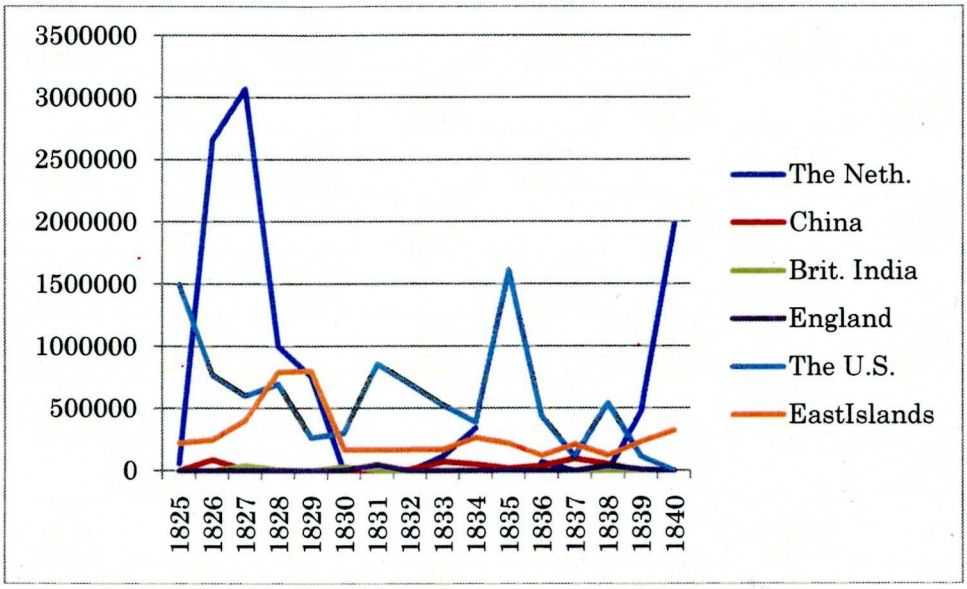


Figure 2-2-5 Value of Gold and Silver Species: exported to

(Guilder)

Year	The Neth.	China	Brit. India	England	The U.S.	East Islands
1825	106064	652906	184844	66000	0	734722
1826	7395	997533	168538	10200	0	1143675
1827	8000	290155	320196	0	0	1636089
1828	279601	102704	2040	165750	0	505314
1829	955650	46329	182800	0	0	832076
1830	694469	142810	64515	594	0	755284
1831	140031	130578	520	1500	2300	241334
1832	244843	233580	2982	60816	5482	373294
1833	78983	246360	0	10309	27902	348796
1834	68940	190388	0	1249	1097	744827
1835	6530	19760	2299	0	5865	301962
1836	14782	91126	520	0	306	796535
1837	82516	114967	0	2500	760	619210
1838	156410	89139	14215	0	383	976844
1839	121928	166387	300	953	829	650077
1840	11882	47854	5023	0	0	183462
	(Calculated	from	Bruin	Kops I &	II)	
1817	0	0	1475742	0	0	1770042

Ministerie van Kolonien (2.10.01 3014)

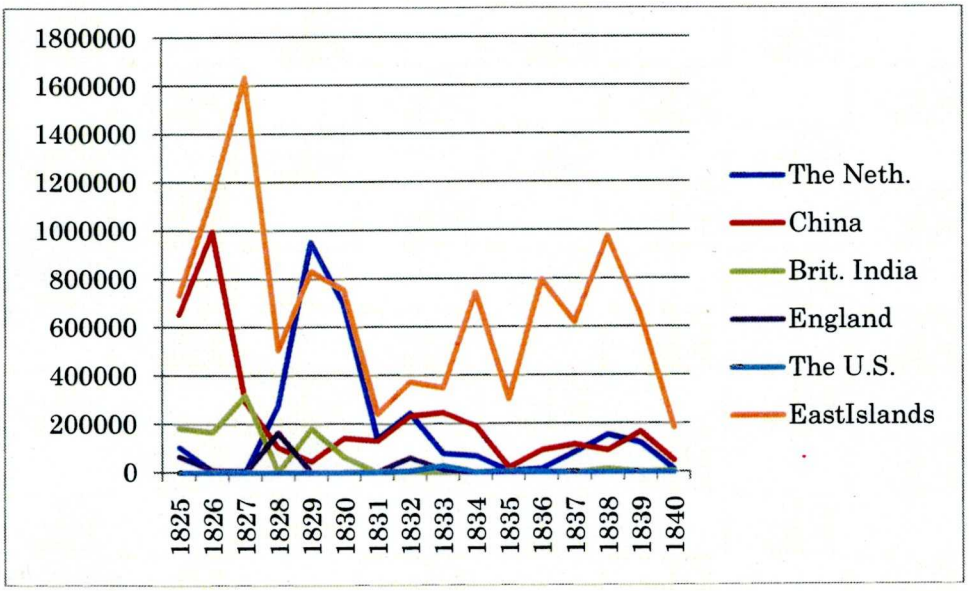


Figure 2-2-6 Balance of Gold and Silver Species in Java

(Guilder)

Year	Import (Value)	Export (Value)	Balance	Balance without the Neth.
1825	1879229	1861627	17602	21936
1826	3982822	2482159	1500663	-1148229
1827	4512213	2297730	2214483	-849839
1828	2616707	1209294	1407413	685101
1829	2188052	2084180	103872	401489
1830	593834	1748197	-1154363	-458994
1831	1109836	587116	522720	648608
1832	880624	921652	-41028	240715
1833	904662	747431	157231	114912
1834	1101080	1012198	88882	-187690
1835	2311389	336437	1974952	1980582
1836	676150	932492	-256342	-313060
1837	513053	839532	-326479	-264969
1838	976665	1266293	-289628	666782
1839	971232	956101	15131	367053
1840	2439269	257761	2181508	195349

(Calculated from Bruin Kops I &II)

Figure 2-2-7 Numbers of Ships Visited Java and Value of their Import

	The Ned.		England		the U.S.		China	
Year	Ship	Value	Ship	Value	Ship	Value	Ship	Value
1825	1175	7879021	53	2771189	38	2654114	*11	328342
1826	1205	10129884	44	1810600	22	1874543	*15	161337
1827	1210	11954426	56	2635222	19	1801238	*20	272253
1828	801	12843902	54	1928713	14	1715306	8	472094
1829	926	12602561	45	2067968	13	520229	8	292671
1830	1132	11947161	44	1813328	13	628832	4	212050
1831	1126	10568497	34	1577769	22	1478973	*9	-
1832	1096	9735545	59	1171567	35	973395	*18	137926
1833	1268	10778975	66	1764684	67	3452864	3	66476
1834	2036	12301867	68	4251344	42	941546	2	36013
1835	1873	11059132	66	2870192	60	2173696	4	61604
1836	2401	13740769	69	2860556	58	738065	3	35557
1837	1423	16359325	44	3020225	47	440289	3	72092
1838	1369	16889796	88	4351751	34	923575	11	204481
1839	1457	11361141	106	3835355	40	558959	11	282915
1840	1642	22755887	88	3765998	8	164233	5	155067

(Calculated from Bruin Kops I &II)　　*ships from Siam is included

1819	43	1843144	62	3378406	50	436700

(Bree 1928:134)

Figure 2-2-8

EXPORTS FROM JAVA and portion sent to the Netherlands
ARA Archief Kolonien No. 3204. Van der Vinne to Baud, 28 March 1842

COMMODITY	1835	1836	1837	1838	1839	1840	1841
COFFEE in Piculs	466,870	498,077	684,947	589,599	757,476	1,132,375	961,467
COFFEE value in Guilders	14,093,902	15,090,362	18,293,179	15,095,793	23,860,499	37,368,361	28,843,998
COFFEE Piculs shipped to the Netherlands	437,562	450,796	639,225	537,176	678,279	1,043,180	865,292
SUGAR in Piculs	432,623	509,513	676,085	734,979	842,017	1,013,878	1,031,094
SUGAR value in Guilders	5,754,489	9,083,141	8,248,571	9,823,028	10,946,222	13,687,352	12,373,132
SUGAR Piculs shipped to the Netherlands	370,846	446,534	608,984	587,251	744,995	867,901	863,453
INDIGO in Pounds	533,753	407,798	822,492	1,123,712	1,191,636	2,123,911	1,827,386
INDIGO value in Guilders	1,044,027	1,122,382	2,328,076	3,168,065	3,574,909	6,371,733	5,939,005
INDIGO Pounds shipped to the Netherlands	515,388	400,255	817,914	1,117,477	1,187,189	2,117,082	1,806,693
RICE in Piculs	767,310	1,092,900	1,003,550	949,456	1,103,378	680,909	676,212
RICE value in Guilders	2,813,470	3,389,615	2,993,692	3,021,446	4,689,353	3,064,092	3,064,092
RICE Piculs shipped to the Netherlands	13,020	46,020	88,980	67,863	180,615	91,793	58,958
TIN in Piculs	40,836	47,739	44,457	41,573	47,631	62,335	48,340
TIN value in Guilders	1,508,695	2,718,810	2,139,896	1,950,432	2,381,577	2,867,398	2,175,282
TIN Piculs shipped to the Netherlands	20,731	28,637	15,584	27,556	36,253	37,568	47,075

(Van Niel 2005: Appendix 36)

Figure 3-1-1

Governmental Expenditures and Receipts[79]
Numbers represent One Million Guilders
Symbols: [..] Incomplete. (..) Estimate

Year	General Expenses	General Revenue	Gain or Loss	Landrent	Import/ Export
1816	3.5	3.8	0.0	1.5	0.2
1817	15.4	15.9	+0.5	3.6	0.4
1818	15.2	19.5	+4.3	4.0	1.0
1819	18.3	20.5	+2.2	4.3	1.4
1820	21.0	20.0	-1.0	4.4	1.7
1821	24.0	24.3	+0.3	4.8	1.9
1822	22.8	25.4	+2.6	5.6	2.1
1823	[24.9]	[24.9]	0.0	6.0	2.6
1824	[26.6]	[22.9]	-3.7	6.2	2.4
1825	[32.3]	[24.3]	-8.0	5.4	2.3
1826	[30.7]	[22.1]	-8.6	(4.9)	2.5
1827	[27.0]	[23.6]	-3.4	(4.6)	3.5
1828	[26.9]	[23.5]	-3.4	(5.1)	3.1
1829	[31.5]	[21.3]	-10.2	(5.8)	2.5
1830	(34.8)	(28.5)	-6.2	(6.3)	2.8
1831	(32.4)	(29.1)	-3.4	(7.8)	3.0
1832	(32.2)	(30.8)	(-1.4)	(8.0)	(2.8)
1833	(35.9)	(33.3)	(-2.7)	(7.8)	(4.0)
1834	(30.2)	(36.0)	(+5.8)	(8.0)	(4.4)

(Van Niel 2005:329)

Figure 3-1-2 Import value of cotton yarn and textile: 1823-18332

(Guilder)

Year	Total Value
1823	2, 224, 500
1824	1, 879, 395
1825	1, 159, 402
1826	830, 291
1827	1, 933, 164
1828	990, 343
1829	539, 892
1830	519, 728
1831	560, 300
1832	70, 817

Ministerie van Kolonien (2.10.01 3018)

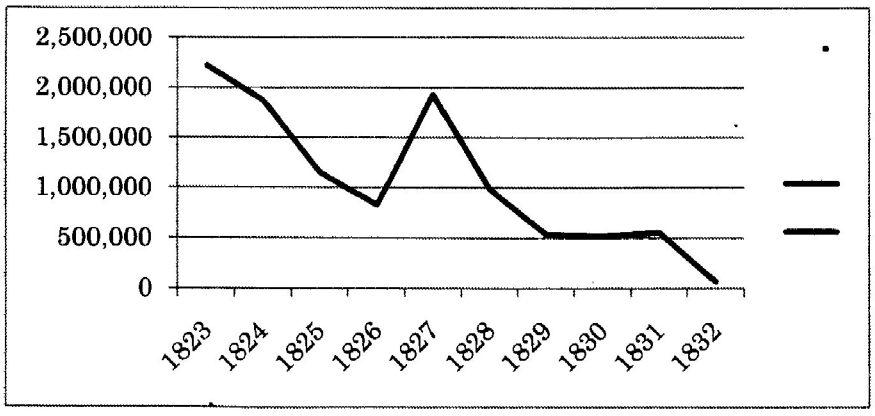


Figure 3-2-1 Import of Copper: 1823-1832

Year	Guilder	Picol
1823	581040	11000
1824	-	-
1825	617862	10745
1826	842	?
1827	581650	9670
1828	989255	11631
1829	615553	6830
1830	983413	14649
1831	593392	10655
1832	439985	6796

Ministerie van Kolonien (2.10.01 3018)

Figure 3-2-2 Coffee Production of Preanger and Buitenzorg

Year	pikols
1817	98902
1818	86137
1819	65430
1920	52675
1821	98082
1822	91685
1823	67956
1824	70993
1825	115961

(Du Bus 1827:103)