

From Smallholder Rubber Income to the Schoolfunds: Fiscal Mechanisms and the Development of Schooling in Kuantan, Riau (1916-1932)

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Abstract

This article examines the relationship between smallholder rubber cultivation, the schoolfunds (a locally administered education fund financed through compulsory contributions), and education in Kuantan during 1916–1932, highlighting the local economy as a key factor in shaping educational development. It aims to analyze and reconstruct the trajectory of educational development and sustainability in Kuantan through the schoolfunds taxation mechanism. The study employs the historical method, including heuristics, source criticism, interpretation, and historiography. The findings show that the economic opening of Kuantan through smallholder rubber plantations generated complex administrative demands, which contributed to the establishment of the schoolfunds in 1916. The schoolfunds was created to finance the overall provision of education in the Onderafdeeling Kuantan (an administrative division under afdeeling, headed by a controleur). However, the global economic crisis of the early 1930s led to a sharp decline in rubber prices and exports, directly reducing local incomes and schoolfunds revenues. This downturn resulted in the contraction of educational facilities and funding, necessitating austerity in the allocation of schoolfunds. This study argues that, structurally, the expansion and sustainability of education in Kuantan rested upon the material foundation of rubber-generated surplus, converted into public funding through a fiscal mechanism (schoolfunds). More importantly, this study contributes to a rethinking of the history of educational financing outside Java by demonstrating that educational development in Kuantan was not solely the result of colonial state intervention (top-down), but was also shaped by the stability of the smallholder rubber economy and the operation of local fiscal mechanisms.

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Introduction

Smallholder rubber plantations have long garnered scholarly attention within the context of Indonesian socio-economic history, particularly in Sumatra (Lindayanti, 1993). Numerous researchers have investigated the development of rubber cultivation, encompassing both large-scale estates (*ondernemingen*) and smallholder plantations. Key themes frequently emphasized include the expansion of rubber production, its integration into regional and global markets, plantation labor, and the transformation of rural landscapes (Stoler, 1985). A study by (Purwanto, 1992) demonstrated a correlation between the growth of the rubber economy and increased public access to education, primarily attributable to elevated incomes that enabled families to afford schooling for their children. Moreover, the research indicates that the Dutch colonial government allocated revenue from rubber export taxes to various sectors, including education in South Sumatra. However, the discourse remains centered on how education is situated within the broader context of fiscal distribution. Education has not been examined as an outcome of a structured financing mechanism; consequently, the role of fiscal schemes, such as schoolfunds, which specifically convert rubber economic surpluses into educational funding, has received limited scholarly attention.

Rubber has historically remained one of the principal plantation commodities underpinning the economy of Riau (Centraal Kantoor Voor De Statistiek Departement van Landbouw, 1930). For many years, rubber tapping has served as a significant livelihood for communities within the region (Iksan et al., 2024). Rubber plantations in this area have been managed not only by large corporations but also cultivated by local farmers (Sadikin & Irawan, 2006). A similar situation exists in Kuantan, where tapping rubber latex has historically been the primary source of income for local communities prior to the gradual replacement of many plantations by oil palm over the past two decades (Utama, 2022).

Research concerning smallholder rubber plantations in Kuantan has evolved through multiple perspectives. Early studies, such as Hamidy (2000), regarded rubber plantations as part of ancestral heritage. Arman (2020) analyzed the influence of both estate and smallholder rubber cultivation on economic growth and changing lifestyles in Kuantan. Additionally, Tsuyoshi (1997) and the Tim Proyek Inventarisasi dan Dokumentasi Kebudayaan Daerah (1986) addressed shifts in local economic conditions during the rubber boom period. Meanwhile, Indriani (2025) investigated landscape transformations resulting from the expansion of smallholder rubber and the sustainability of cultural artifacts remaining from that era. From a maritime perspective, Asnan (2016) examined the impact of rubber on maritime trade networks in Kuantan. The majority of studies on smallholder rubber in Kuantan have concentrated on production, price fluctuations, exports, and the dynamics of economic crises. Within this framework, economic transformation is frequently regarded as an isolated sector, distinct from broader social change processes. Consequently, rubber is often positioned as an export commodity, an indicator of welfare, or part of the colonial capitalist system, without a thorough examination of how the economic surplus it generates is integrated into the formation of social institutions, such as education. In this regard, rubber is seldom viewed as the foundational material enabling access to education. This analytical separation between economic and social institutions has resulted in the underexploration of the structural relationship between the smallholder rubber economy and educational development through fiscal mechanisms, such as school funds, in existing historiography.

Conversely, research concerning the development of education in Riau has predominantly concentrated on the implementation of the Ethical Policy during the colonial era and the transformation of educational structures from religious institutions to what were considered “modern” formal schools (Hafiz, 2012). Furthermore, investigations into education within Riau remain geographically confined to areas such as Siak, Pasir Pengaraian, and Pekanbaru (Wilaela, 2011). Historical studies of education in Riau have generally focused on administrative centers and power hubs such as Siak and Pekanbaru, with an emphasis on Dutch colonial policies and the involvement of local elites. Such an approach has

resulted in a top-down historiographical perspective, where educational development is primarily viewed as a consequence of state intervention and the initiatives of those in authority. This viewpoint tends to obscure regional and peripheral variations, as well as disparities in material conditions among regions, particularly regarding the capacity of local communities to access, support, and sustain educational endeavors. Consequently, this study offers a novel perspective that extends its focus beyond the central region to include peripheral regions, thereby facilitating a more comprehensive understanding of the evolution of educational institutions in Riau.

The correlation between education funding and fiscal capacity is further exemplified in Fauzianoors (2024) research conducted in the Mangkunegaran region during the Dutch colonial era. Although funding mechanisms for education were implemented through various schemes, their sustainability was consistently reliant on state revenues derived from the plantation economy. During periods of economic crisis that diminished these revenues, the allocation of educational funds was correspondingly reduced as part of fiscal austerity measures. This pattern closely resembles the situation in Kuantan, where the dependence of education funding on plantation export commodities rendered it highly susceptible to economic fluctuations.

Existing studies examining the impact of smallholder rubber plantations on society in Kuantan have generally concentrated on issues such as landscape formation, plantation labor, increasing trade volumes and income levels, and alterations in local lifestyles. Although distinct studies have addressed either smallholder rubber or education, the interconnection between these two phenomena has been scarcely examined. Smallholder rubber production is typically analyzed within the framework of commodity production and regional economic support. Meanwhile, studies of educational development in Indonesia are often associated with administrative policies and the implementation of the Ethical Policy (Marpaung et al., 2024). Consequently, the material relationship between the smallholder rubber economy and educational development, particularly regarding the mechanisms employed to mobilize and convert economic resources into educational funding, remains insufficiently explored within the historiography.

This research is founded on the premise that, since 1916, when the Riau Resident mandated that each region independently finance education, the scheme for educational funding transitioned to a local fiscal basis. In Kuantan, this transition coincided with the emergence of the smallholder rubber economy commencing in the second decade of the 20th century. This economic development not only enhanced regional economic integration but also created a necessity for educated administrative personnel. The demand for personnel skilled in reading, writing, and arithmetic was addressed through the establishment of elementary and secondary educational institutions, such as *volksschool*, *Inlandsche School der tweede klasse*, and *vervolgsschool*. In this context, the *schoolfonds* became the principal fiscal mechanism linking local revenues to educational financing, thereby facilitating the establishment of schools, remuneration of teachers, allowances, and the development of educational infrastructure.

This research is confined to the year 1932, a period that signifies the phase during which a crisis in the educational financing mechanism occurred in Kuantan. The global economic downturn of the early 1930s resulted in a precipitous decline in rubber prices, which by 1932 had decreased to approximately 1.50 f per picul. This economic decline markedly diminished local incomes and the revenue base of the school fund. The ongoing crisis compelled the allocation of the school fund to be conducted with maximum economic efficiency. Furthermore, this situation was intensified by the fact that, in 1932, the school funds were actually in deficit due to unpaid arrears from the previous year's school fund, necessitating that the remaining funds be allocated as economically as possible. This article posits that the development of education in Kuantan was not chiefly attributable to colonial administrative success but was fundamentally based on the financial contributions of local smallholder communities through the rubber economy, which constituted the local income tax base. The role of

colonial fiscal mechanisms, particularly the school fund, was to organize and channel these locally generated resources into educational financing.

Research Methods

This study employed the historical method. The research process commenced with the selection of the topic, followed by heuristics, source criticism, interpretation, and historiography (Kuntowijoyo, 2005). The heuristic stage involved collecting both primary and secondary sources pertinent to the research topic. The primary sources utilized include "Memorie van Overgave" from the National Archives and the archives of "Bestuurszaken Der Buitengewesten" (BG/AB): "Ontheffing zelfbestuur: van Loboek Djambi van zijn waardigheid en tijdelijke opdracht van het bestuur over dat landschap aan den Controleur der Kwantandistricten inlijving Kwantan (Riouw en Onderheerigheden)" from the National Archives of the Republic of Indonesia (ANRI) in Jakarta to obtain specific reports on the conditions of the Kuantan region and retribution policies during the Dutch colonial period. Additionally, reports from "Departement van Lanbouw, Nijverheid en Handel" were used to obtain export statistics for rubber and other commodities in Riau en Onderhoorigheden from the National Library of the Republic of Indonesia. The study also referenced "Algemeen verslag van het onderwijs in Nederlandsch-Indië over 1923 en 1924" from Lawang Sejarah UGM, as well as newspaper articles ("*Deli Courant*" and "*Sumatra Bode*") from Delpher. Meanwhile, secondary sources include books from the Senobudoyo Library in Yogyakarta, the Soeman HS Library in Pekanbaru, and scholarly articles relevant to this topic.

The subsequent phase involves source criticism. External criticism is undertaken to verify the authenticity and credibility of the source. Internal criticism is employed to evaluate the content of the source, considering any potential administrative bias and colonial viewpoints present. The process of source criticism also includes comparing various sources, such as field research reports and newspaper articles authored by parties outside the official government domain, in order to identify diverse perspectives and mitigate bias. The third stage is interpretation, which involves examining the interrelations among economic, fiscal, and educational data to develop a coherent historical explanation. The findings of this interpretation are then systematically presented in the final phase, known as historiography (Kuntowijoyo, 1995).

This research employs a socio-economic approach. According to Kuntowijoyo (2003), social history is frequently closely intertwined with economic history, and is thus often referred to as socio-economic history. This study utilizes a socio-economic historical methodology to analyze the relationship between changes in the local economic base and the development of social institutions. In this context, the economic aspects examined include smallholder rubber production, price fluctuations, exports, and changes in community income, which serve as the basis for fiscal revenue. Concurrently, the social aspect is analyzed through educational developments, such as the number of schools, students, and the demand for educated administrative personnel. These two dimensions are interconnected through an analysis of fiscal mechanisms, particularly school funds, which act as intermediaries in converting the rubber economic surplus into educational funding. Consequently, the socio-economic approach in this study perceives the economy and society not merely as separate domains, but as interconnected through the fiscal structure that links them.

Results

Smallholder Rubber Cultivation: The Primary Economic Potential of Kuantan

The emergence of rubber plantations in Sumatra was influenced by global market demand. The rapidly growing automotive industry in the early 20th century rendered rubber a highly sought-after commodity during that period (Jovanda et al., 2024). Rubber quickly became a strategic commodity in the global economy and encouraged the establishment of rubber plantations across the

Indonesian archipelago, including the *Onderafdeeling* Kuantan, *Afdeeling* Indragiri, *Residentie* Riouw en *Onderhoorigheden* (Kops, 1914). Rubber cultivation in Kuantan itself is generally carried out by bumiputera communities. This planting emerged as a response to the desire to participate in the export commodity trade to improve their economy.

The residents of Kuantan commonly refer to the activity of tapping rubber as “manakiak gotah” (Azmi et al., 2015). Prior to the introduction of rubber, the primary occupations of the inhabitants of Kuantan were rice cultivation and animal husbandry, primarily for self-sufficiency (Schwartz, 1893). Some individuals additionally harvested wild latex from the forest (“Mededeelingen Betreffende De Kwantan-Districten,” 1910). They also collected various forest products; however, during their trade transactions, a barter system was predominantly employed, resulting in limited circulation of money within the region during the first decade of the 20th century. Following the introduction of Hevea rubber to Kuantan in the second decade of the 20th century, rubber tapping rapidly emerged as a significant livelihood for the local population (Stuurman, 1932). Unlike the previously barter-centric economy, processed rubber could be directly sold by farmers to local middlemen known as *toke*. This system facilitated the immediate conversion of farmers' produce into cash, thereby establishing a cash surplus that served as the foundation for taxation in the second decade of the 20th century.

Rubber in the Kuantan region is renowned for its high quality. Rubber from Kuantan is pre-processed through screening, coagulation, pressing, and drying. This process produces a cleaner, more durable sheet rubber. The superior quality of this rubber has contributed to its popularity in the export market in Singapore (Slotemaker, 1926). Consequently, this quality has facilitated the region's development as a supply area (hinterland) for rubber commodities in *Afdeeling* Indragiri, *Residentie* Riouw (“Instelling van Het Gouvernement Zuid Sumatera,” 1927).

The Development of the Smallholder Rubber Economy and the Emergence of Administrative Pressures

The economic liberalization of the Kuantan region and its increasing significance as a rubber-producing area have not only elevated production levels and trade volumes but have also introduced a more intricate local administrative workload compared to the past, when communities primarily cultivated subsistence crops. The integration of this region into export markets necessitated that local administrators acquire comprehensive understanding of administrative affairs, including tax management, production reporting, and other essential aspects pivotal to the development of the Kuantan region. However, this requirement was not readily fulfillable due to the limited literacy skills of the local elite (*zelfbestuur*) in reading and writing Latin script. Nevertheless, this condition should not be solely interpreted as a literacy deficiency but rather as a reflection of restricted access to formal colonial education and the differences in knowledge systems that evolved within local communities, which were predominantly centered around *surau*-based education and Arabic-Malay literacy.

This limitation, manifested as a disparity between colonial administrative requirements and the literacy levels available at the local level, is documented in various colonial reports from the second decade of the 20th century. A report authored by an assistant resident named De Haan, in his attempts to identify a replacement for one of the *Orang Gedang* who reportedly died in 1915, expressed his disillusionment with the capabilities of the *Orang Gedang* in Kuantan. *The Orang Gedang* served as the local elite or leaders (*zelfbestuur*) responsible for governing districts within Kuantan. De Haan noted that he could not place high expectations on the *Orang Gedang* in Kuantan, as they had not yet attained sufficient competency to serve effectively as local government officials (*Inlandsche bestuurambtenaren*). His assessment was not merely personal critique but rather indicative of the structural limitations present. During his evaluation of the *Orang Gedang*, still in office, De Haan observed that none possessed literacy in Latin, thereby hindering their familiarity with the fundamental rules governing the administrative system provided by the *Controleur* Kuantan (*Ontheffing Zelfbestuur*:

Van Loeboek Djambi van Zijn Waardigheid En Tijdelijke Opdracht van Het Bestuur over Dat Landschap Aan Den Controleur Der Kwantandistricten Inlijving Kwantan Districten, 1918).

Pauw, the Kuantan Controleur, also reported that the Kuantan region began to open up economically in the second decade of the 20th century, and the Kuantan community enthusiastically embraced this development. However, this economic progress was not supported by the ability to read and write Latin among local leaders. This situation rendered administrative matters in Kuantan challenging. The *Orang Gedang* were required to attend meetings, coordinate with the Dutch colonial government (Controleur), manage tax records, report on rubber in Kuantan at rubber meetings, perform herendients (compulsory labor), and other tasks. These responsibilities would have been difficult to fulfill without the most basic skills: reading and writing Latin script (Ontheffing Zelfbestuur: Van Loeboek Djambi van Zijn Waardigheid En Tijdelijke Opdracht van Het Bestuur over Dat Landschap Aan Den Controleur Der Kwantandistricten Inlijving Kwantan Districten, 1918).

The administrative system of the colonial government, which integrated all regulations and coordination through the Latin alphabet and the literacy skills of the Gedang people, who were accustomed to the Arabic-Malay script, created a challenging situation for both parties. To address this issue, the Dutch colonial administration attempted to recruit scribes from West Coast Sumatra to manage all administrative matters in Kuantan; however, this was merely a temporary solution until the administrative personnel in Kuantan could read and write in Latin (Ontheffing Zelfbestuur: Van Loeboek Djambi van Zijn Waardigheid En Tijdelijke Opdracht van Het Bestuur over Dat Landschap Aan Den Controleur Der Kwantandistricten Inlijving Kwantan Districten, 1918). The decision to bring in administrative staff from West Coast Sumatra is closely linked to regional disparities in the development of formal education since the previous century. A map illustrating the distribution of schools in West Coast Sumatra shows that second-class schools and village schools have existed since the 19th century (Anwar et al., 1986). A teacher training school (kweeksschool) was also established in Fort de Kock in the 1850s (Amran, 1981). According to records from the Bureau van den Onderwijsraad, colonial educational statistics in 1923 indicated that the number of volksschools in West Coast Sumatra had reached 545 units, compared to approximately 79 schools in Riouw and its dependencies (Bureau van den Onderwijsraad, 1924).

In executing these educational initiatives, the Kuantan controller could not anticipate receiving subsidies from the Dutch colonial government. This was due to the fact that, since 1916, the Resident of Riouw had instituted a regulation (zelfbestuursverordening) stipulating that all educational expenses in the Resident of Riouw and its dependencies would be covered by the respective regional budgets. Consequently, if the Kuantan controller sought to establish a comprehensive educational system in Kuantan, he would be compelled to depend on local taxation within the Kuantan region (Stuurman, 1932).

Since the implementation of this regulation, educational funding has been reliant on local finances that allocate resources through the schoolfonds (education fund) taxation mechanism (Stuurman, 1932). In this context, the education fund is directly dependent on the rubber economy, as nearly all Bumiputera in Kuantan at that time depended on rubber plantations for their livelihood. Prior to the development of rubber cultivation, residents in this region relied on subsistence rice farming, which did not generate substantial cash surpluses. (Ontheffing Zelfbestuur: Van Loeboek Djambi van Zijn Waardigheid En Tijdelijke Opdracht van Het Bestuur over Dat Landschap Aan Den Controleur Der Kwantandistricten Inlijving Kwantan Districten, 1918) (“Het Westkustrapport,” 1928).

The integration of this region into the rubber export market considerably enhanced the income of the Kuantan community (Rachman, 1924). In 1919, smallholder rubber production in Kuantan amounted to approximately 1,000,000 kilograms. By 1927, rubber exports by smallholders reached approximately 2,288,790 kilograms. In 1928, the total rubber exports further increased to approximately 3,000,000 kilograms. According to Indragiri's 1928 export data, rubber was the second-

largest export commodity after copra (Centraal Kantoor Voor De Statistiek Departement van Landbouw, 1930). This growth in income facilitated the consistent and systematic payment of schoolfonds taxes. In 1927, the recorded revenue from schoolfonds amounted to f.14,394 (Couvreur, 1932).

The Institutionalization of the Schoolfonds and the Development of Educational Facilities in Kuantan

In 1918, it was documented that at least one sekolah rakyat (people's school) was present in Iboel, and a sekolah kelas dua (second-class government school) was located in Taluk, the administrative center of Onderafdeeling Koeantan. (Bestuurzaken Der Buitengewesten (BG/AB): Afd.Btb.Inlijving Kwantandistricten (Riouw En Ondh), 1921; Ontheffing Zelfbestuur: Van Loeboek Djambi van Zijn Waardigheid En Tijdelijke Opdracht van Het Bestuur over Dat Landschap Aan Den Controleur Der Kwantandistricten Inlijving Kwantan Districten, 1918). To establish an effective education system in Kuantan, the controleur needed to guarantee the efficient operation of the funding scheme. The controleur communicated the regulations concerning the tax system to the village heads. Subsequently, tax collection was conducted by the penghulu (Couvreur, 1932). Furthermore, the budget allocated to the education sector has been fully delegated to regional authorities. All activities related to the implementation of education must be organized within a concrete and systematic framework to ensure that the teaching and learning process proceeds without interruption.

The role of school funds in the development of education in Kuantan can be observed through the growth of educational institutions over a specific period. The Dutch colonial administration promoted fiscal discipline within the community by directing education as an economic responsibility. The families of local officials predominantly received formal education, initially to acquire literacy in Latin. Penghulu also encouraged the community under their jurisdiction to participate in schooling (Couvreur, 1932). By 1930, the number of schools in Kuantan continued to increase, along with the number of students. The schools in this onderafdeeling reached a total of 20, accommodating 1,634 students. In 1932, the school fund, which was originally a separate tax, was integrated with income tax, with the levied amount set at 10% of the primary income tax. The minimum contribution was f0.50. This tax was deposited into the landschapskassen (landscape treasury) (Stuurman, 1932).

The funds raised from these school funds will ensure the structural sustainability of education. The school funds were used to support the overall development of Onderafdeeling Kuantan, including the construction of new school buildings, improvements to school facilities, teacher allowances, and teacher training in Rengat. The teacher training in Rengat is financed by the school funds at a cost of approximately ±f16 per month. In 1932, the number of schools in Kuantan remained at twenty, with a total enrollment of 2,036 students. In mid-1932, there was a slight recovery in prices, reaching f 3.50–3.60 for low-grade rubber and up to f 5–6 for dry rubber. In this context, the increase in student numbers in 1932 should be understood as a residual effect of the previous period of prosperity and the public's expectation of economic recovery. The following is a list of the schools built in Onderafdeeling Kuantan up to 1932, together with their enrollments.

Table 1. Table of locations of sekolah rakyat (volkschool) and their students in Onderafdeeling Kuantan

No	location	1930		1932	
		Male	Female	Male	Female
1	Iboel	40	9	31	13
2	Loeboek Ramo	48	18	26	10
3	Tjengar	43	9	22	10
4	Loeboek Djambi	76	8	50	4
5	Pabaoen	18	22	19	22
6	Loeboek Ambatjang	58	14	50	7

7	Goenoeng	60	5	46	-
8	Kari	61	12	50	14
9	Sentadjo	90	37	100	70
10	Kopah	88	9	60	10
11	Benai	74	1	57	21
12	Pangean	85	5	102	7
13	Logas	24	-	46	-
14	Kota Toeo	99	8	98	8
15	Kota Radjo	70	-	92	13
16	Inoeman	81	2	110	8
17	Tjerenti	104	8	91	11
	Total	1.119	167	1.387	265

Source: (Swaart, 1930)

Table 2. *Sekolah pemerintah (gouvernementsschool)* and their children in *Onderafdeeling* Kuantan

No	Location	1930		1932	
		Male	Female	Male	Female
1	Gouvernementsschool / 2de klasse school (Taluk)	203	46	211	46
2	Sekolah lanjutan/ <i>vervolg</i> school (Lubuk Jambi)	57	-	76	-
3	Sekolah lanjutan/ <i>vervolg</i> school (Baserah)	58	4	50	1
	Total	298	50	337	47

Source: (Swaart, 1930)

Based on Table 2, it appears that schools are distributed across various villages or negari in Kuantan. Over time, the establishment of schools in the Kuantan region facilitated opportunities not only for local administrators but also for the entire Kuantan community, which enjoyed good economic status due to the rubber industry. Enrollment in these schools included both male and female students. In 1932, the first female teacher was appointed to instruct at the Sentadjo volksschool. This appointment led to a significant increase in student enrollment at the school within two weeks, rising from 32 to 80 students. The surge in enrollment also had additional positive effects; new classes focused on handicrafts were introduced, held bi-weekly. These classes became highly popular among the students of Sentadjo volksschool. Moreover, several female students who had previously left the school one or two years earlier expressed a desire to re-enroll and participate in these classes. Although the number of female students was generally smaller, following the appointment of female teachers and the introduction of these subjects, the female student population experienced a rapid increase (Couvreur, 1932).

Nonetheless, there exists an additional factor that facilitates the financing of education in Kuantan. A monthly school fee is levied, amounting to f1.10, paid consistently each month. This fee is intended to support the operational expenses of each individual school. The revenue generated directly contributes to the human resources within the respective schools. Concurrently, the schoolfunds funds all educational services at *Onderafdeeling* Kuantan. These two sources of funding mutually complement each other. (Stuurman, 1932).

The Economic Crisis and the Disruption of Educational Financing

The implementation of schoolfunds and education at *Onderafdeeling* Kuantan continued smoothly as long as the rubber economy was booming. However, this situation changed during the economic crisis. The community's economy was devastated by falling rubber prices. The community

lost their primary source of income that had brought them years of economic prosperity. This decline in income directly impacted the community's income tax and schoolfunds. This was evidenced by the decline in the number of schoolfunds received by Onderafdeeling Kuantan. During the community's rubber boom, for example, in 1927, the number of schoolfunds reached f14,394. In 1929, when signs of a global economic crisis began to appear, the number of schoolfunds dropped to f7,624. In 1930, when a major economic crisis occurred, the number of schoolfunds dropped further to f4,806. In 1931, the number of schoolfunds collected dropped even further, to only f1,924. In that year, there were still outstanding arrears of f1,879.05. For more clarity, the amount of rubber exports and schoolfunds from year to year can be seen in the table below:

Table 3. Development of Rubber Exports, Number of Schoolfunds, and Number of Formal Colonial Schools in Onderafdeeling Kuantan (1919–1932)

No	Year	Amount of Rubber Export	Schoolfunds	Total Number of Formal Colonial School
1	1919	± 1.000.000 kg	Data not available	2 (1 2de klasse school & 1 volksschool)
2	1927	± 2.288.790 kg	f. 14.394	Data not available
3	1929	unknown	f. 7.624	Data not available
4	1930	± 40.918 kg	f. 4.806	20 (17 volksschool & 3 gouvernementsschool)
5	1931	± 226.340 kg	f. 1.924	20 (17 volksschool & 3 gouvernementsschool)
6	1932	0	Data not available (arrears from 1931: f. 1,879)	20 (17 volksschool & 3 gouvernementsschool)

Source : (Bestuurzaken Der Buitengewesten (BG/AB): Afd.Btb.Inlijving Kwantandistricten (Riouw En Ondh), 1921; Couvreur, 1932; Swaart, 1930)

Table 3 illustrates that the development of formal colonial education in Kuantan paralleled the expansion of the smallholder rubber economy and the capacity of school funds to finance education. From the late 1910s to the 1920s, increasing rubber exports were accompanied by elevated school fund revenues, which subsequently correlated with the expansion of formal colonial schools in the early 1930s. However, when the global economic crisis commenced, leading to a downturn in rubber trade and revenues in the early 1930s, school fund revenues also experienced a significant decline. Although the number of schools remained relatively stable between 1930 and 1932, archival records indicate that their operational sustainability began to diminish. Despite the continued production and export of rubber during the economic crisis, the sharp decline in prices resulted in a substantial reduction in farmers' income. In response to the decline in rubber prices, there have been attempts to diversify the local economy through the cultivation of tobacco and gambier. Nevertheless, these initiatives remain spatially limited, encompassing only approximately 4 of Kuantan's 35 villages, and have not yet developed into a sufficiently significant source of income to supplant rubber as the primary economic base.

In 1932, efforts to develop education became increasingly challenging, as evidenced by the rejection of new schools and the cancellation of plans for the inaugural girls' school. From a community standpoint, this circumstance did not incite open opposition but rather fostered pragmatic adaptation to prevailing limitations. Educational ambitions endured, albeit with adjustments to the narrowing access, while households persisted in sending their children to available schools despite

capacity constraints (Couvreur, 1932). Although direct data regarding alternative educational practices in 1932 is limited, there is no substantial indication that the community was broadly transitioning from formal to informal educational forms such as *surau*. This is corroborated by the 1936 *Memorie van Overgave* report, which demonstrated that the Kuantan community maintained its participation in formal education despite post-crisis simplifications, rationalizations, and modifications to its financial mechanisms within the colonial education system. With appropriate interpretive caution, this situation suggests that formal education remained the primary reference point for the community, notwithstanding its limited expansion and institutional capacity during the economic crisis (JHR, 1936).

Conversely, the economic crisis also impacted the dynamics of women's education in Kuantan. Initially, interest in women's education was comparatively low, as evidenced by the limited number of female students enrolled in schools. This situation prompted the formulation of plans to establish a girls' school in 1931 aimed at increasing enrollment. However, this initiative was abandoned owing to the deteriorating local economy and declining school budgets. As a more modest alternative, in 1932, the first female teacher was appointed at the *Sentadjo Volksschool*, accompanied by the introduction of classes designed to attract female students (Couvreur, 1932). The positive reception of this development indicated that women's educational aspirations began to evolve when suitable access and approaches were provided. Nonetheless, these aspirations were not supported by sufficient institutional expansion, as no new schools were established. Consequently, the crisis did not eliminate women's educational ambitions; rather, it constrained and limited them within a restricted institutional framework.

The colonial government was compelled to implement substantial austerity measures due to a drastic reduction in schoolfunds funding. Consequently, they reduced the number of teachers and eliminated various allowances for educators, including housing and performance allowances. The collapse of rubber prices, triggered by the *Maleise* crisis, directly affected community incomes. As rubber prices declined, household earnings diminished, which in turn impacted income tax revenues. Additionally, this downturn adversely affected the schoolfunds and monthly educational fees in Kuantan. The disruption of funding sources led to interruptions in educational services. Despite these austerity efforts, the remaining schoolfunds was inadequate to cover all expenses in the Kuantan *Onderafdeeling*. Attempts at economic diversification during the crisis were limited, with minimal expansion in four villages and no significant development of alternative fiscal mechanisms outside the rubber economy. The sole solution to these challenges was the provision of an educational subsidy from the Dutch colonial government (Couvreur, 1932). However, securing such subsidies proved difficult, as the economic crisis affecting Kuantan was also prevalent in other parts of Dutch colonial territories (Padmo, 1991).

Discussion

The opening of a region to economic activity exerts a profound influence, both on the region itself and on its inhabitants. Although this area was annexed by the Dutch in 1905, the colonial administration initially focused solely on appointing competent local officials, those capable of reading and writing in Latin, only after this region began to emerge as a significant producer of export-oriented smallholder rubber (W.A. Kanter, 1908). The economic development of a region frequently precipitates social change among its population. From a social historical perspective, a primary focus of investigation involves examining societal transformations (Sartono, 1992). One method of understanding these social changes is by analyzing modifications in social institutions, which have engendered diverse transformations within community life (Kuntowijoyo, 2003). Within the context of Kuantan, integration into the smallholder community rubber economy became a vital link between economic change and the evolution of educational institutions.

The findings of this study suggest that the educational transformation in Kuantan, which took place between 1916 and 1932, is intrinsically linked to the structural changes in the local economy that

commenced in the second decade of the 20th century. The transition from a subsistence production system to a rubber-based export economy generated significantly increased cash flow compared to previous periods. This economic shift resulted in a transformation in the residents' understanding and utilization of money. The relatively stable cash flow from rubber sales to merchants enabled farmers to sell their rubber directly and receive immediate cash payments. In this environment, money was no longer viewed as limited or incidental; rather, it became a routine and predictable element of economic activity. This development fostered the emergence of more quantifiable economic practices, wherein income could be measured and expenses systematically planned. Household expenditures could be allocated to various domains beyond mere consumption. Such considerations allowed the community to advance beyond short-term consumption towards strategic financial planning. Within Kuantan, education was regarded as an investment in the future. The resultant cash surplus further facilitated the planning of educational expenses. In this context, education can be understood as a form of social investment, whereby individuals began to recognize the long-term benefits of utilizing money presently, an approach contributing to long-term socio-economic transformation (Psacharopoulos, 2006).

Kuantan's integration into export markets, the intensification of trade, and the colonial government's increasing interest in rubber necessitated a proficient bureaucracy capable of reading and writing in Latin script. However, the local officials in Kuantan during the second decade of the twentieth century were unable to fulfill this requirement. Their deficiency was subsequently utilized to promote the development of formal education. Within this framework, such a policy is often regarded as a long-term strategy to enhance administrative capacity at the local level through the implementation of formal education. Nevertheless, educational development in this context can also be interpreted as part of a colonial efficiency strategy. In the context of the Ethical Policy, the development of colonial education was frequently directed toward satisfying the economic and administrative objectives of the colonial government by providing educated labor at reduced costs (Kusmawati et al., 2023). Specifically, in Kuantan, one of the primary objectives was to decrease reliance on administrative personnel from outside the region, such as clerks from Westkust of Sumatra, which entailed additional costs and impeded bureaucratic processes. Having a locally educated workforce would have represented a more economical and practical solution for managing colonial administration.

Furthermore, regulations enacted by the Resident of Riau in 1916 mandated that the Kuantan controleur rely on local revenues to advance educational development within the region. This context accentuates the pivotal role of the schoolfunds. The promulgation of the Riau Resident's regulations in 1916, together with the establishment of the schoolfunds during the same year, signified the introduction of educational funding into the regional fiscal framework of Kuantan. The schoolfunds functioned as a colonial fiscal instrument, connecting economic transformation with the development of educational institutions. Although their creation was driven by administrative policy, their effectiveness and sustainability were largely contingent upon the community's capacity to generate cash income from rubber. In the absence of rubber income, it would be exceedingly challenging for the community to sustain payments towards the schoolfunds and monthly school fees. Similarly, the construction of educational facilities would be highly difficult without consistent funding derived from community rubber revenues.

Nevertheless, the function of school funds as fiscal instruments cannot be divorced from the power relations that underpin them. Communities were compelled to contribute via taxes and fees, while access to education was provided within the confines of colonial administrative requirements, leaving no scope for equal participation in policy formulation. This is evidenced by various instances, such as the rejection of community proposals for new schools and the establishment of the first girls' school. In essence, school funds served not only as a financial mechanism but also as a coercive fiscal

obligation. This is exemplified by the integration of communities into the colonial economic system through economic (fiscal) obligations that concurrently determined their access to education.

The integration of the schoolfunds into the income tax structure in 1930 demonstrated the increasing significance of this tax for educational development in Kuantan. However, the global economic crisis that occurred around the end of 1929 or the beginning of 1930 adversely affected the sustainability of education in Kuantan. This economic downturn caused a sharp decline in rubber prices, which directly impacted the income of the Kuantan community. In 1927, the amount of schoolfunds collected reached F 14,394. This figure decreased by 87% in 1931 to F 1,924, indicating a substantial decline following the global economic crisis. Within the framework of monoculture dependence, this situation can be understood as a consequence of a region's economic reliance on a single primary commodity. Excessive dependence on a single commodity renders farmers highly susceptible to market price fluctuations, where declining demand or surplus supply can lead to significant economic losses (Khatri & Amina, 2025). In the context of Kuantan, this condition resulted in the absence of an economic buffer mechanism when rubber prices fell. Consequently, the effects of the crisis were felt not only at the level of production and community income but also directly impacted local fiscal capacity, including school funds, as evidenced by the reluctance to establish new schools, reductions in teacher allowances, and other facilities.

This article contributes to the historiography of colonial fiscal history and the historiography of colonial education outside Java. First, within colonial fiscal history, the article demonstrates that the economic surplus from small-scale rubber plantations was mobilized through local fiscal mechanisms to finance education. By positioning community revenues, tax practices, and school funding as the primary units of analysis, the article asserts that local fiscal capacity was not solely determined by colonial state policies but also shaped by the economic dynamics of the community. These findings demonstrate that the rubber economy not only generated surpluses but also served as the material basis for the formation of social infrastructure through institutionalized fiscal mechanisms. Furthermore, the article demonstrates that the sustainability of these mechanisms depended on the availability of economic surpluses. When the crisis reduced rubber revenues, households' capacity to meet fiscal obligations weakened, reflected in increasing school funding arrears. Under these conditions, household allocations tended to prioritize basic needs (food), so fiscal compliance cannot be understood solely as a form of colonial discipline but rather as a practice contingent on material economic conditions.

Secondly, within the historiography of colonial education outside Java, this article challenges the prevailing narrative that colonial education was solely a state initiative financed from the central authority in Batavia (Bureau van den Onderwijsraad, 1924). In peripheral regions such as Kuantan, funding for education was not exclusively dependent on the colonial government but also relied on local fiscal mechanisms arising from the smallholder rubber economy. Moreover, this finding corroborates that the Kuantan community, as an area of production, was not merely a passive recipient of colonial policies but also an active participant in supporting the sustainability of educational institutions through revenues generated from the smallholder rubber economy. Under this framework, the fiscal mechanisms of colonial education outside Java should be understood as a hybrid process, wherein state initiatives operated in conjunction with the mobilization of local resources, reflecting a relationship of interdependence between colonial government policies and local communities (Nyoni, 2019). Consequently, this article redefines the understanding of colonial education from a purely centralized, top-down state project to one that emerges from the interaction between colonial fiscal policies, local economic transformation, and community material contributions.

Conclusion

Kuantan's participation in smallholder rubber export activities during the second decade of the 20th century transformed its position within the colonial economic structure of the Residentie Riouw

en Onderhoorigheden. Simultaneously, this engagement increased the circulation of cash, which served as the material foundation for local fiscal policy. This cash surplus subsequently became the basis for educational financing, particularly following the inauguration of the school fund in 1916. Through this mechanism, educational funding shifted from being solely dependent on administrative allocations to being directly linked to the conversion of community economic surpluses into the fiscal system. Consequently, education in Kuantan emerged as a product of self-reliant fiscal policy driven by a market economy, rather than merely as a result of top-down colonial government policies. Educational institutions also evolved as institutionalized social infrastructure, fostering an orientation towards education while simultaneously transforming the social structure of the local community. This transformation was characterized by a transition from traditional surau-based education to a formal education system. It is noteworthy that education funding in Kuantan was not solely administrative but also structural and economic, illustrating the dichotomy between bureaucratic policies and actual economic capacity. The sustainability of school funding was thus more closely linked to the community's economic capacity than to administrative decisions alone. Nonetheless, reliance on the rubber economy rendered the consistency of funding vulnerable to price fluctuations and global trade dynamics, as evidenced by the sharp decline in local community incomes and school funds during the economic crisis of the 1930s. Therefore, the development of education in Kuantan between 1916 and 1932 was not only contingent upon the smallholder rubber economy but also inherently connected to its instability, thus evolving within a framework characterized by organized vulnerability.

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