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SPECIAL FEATURE

From Indenture to Electronics: Brokered Labor Regimes in Johor, Malaysia

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Abstract

This article develops the concept of a brokered dormitory labor regime (BDLR) to analyze Johor, Malaysia's electrical and electronics export-processing zones, where debt-financed recruitment, deceptive contracting, and restricted mobility synchronize labor turnover with the accelerating demand for semiconductor manufacturing driven by artificial intelligence. Two intermediaries, the labor agent and the kadar, secure this synchronization by controlling workers' social reproduction. Tracing this regime's genealogy to the nineteenth-century kangani and kangchu systems in the Straits Settlements, the article argues that the BDLR reactivates a colonial infrastructure of coerced migrant labor, revealing a recurring pattern of asynchronous synchronization between capital and labor across successive industrial revolutions.

Keywords: artificial intelligence; forced labour; indenture; brokerage; Malaysia

Introduction

Migrant workers assembling and testing semiconductors in Johor, Malaysia, are recruited into debt, stripped of their passports, and confined to employer-run dormitories. This article traces that regime's genealogy to forced labor infrastructures first assembled under colonial rule and shows why, under the accelerating demands of AI-driven semiconductor production, capital has reactivated them as what I define as a brokered dormitory labor regime (BDLR).

Understanding why requires situating this case within existing scholarship on labor and automation.

Scholarly literature on AI and automation has documented how digital tasks, organized as fragmented, often invisible micro-operations, form an integral layer of AI production:[1] what an expanding body of research has termed "hidden labor" and "ghost work" behind the global digital supply chain.[2] This literature demonstrates that emerging technologies stratify global labor regimes (LRs) doubly: technically, through a hierarchy of tasks from data annotation to chip fabrication that concentrates value at

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the top and precarity at the bottom, the "smiling curve" long documented in electronics manufacturing;[3] and geographically, through the relocation of the least automatable, most labor-intensive stages to jurisdictions where labor can be secured most cheaply.[4] This dynamic has historically been named the new international division of labor.[5]

Yet this literature has followed the first form of stratification into digital and platform-based work far more often than the second into manufacturing: empirical research on automation and labor within electronics and back-end semiconductor production remains comparatively limited.[6]

This article focuses on the second kind of stratification, where a semiconductor supply chain meets the coerced LR that supplies its labor-intensive core.

Recent analyses indicate that Southeast Asian labor systems, particularly those associated with the Chinese 1990s–2000s electronics industry model, have been rearticulated within Southeast Asia's export-oriented manufacturing zones, particularly in Thailand, Cambodia, Vietnam, Indonesia, and Malaysia.[7]

Although the SIJORI CBR has long been a central back-end manufacturing site for East Asian and Western electrical and electronics (EE) global value chains (GVCs), the corridor has recently been repositioned within both the U.S. Pax Silica initiative and China's Belt and Road Initiative (BRI), attracting multinational firms involved in microchip assembly, semiconductor testing, and AI data-center construction. In 2023, Malaysia, which hosts 13 percent of global semiconductor assembly, testing, and packaging operations, became the largest source of U.S. chip assembly imports while also positioning itself within Chinese BRI regional integration strategies.[8] As of 2024, Johor recorded RM9.8 billion in EE investments in just nine months, 34 percent of Malaysia's total EE investment, hosting approximately 51 approved data-center projects.[9]

The key driver of Johor's EE export processing zones (EPZs) is a workforce of temporary migrants, mainly from Indonesia (40 percent), Bangladesh (28 percent), Nepal (16 percent), and other Asian countries.[10] With severely limited rights and no access to citizenship, they serve as a stable source of "on-demand" exploitable labor, accounting for 70 percent of semiconductor EPZ workers, 35 percent of whom have been reported as forced.[11]

The workers' condition of "obscene inclusion"[12] results from a precise "legal production of illegality,"[13] concepts De Genova developed analyzing Mexican migration to the United States and that Liu has extended to contemporary labor migration in Asia.[14] In particular, in Malaysian EE EPZs, a complex network of subcontracting chains, migrant brokers, and recruiting agencies, supported by both institutional and informal infrastructures, constitutes the backbone of what Liu described elsewhere as the "logistics of neoliberal slavery."[15]

Examining these contemporary migration and labor infrastructures in Malaysian EE EPZs requires embedding the analysis in a complex sociohistorical context marked by enduring forms of ethnic power, colonial structures, and uneven development.

The article is divided into three parts, examining in turn the contemporary brokerage infrastructure, its colonial antecedents, and the theoretical significance of their recurrence. Building on LR and social reproduction theory (SRT), the first part analyzes the role of brokerage infrastructures in the contemporary dormitory labor regime (DLR) at Johor's EE EPZs. In particular, I examine two broker figures (the agent and the *kadar*) that shape what I call a BDLR, where crises of social reproduction

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among workers are used to synchronize labor and capital turnover in semiconductor manufacturing.

Although the BDLR differs from Chinese and other DLRs, my aim is to embed it within local labor history, resisting an exceptionalist reading of it as another form of "hidden labor" behind Global South semiconductor manufacturing.

The second part situates the contemporary BDLR at Johor's EE EPZs against two earlier DLRs in use in the Straits Settlements in the mid-nineteenth century: the *kangchu* and the *kangani* system.

Drawing on Marxist global history and geography, the results are discussed in a "From indentured to electronics: An asynchronous synchronization" section, thereby providing an original standpoint for analyzing LRs underpinning the current technological revolution. By illustrating the longstanding role of forced migrant workers in SIJORI CBR, the article situates the genealogy of BDLR at EE EPZs within cyclical shifts in historical global capitalism.

The article offers an original lens to frame the geopolitics of automation from the standpoint of LRs in the Global South: a shift in perspective that is highly significant for the context.

In Malaysia, temporary migrant workers are the most marginalized community, a condition shared only with 800,000 descendants of the British Empire's "coolies"-indentured laborers from China and India.[16] Their historical[17] and contemporary contribution to the nation's economy and development, alongside their struggles, requires adequate representation in the current debate on AI and labor.

Qiu's genealogy of unfreedom, tracing forced labor in Foxconn's assembly lines back to the Atlantic slave trade, is a rare exception;[18] no comparable study has traced the DLR's specific history in Johor or situated it within the semiconductor industry's contemporary GVCs.

This genealogical strategy is analytically specific. In fact, whereas analyses from the Global North situate contemporary global transformations within historical trajectories of Fordism and post-Fordism, debates on so-called "hidden digital labor" in the Global South tend to adopt a presentist perspective, severed from the local labor histories in which the same working populations have long been integral to successive technological revolutions. Conversely, building on a genealogical approach and on a political economy analysis of SIJORI's GVCs,[19] the article argues that the BDLR is a structural requirement of capital's expansion, reactivating rather than merely resembling colonial infrastructures of coerced migrant labor first assembled to extract rubber and tin from the Straits Settlements a century earlier.

The BDLR in Johor, Malaysia

Since 2019, the expansion of cloud computing infrastructure, accelerated by pandemic-driven demand for digital services, has been reshaping global semiconductor markets; since 2023, the emergence of generative AI has intensified this pressure further.[20]

Capital intensity in the sector now reaches 45–57 percent of revenue, and sustaining a 10 percent return on the capacity currently being built through 2032 would require AI-related revenues of roughly $3.7 trillion annually, several times the industry's current revenue base.[21]

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After losing its position as a top microchip exporter in the late twentieth century, Malaysia has reemerged as a key manufacturing center in the global digital supply chain.[22] This resurgence unfolds within the *polycrisis* conjuncture inaugurated in 2019 and coincides with China's infrastructural shifts under the BRI and the geopolitics of decoupling and friend-shoring.[23]

Today, Malaysia accounts for about 13 percent of the global semiconductor market, with a target of 15 percent by 2030, and production is heavily concentrated in Johor, within the SIJORI Growth Triangle linking Singapore and Riau, a key offshoring zone for EE manufacturing. Between 2021 and 2024, Western and East Asian firms invested billions in Johor's EPZs for semiconductor assembly, packaging, and testing, supported by Special Economic Zones (SEZs), Free Trade Agreements (FTAs), and logistical integration with Singapore, the United States, and Indonesia.[24] Johor's incorporation into the SIJORI cross-border region has been central to Malaysia's ability to compete and partner with Singapore while sustaining low labor costs through free trade zones and fiscal incentives, positioning the country as a leading global supplier of EE manufacturing.[25]

Crucially, Malaysia's competitiveness relies on a highly regulated regime of bounded and temporary labor migration: migrant workers, who earn 32 percent less than Malaysian nationals, are systematically channeled into export-led manufacturing, construction, and agriculture, making Malaysia Southeast Asia's largest labor importer.[26] While foreign direct investment is increasingly tied to China's market size, the literature stresses that migrant labor in Malaysia operates as a composite factor of production, whose role in capital accumulation cannot be reduced to wage differentials alone.[27] In this context, the peculiarities of both EE global production and markets require an adequate theoretical framework.

Crucial to understanding labor composition in EE EPZs are the interrelations among segmented labor markets, recruitment, employment conditions, labor processes, and forms of enterprise authority and control, which coalesce into defined clusters with their own distinct logic and effects.[28]

LR theory names the interaction between social relations and institutions that tie capital and labor together in a state of relative, tension-ridden stability in specific times and places.[29] Extended through transnational labor process theory to the coordinated but geographically distributed functions of global production networks,[30] it explains how EPZs' colocation follows the interdependencies between workers' positionality in these networks and the social and institutional milieux in which they live and work.

Crucial for EPZs in EE manufacturing across Asia, the DLR extends labor relations into workers' compound dormitories, usually provided by employers or the state.[31]

The use of a dormitory is central to enforcing workers' discipline, as labor control at EPZs' DLRs is principally guided by two primary strategies: the development of (a) regimes of workers' (im)mobility and (b) infrastructures that facilitate capital reinvestment through the extraction of surplus value within the domain of workers' social reproduction.[32]

In border and migration studies, regimes of (im)mobility constitute the institutionalized ensemble of laws, policies, infrastructures, and social practices that generate, facilitate, categorize, regulate, and occasionally enforce individuals' movement or immobility across spatial and temporal dimensions.[33] Social reproduction, drawing

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from Marxian theory, refers to the processes and institutions that maintain and replenish labor power and social bonds, including activities such as cooking, cleaning, care, healthcare, and education, all of which are essential for capital accumulation.[34]

Labor in semiconductor manufacturing EPZs in Nusajaya, Kulai, and Iskandar Puteri, part of the Johor SEZs, is segmented, with 10–30 percent Malaysian workers and 70 percent temporary migrants from Indonesia, Bangladesh, Pakistan, and Nepal residing in dormitories.[35] In analyzing the Johor EE DLR, I first focus on the roles of two labor brokers: the so-called "agent" and the "kaadar," in shaping labor immobility and debt cycles that force workers into crises of social reproduction. Both roles are essential to configuring what I define as a BDLR, in which labor recruitment, shifts and turnover are synchronized with export-led manufacturing.

Approaching the DLR through the "middle space" of migration, namely brokerage infrastructures, offers a privileged methodological lens for analyzing transnational LRs.[36] In Southeast Asia, brokers have long mediated relations between capital, the state, and migrant workers, sustaining circulatory migration systems in which labor mobility is governed as an instrument of national development and capital accumulation.[37] In Malaysia, this brokerage ecology has expanded alongside the upward concentration of capital and the downward outsourcing of labor management, producing fragmented and racialized regimes of migrant incorporation.[38]

Today, ASEAN migrants are channeled into low-wage, temporary visa regimes that prohibit family formation and access to citizenship and welfare, thereby experiencing institutionalized vulnerability and permanent precarity.[39] Most of these migrants come from Bangladesh, Nepal, and Indonesia, three of the world's major sending countries, and their enduring vulnerability has fueled a dense market of intermediaries and recruiting agencies operating across legal and illegal infrastructures.

In Johor's EE EPZs, every worker is embedded in an unequal relationship with a particular broker, the so-called "agent," who controls mobility, wages, documentation, accommodation, and access to healthcare, often by confiscating passports and labor contracts.[40]

The agent plays a pivotal role in weakening migrants' power to contest or refuse labor exploitation. Migrants who become irregular, frequently due to broker-induced delays or misinformation, are highly susceptible to coercion, extortion, and deportation, while legal frameworks tie residence permits to specific employers and locations, effectively foreclosing collective resistance.[41]

These constraints intersect with dormitory-based labor control regimes. In Malaysia, federal regulations exclude migrants from the private housing market and make employers legally responsible for providing accommodation, thereby extending managerial authority into workers' private lives. In Johor, this regime is further reinforced by the institutionalization of kafala-like sponsorship systems, employer-imposed surveillance, nationality-based spatial segregation, and restricted mobility, enforced through both private security and state-led immigration policing.[42]

The synchronization of capital and labor turnover via debt brokerage

By limiting potential labor resistance and recycling the salaries of segregated worker populations into infrastructures of social reproduction, regimes of labor (im)mobility

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at DLRs reduce production costs by employing vulnerable migrant labor.[43] But how do the DLRs' politics of social reproduction relate to labor segmentation at EPZs, and how can brokers use these to enforce the turnover of labor and capital?

Drawing on SRT,[44] authors such as Mezzadri[45] identify how processes of class and societal reproduction reinforce workers' discipline and capital accumulation in Southeast Asian EPZs and DLRs, with crises of social reproduction being crucial. In analyzing DLRs in China, Yige Dong[46] characterized a "crisis of social reproduction" as an escalating contradiction between capital's requirement for healthy labor at comparatively low cost and the system's propensity to undermine the social conditions that sustain and regenerate such labor.

By the time they arrive in Johor's EPZs, migrant workers are already enmeshed in a severe financial crisis produced by debt-based recruitment. While Malaysian workers are excluded from such practices, 92 percent of foreign workers in Malaysia pay recruitment fees, and 77 percent borrow to cover these costs.[47] In Johor's and Penang's semiconductor EPZs, debt recruitment is systematically combined with deceptive recruitment, leaving workers unable to refuse or change jobs upon arrival, even when employment conditions differ from the contracts signed at home.[48] According to the International Labour Organisation and multiple NGOs, these practices constitute forced labor, a condition that is particularly acute in Malaysian EE EPZs, where 75 percent of job seekers incur debt because of recruitment fees.[49] Within Johor's EE BDLRs, debt transforms deceptive recruitment into coercive LRs, including misrepresentation of wages, working hours, overtime, pay, or termination clauses.[50] As recently as November 2025, UN human rights experts described these discrepancies between promised and actual employment terms as "widespread and systematic" among Malaysia's migrant workforce.

In Johor's EE EPZ DLRs, recruitment debt regulates work shifts and turnover in line with export-led cycles. This synchronization between capital and labor turnover is mediated by two key intermediaries: the agent and the kaadar. While employers formally sponsor and confiscate workers' passports through contractors or agents, migrants' everyday consumption and social reproduction are informally governed by the kaadar—an external broker who operates outside the firm yet remains central to labor control.[51] Typically the owner of an ethnic grocery store between industrial parks and dormitories, the kaadar extends credit for essentials like food, housing, and transport, creating a captive market for migrant workers' social reproduction. By keeping workers in debt, this figure deprives migrants of the ability to refuse orders or contest labor conditions.

Although these roles may overlap, the functional distinction between agent and *kaadar* constitutes a BDLR that differs from the Chinese model.[52] Agents handle recruitment, shift scheduling, and turnover, while *kaadars* sustain debt cycles via credit systems that extend initial debts over time and into daily life, connecting the LR to informal financial circuits. Through these intermediaries, debt systematically generates crises of social reproduction, rendering migrant labor disposable and subject to discipline, control, and deception. Crucially, by aligning debt repayment timelines with factory quotas, Johor's BDLR synchronizes labor shifts with Just-in-Time production schedules characteristic of electronics and semiconductor manufacturing.

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In wafer fabrication plants, workers reported being ordered to extend shifts whenever production spiked, with no right to decline; here, debt enforces systematic overtime.[53] Workers report that debts cannot be repaid without regular overtime, making indebtedness a structural mechanism for aligning labor availability with production targets in EE manufacturing.[54] Across Malaysian semiconductor EPZs, 92 percent of workers who had not settled their debts reported feeling compelled to work additional hours, often exceeding the legal maximum of 72 hours per week.[55] Contracts often assume at least 72 working hours weekly, relying on forced overtime as the only way to repay debts.[56]

Recent reports highlighted forced overtime as systematic across EE EPZs in different Malaysian states, with workers facing deportation. At Kawaguchi Manufacturing, a Port Klang supplier for Sony, Panasonic, and Daikin appliances, more than 200 Bangladeshi workers who had paid recruitment fees of nearly $5,000 each went unpaid for months and worked shifts of up to 24 hours without breaks. Four who protested in August 2024 were blacklisted and sent back to Bangladesh with a five-year re-entry ban; those who instead raised the issue with management directly were told they would be deported rather than paid.[57] When the factory closed in December 2024, a labor tribunal ordered over RM3 million in back wages, but workers received less than a tenth of that five months later.[58]

In "rush order" scenarios, indebted workers must accept unlimited overtime, with production quotas dictating endurance instead of legal limits.[59] Residence permits tied to a single employer mean that leaving a job turns the worker undocumented and deportable within days.

Colonial legacies: Debt brokerage and migrant labor in the straits settlements

Initially linked to studies of Chinese export manufacturing,[60] the DLR model has since been applied to EPZs across several continents.[61] However, the contemporary BDLR in Johor distinguishes itself from other DLRs, particularly the "canonical" Chinese model, by its foundation in historical colonial systems of coolie management associated with Indian and Chinese indentured labor in Malaya and Southeast Asia.[62] In fact, the concept of DLR developed as an analytical tool for studying Chinese manufacturing, but as a historical practice it dates back further, to the history of the Chinese and Indian migrant working class.

As Hamashita observes,[63] China-centered migrant networks have formed the backbone of East Asian connectivity since the early modern period and were repeatedly reworked to serve European colonial administrations and commercial interests. Along with the historical political unity of SIJORI under the Riau Sultanate until the 1824 partition, they created enduring networks of movement, commercial brokerage, and local provisioning.[64] Migrant infrastructures arose before British rule in Malaya, when the English East India Company established port settlements in the Straits of Malacca, known as the Straits Settlements, comprising Penang, Singapore, and Malacca, whose economy depended on imported Indian slave and convict labor.[65]

The immigration rate for Malaya (Peninsula Malaysia and Singapore) was the highest in the world throughout the period 1881–1939, with Chinese and Indian gross migration rates twice as high as those to the United States between 1911 and 1929.[66]

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Whereas European migration to Southeast Asia was largely voluntary, Chinese and Indian labor migration unfolded through free and semi-free arrangements mediated by labor brokers operating across legal and extra-legal channels. These brokered networks, linking recruitment, employer-provided housing, and merchant-credit relations, formed durable infrastructures of labor circulation and control under colonial rule, with lasting effects on regional LRs.[67] In the Straits Settlements, such systems were central to Malaysia's late nineteenth-century integration into the global economy, aligning labor mobilization with British imperial development, commodity demand, and the Second Industrial Revolution.[68]

The Indian kangani and Chinese kangchu systems, emerging in the early nineteenth century, constitute foundational regimes in this trajectory, both governing labor turnover through brokered management of crises in workers' social reproduction.

Both systems belong to what labor historians have called the middle ground between free wage labor and slavery, and to contract labor, indenture, and debt bondage, which persisted and, in places, intensified well after the abolition of slavery itself.[69] Brass describes employers reintroducing unfreedom under market pressure as *deproletarianization*, a process he distinguishes from the residual survival of precapitalist relations.[70] *Kangani* and *kangchu* recruitment aligns more closely with this description than with either the legal classification of indenture or free contract: workers signed documents, yet debt and confiscated wages determined whether they could refuse those terms.

In the mid-nineteenth-century Straits Settlements, the kangani system emerged as a brokered LR for recruiting Indian migrants, enabling surplus extraction within a racialized and militarized organization of colonial production.[71]

Acting simultaneously as recruiter, supervisor, storekeeper, and moneylender, the kangani, from the Tamil kan, "eye," anticipated the contemporary kaadar by embedding labor control within debt and workers' social reproduction.[72] Sub-subsistence wages, employer-provided housing, and brokered debt synchronized labor turnover with export capital production, transforming plantations into "total institutions" where dismissal entailed eviction and expulsion.[73]

Leaving before then was not simply discouraged: desertion and "malingering" were criminal offences under Straits Settlements labor ordinances, and in 1887 such convictions accounted for nearly a third of the colony's prison population; most workers returned to the same estate under police escort once released.[74]

Although profitable, endemic disease and harsh conditions repeatedly destabilized labor supply, generating crises of social reproduction that threatened accumulation.[75]

Yet, as the *kangchu* system illustrates, colonial LRs actively managed such crises to recalibrate the circulation of labor and capital, reaffirming Marx's understanding of crisis as a structural moment of capitalist reproduction and renewal.[76] Alongside the *kangani*, the *kangchu* system governing Chinese indentured labor further mobilized social reproduction crises, most notably through opium as a biopolitical technology, to regulate labor intensity in line with capital turnover.

Like the *kangani*, the *kangchu* system recruited Chinese migrant workers, such as the Hoklo, Hakka, Hailam, Teotjoe, and others, for plantations and mining enterprises across the Straits Settlements and the Malay world.[77] Recruited through credit-ticket schemes at local food courts (*kedeh nasi*), workers arrived with substantial debts

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(£10–£15, roughly a year's wages), were housed in companies' dormitories (*kongsi*) and were bound to Hokkien labor brokers (the *taukeh*), who controlled wages, housing, and consumption, foreshadowing the contemporary BDLR.[78]

Debt infrastructures were constitutive of the *kangchu* system, as profits from kangkar shops and retail, fueled by debt-based consumption, often exceeded those from tin exports.[79] Central to this regime was opium, which functioned simultaneously as a work-discipline drug, a means of recovering recruitment costs, and a biopolitical technology for managing labor turnover and endurance amid extreme disease and mortality.[80]

By pharmacologically sustaining labor while fostering addiction, opium stabilized labor supply without resolving the structural crises of workers' reproduction, binding wages ($3–4 per month) back into captive markets controlled by *kangchu* syndicates.[81]

This "opium regime," as defined by Brook and Wakabayashi,[82] underpinned the low-cost export of tin, rubber, pepper, and gold, supporting British industrialization, particularly in the communications and automotive sectors, and by 1919, made Malaya the world's largest rubber producer.[83]

Yet to understand the historical role of these labor systems in the region, their analysis must be situated within the concrete significance they held in processes of capital accumulation and circulation. As Carl Trocki has shown,[84] opium revenue farms served as early financial infrastructures and colonial revenue systems, sustaining export-led zones of the Second Industrial Revolution and shaping a new, multi-scalar cycle of capital accumulation in Southeast Asia.

The *kangani* system did not survive into the twentieth century's later decades: colonial labor ordinances were wound down through the 1930s, and the system was formally abolished in 1938, well before independence in 1957.[85] When Malaysia's electronics industry first took shape, at Penang's Bayan Lepas free trade zone from 1972, it drew on a different labor base for a different purpose.[86] Under the New Economic Policy, the federal government directed foreign firms such as Intel and Hewlett-Packard toward a workforce of young, unmarried Malay women recruited from rural districts into urban wage labor, an attempt to draw the country's Malay majority into an industrial working class from which colonial-era racial division of labor had largely excluded them.[87] For roughly two decades, Malaysia's export electronics sector ran on citizen labor; only as manufacturing labor shortages emerged through the 1990s did the sector turn to the foreign workforce.[88] The debt-bound, brokered workforce documented in Johor's EPZs is best read as a reversion, not a continuous survival, of the colonial model.

Situated within the post-Second Industrial Revolution phase of global capitalist expansion, these LRs belong to the same cycle of capital accumulation, colonial and contemporary alike.

From indentured to electronics: An asynchronous synchronization

Following the 2008 financial crisis and the overlapping sanitary (2020–2022), humanitarian and hegemonic crises in the unfolding of a global regime of war,[89] the current crisis of capital reproduction is marked by chronic overaccumulation, profitability pressures, and stagnating demand, addressed through infrastructural expansion

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aimed at increasing turnover and extending valorization across spatial and temporal dimensions.[90]

Today, Johor's recent prominence in EE and AI semiconductor manufacturing must be contextualized within the broader crisis conjuncture of hegemonic transition and capital reproduction.[91] Following Kim Moody's account of the shift toward turnover time in contemporary capitalism,[92] when the reproduction of capital is hindered within the spheres of production and circulation, capital endeavors to shorten the combined duration of these circuits, the turnover time, through revolutions in communication, transportation, and technological organization.[93]

Since the 2008 financial crisis, the rise of contemporary digitalization and automation has generalized this phenomenon. Economists working within the Marxist tradition of the tendency of the rate of profit to fall document a genuine, if contested, empirical pattern.[94] Carchedi and Roberts's cross-national study finds the world rate of profit declining across the postwar period as capital stock grows faster than the profit it yields, a trend driven not by shrinking absolute profits but by their failure to keep pace with a swelling mass of fixed capital.[95] Contemporary AI investment exhibits the same pattern in acute form, its debt-financed infrastructure buildout documented in "The BDLR in Johor, Malaysia" section.

In this context, Moody shows that firms automate only where the profitability calculus favors it and turn to cheaper alternatives where it does not. Intensified control over the pace and turnover of labor is one such alternative: a form of labor arbitrage that shifts cost onto the workforce, as documented in Johor, rather than onto fixed capital. Fixed-capital infrastructure and brokered, debt-bound labor thus serve as two instruments answering to the same pressure, the first substituting capital for labor where profitable, the second substituting cheap coerced labor for capital where it is not. The impending AI revolution can accordingly be theorized as a contingent, if historically significant, phase in the long cycle of capitalist value accumulation.

This second instrument addresses a limit inherent to the first. The automation that AI investment is meant to deliver across the wider economy depends on a supply of semiconductors expanding fast enough to sustain it. Meeting that demand through further investment in chip-manufacturing capacity would only add to the fixed capital already outpacing the profit it yields. Capital turns instead to the labor-intensive stages of that supply chain, assembly, testing, and packaging, where Johor sits, as intensifying the pace at which labor is worked and replaced is cheaper than expanding capacity to the same end. Johor, within SIJORI, met this demand because the required infrastructure already existed: colonial-era recruitment networks, dormitory provision, and debt administration offered a workforce ready to reassemble.

Marx defined reflux (Rückfluss) as the capacity of a circuit of capital to turn back upon itself through repayment and reinvestment.[96] Here, capital declines a further circuit of fixed investment and instead turns toward an existing, if dormant, infrastructure of labor extraction: a *reflux* into inherited capacity for capital reproduction.

Placing Johor within the SIJORI cross-border region clarifies the process in a historical-geographical corollary. While SIJORI has historically operated as a spatial–temporal fix for global manufacturing, renewed investment in packaging, testing, and data-center capacity today renovates SIJORI for the digital economy, aligning fixed

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capital with circulation-enhancing infrastructures between the U.S.-led Pax Silica and the Chinese BRI.[97]

Within this context, I argued that this renovation is sustained by a DLR where two brokers' figures—the *agent* and the *kadar*—synchronize the turnover of capital and of labor through debt, document confiscation, sponsorship-dependent residence, and dormitory control.

Building on Harvey's concept of "spatial fix," Meehan and Plonski[98] introduced the term "brokerage fix" to highlight ambiguities and contradictions in the production of both capital and state space. Yet, in the capitalist mode of production, circulation actively causes crisis; its contradictory laws of motion do not resolve the crisis of capital reproduction but only postpone it, by emphasizing crises in social reproduction elsewhere.[99] The brokerage fix thus remains unstable and contentious, serving as a provisional crisis solution which must be understood within its geo-historical context, as it always creates new challenges requiring later fixes and ongoing renegotiation.[100]

In the BDLR at play in Johor's EE EPZs, these same brokerage mechanisms shape crises of social reproduction among migrant workers, in turn mobilized to accelerate and align labor turnover (shifts) with export production peaks, thereby shaping a model of just-in-time forced labor that makes Johor and the SIJORI particularly attractive for relocating electronics and semiconductor manufacturing. Yet, the BDLR exposes a strategy that needs further conceptualization.

I call the operation at stake an *asynchronous synchronization*, as the synchronicity between capital and labor turnover is shaped by the asynchronicity inherent within the temporalities of a crisis of capital reproduction and a crisis of social reproduction.

The asynchrony works as follows: capital's turnover time, compressed by the demands of AI-driven semiconductor production, moves on a cycle of months; the labor infrastructure recruited to meet it, the BDLR, answers to a cycle of generations. Synchronization forces the two into alignment without resolving the gap between them, which is why the alignment must be continually redone through debt, confiscation, and coercion rather than settled once.

By analyzing the *kangchu* and the *kangani* regime, I contend that this *asynchronous synchronization* fixes capital within an LR constituted by both short-term (labor turnover), mid-term (labor migration), and long-term temporalities, re-evoking former labor systems and brokerage networks.

DLRs constitute a strategy by capital to control and reduce the costs of social reproduction through regimes of (im)mobilization and circulation of labor. Within each sociohistorical and cultural context, DLRs shape exploitative labor relations by extracting socially and historically embedded surplus value.[101]

Within this context, historical lineages of the indentured working class can inform the analysis of the semiconductor manufacturing supply chain and its LR in Johor, Malaysia. While the *kangani* system relied on labor brokers for recruitment and subsistence, the *kangchu* system intensified this by mobilizing reproductive indebtedness and precarity, mainly through opium, to control labor, discipline, and working hours.

Capital's turnover and the crises of workers' social reproduction thus drive each other, not one before the other. In Johor, the same means set to address a capital's reproduction crisis produces a crisis of social reproduction in turn.

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Hence, as former brokered LR—the *kangchu* and the *kangani*—were pivotal to integrating the Straits Settlements into the Second Industrial Revolution, the contemporary BDLR at Johor EE EPZs draws on infrastructure sedimented by earlier GVC integration. In Johor, capital investments aligned with hegemonic power have long been directed toward labor-brokerage infrastructures: the *asynchronous synchronization* directs short-term operations in capital turnover and re-evokes long-term lineages.

Conclusion

Building on LR theory and SRT, the article argues that historical lineages can inform the analysis of the EE manufacturing supply chain and its LRs in Johor, Malaysia, thereby aligning the BDLR with the historical dynamics of global capital.

The conditions of coolie labor rank among the most insecure and super-exploited of all historical work groups. Nevertheless, recent processes of manufacturing outsourcing and labor recruitment-alongside the expansion of labor brokerage and human trafficking in countries targeted by foreign capital-have reproduced working conditions similar, if not analogous, to those of indentured labor.[102] Consequently, a limited body of scholarship has begun to examine contemporary LRs through the historical lens of coolie labor, questioning whether coolies constituted an early form of the precariat or, conversely, whether such comparisons risk obscuring important historical specificities.[103]

In this context, the history of international labor, especially when integrated with sociological and ethnographic studies, becomes essential to academic and political commitments.

The working-class history has been treated in terms of the nation's isolated historical narrative rather than of the broader history of capitalism in a world-historical context,[104] and predominant Malayan historiography, part of a broader colonial strategy of governing through the division of the population into "ethnic blocs," chiefly emphasizes sequential narratives of the ruling classes across colonial and postcolonial periods.[105]

Global South genealogies remain correspondingly scarce in the critical literature on AI and digital capitalism; even analyses of the so-called "hidden labor" of the digital economy lack studies conceptualizing historical and contemporary brokerage infrastructures as integral to the LRs sustaining current manufacturing and technological development. I refrain, however, from characterizing this exploitation as "hidden work": the underrepresentation of non-Euro-American LRs in Western scholarship does not render them inherently invisible. They are locally known to political and labor institutions, brokers, and regulators, and remain obscured in mainstream discourse because of economic and political interests, but also because of epistemic hierarchies and uneven knowledge production.[106] Instead, I historicize this labor in its own context,[107] situating the colonial lineages that still reframe Johor and SIJORI's transnational LRs.

This perspective contributes to an emerging scholarly debate on reassessing unfree LRs as constitutive mechanisms of value formation during periods of global capitalist expansion.[108] Yet this account traces recurrence, not an unbroken institutional lineage.

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Analyzing the BDLR within the longue durée of global labor history reveals the specific historical conditions that make contemporary accumulation possible. AI's infrastructure runs on forced migrant workers' labor. Naming the brokerage regimes that bind them, and the colonial infrastructure those regimes reactivate, is a first step toward holding accountable those who profit from a condition these workers did not choose and largely cannot leave.

Notes

1. Benanav, A., *Automation and the Future of Work* (London: Verso Books, 2020); Ekbia, H. R., and B. A. Nardi, *Heteromation, and Other Stories of Computing and Capitalism* (Cambridge, MA: MIT Press, 2017); Gray, M. L., and S. Suri, *Ghost Work: How to Stop Silicon Valley from Building a New Global Underclass* (Boston: Houghton Mifflin Harcourt, 2019); Scholz, T., ed., *Digital Labor: The Internet as Playground and Factory* (New York: Routledge, 2017).
2. Milan, S., and E. Treré, "Big Data from the South(s)," *Television & New Media* 20, no. 4 (2019): 319–35; Roberts, S. T., *Behind the Screen: Content Moderation in the Shadows of Social Media* (New Haven: Yale University Press, 2019); Fuchs, C., *Digital Labour and Karl Marx* (London: Routledge, 2014).
3. Shih, S., *Me-Too Is Not My Style* (Taipei: The Acer Foundation, 1996); Shin, N., K. L. Kraemer, and J. Dedrick, "Value Capture in the Global Electronics Industry: Empirical Evidence for the 'Smiling Curve' Concept," *Industry and Innovation* 19, no. 2 (2012): 89–107.
4. Milan, S., and E. Treré, "Big Data from the South(s)," *Television & New Media* 20, no. 4 (2019): 319–35; Roberts, S. T., *Behind the Screen: Content Moderation in the Shadows of Social Media* (New Haven: Yale University Press, 2019); Fuchs, *Digital Labour and Karl Marx*.
5. Fröbel, F., J. Heinrichs, and O. Kreye, *The New International Division of Labour: Structural Unemployment in Industrialised Countries and Industrialisation in Developing Countries* (Cambridge: Cambridge University Press, 1980).
6. Andrijasevic, R., "The Dormitory Regime Revisited: Time in Transnational Capitalist Production," in *Labour Regimes and Global Production* ed. E. Baglioni, L. Campling, N. M. Coe, and A. Smith (Newcastle: Agenda Publishing, 2022), 285–301.
7. Chang, D. O., "Transnational Labour Regimes and Neo-Liberal Development in Cambodia," *Journal of Contemporary Asia* 52, no. 1 (2022): 45–70; Cerimele, M., "Dormitories, Migration, and Labour Control in Vietnam's Industrial Zones," *Journal of Contemporary Asia* 48, no. 2 (2018): 314–35.
8. Xiaodong, X., "The SIJORI Growth Triangle: Progress, Problems and Prospect," *Journal of Maritime Studies and National Integration* 3, no. 1 (2019): 1–13.
9. Lee, T. Y., ed., *Growth Triangle: The Johor–Singapore–Riau Experience* (Singapore: ISEAS, 1991); Sparke, M., J. D. Sidaway, T. Bunnell, and C. Grundy-Warr, "Triangulating the Growth Triangle: Singapore, Indonesia, Malaysia," *Transactions of the Institute of British Geographers* 29, no. 4 (2004): 485–98.
10. Bastide, L.,"Incorporating Transnational Labour: Migration Rent, Combined Relocation, and Offshore Production Networks in Malaysia," *Migration Studies* 9, no. 3 (2021): 1250–68.
11. Verité, *Forced Labor in the Production of Electronic Goods in Malaysia: A Comprehensive Study of Scope and Characteristics* (Boston: Verité, 2014).
12. De Genova, N., "Spectacles of Migrant 'Illegality': The Scene of Exclusion, the Obscene of Inclusion," *Ethnic and Racial Studies* 36, no. 7 (2013): 1180–98.
13. De Genova, N., "Migrant 'Illegality' and Deportability in Everyday Life," *Annual Review of Anthropology* 31 (2002): 419–47; De Genova, N., "The Legal Production of Mexican/Migrant 'Illegality'," *Latino Studies* 2, no. 1 (2004): 160–85; De Genova, N., *Working the Boundaries* (Durham: Duke University Press, 2005).
14. Liu, J. C. H., "The Logistics of Neoliberal Slavery: Legal Production of Illegality," *Inter-Asia Cultural Studies* 23, no. 1 (2022): 100–20.
15. Liu, J. C. H., The Logistics of Neoliberal Slavery."
16. Selvaratnam, V., "Malaysia's South Indian 'Coolies': Legacies of Imperialism, Colonial Capitalism and Racism," in *Contesting Malaysia's Integration into the World Economy*, eds R. Rasiah, A. Hashim, and J. S. Sidhu (Singapore: Springer, 2021), 169–99.
17. Selvaratnam, "Malaysia's South Indian 'Coolies.'"

https://doi.org/10.1017/S0147547926100453

18. Qiu, J. L., *Goodbye iSlave: A Manifesto for Digital Abolition* (Urbana: University of Illinois Press, 2016).
19. I use "genealogy" rather than "history" because the aim is not a continuous institutional lineage from the *kangchu* system to the contemporary BDLR. Colonial land law, plantation ownership, and labor administration were in fact substantially reorganized across the intervening century, and the *kangani* system itself was abolished in 1938. The aim is instead to trace a recurring structural formation: confronted twice, in discontinuous historical conditions, with the problem of synchronizing labor turnover to capital turnover, employers and the state arrive at structurally similar brokerage solutions. The fourth section, named "from indenture to electronics" returns to this recurrence through Marx's concept of *reflux* and what I call asynchronous synchronization.
20. "How AI Debt Is Reshaping Credit Markets," *Goldman Sachs Exchanges*, 2026; Reuters, "Analysis of LSEG Data," 2026.
21. "What Must Happen for AI's Trillion-Dollar Gamble to Pay Off," MIT Technology Review, 15 September 2026.
22. Hutchinson, F. E., and L. van Grunsven, "Industry Dynamics in Growth Triangles: The E&E Industry in SIJORI 25 Years On," *Asian-Pacific Economic Literature* 32, no. 2 (2018): 42–63.
23. Athukorala, P. C., "China's Evolving Role in Global Production Networks: Implications for Trump's Trade War," in *China's New Sources of Economic Growth: Human Capital, Innovation and Technological Change,* vol. 2. ed. L. Song, R. Garnaut, C. Fang, and L. Johnston (Canberra: ANU Press, 2017), 363–88; Pun, N., "China's Deepening Infrastructural Capitalism: The Hard Landing of Artificial Intelligence, Big Data, and Automated Technology," *Weizenbaum Journal of the Digital Society* 5, no. 1 (2025); Sum, N.-L., "China's 'Going Out' and BRI as Spatial Fixes," *Globalizations* 16, no. 7 (2019): 1145–66; Summers, T., "China's 'New Silk Roads': Sub-national Regions and Networks of Global Political Economy," *Third World Quarterly* 37, no. 9 (2016): 1628–44; Taylor, I., and T. Zajontz, "China's Belt and Road Initiative: A Critical Appraisal," *Journal of Contemporary China* 29, no. 123 (2020): 1–17; U.S. Mission to ASEAN. 2025. "Pax Silica Initiative," December 11, 2025. Accessed December 15, 2025. https://asean.usmission.gov/pax-silica-initiative/.
24. Hutchinson and van Grunsven, "Industry Dynamics in Growth Triangles."
25. Devadason, E. S., and T. Subramaniam, "Migrant Workers and Labour Market Outcomes in Malaysia," *International Migration* 54, no. 2 (2016): 28–43; Raj-Reichert, G., "The Electronics Industry in Malaysia," in *Global Value Chains and Development*, ed. G. Gereffi, K. Lee, and J. Lee (Cambridge: Cambridge University Press, 2018), 203–26.
26. World Bank, *Malaysia Economic Monitor: Immigrant Labour* (Washington, DC: World Bank, 2015).
27. Bastide, L., "Incorporating Transnational Labour."
28. Arnold, D., "Labor Migration," in *International Encyclopedia of Geography: People, the Earth, Environment, and Technology* (2017), 1–12; Arnold, D., and J. Pickles, "Global Work, Surplus Labor, and the Precarious Economies of the Border," *Antipode* 43, no. 5 (201): 1598–624; Bastide, L., "Incorporating Transnational Labour."
29. Baglioni, E., L. Campling, N. M. Coe, and A. Smith, eds, *Labour Regimes and Global Production* (Newcastle: Agenda Publishing, 2022).
30. Newsome, K., P. Taylor, J. Bair, and A. Rainnie, eds, *Putting Labour in Its Place: Labour Process Analysis and Global Value Chains* (London: Palgrave Macmillan, 2015).
31. Chan, J., and N. Pun, "The Dormitory Labour Regime in China as a Site for Control and Resistance," *The China Journal* 64, (2009): 27–51; Yu, H., "Dormitory Politics in China's Factory Zones," *China Information* 34, no. 3 (2020): 344–67.
32. Schling, E., "Labour (Im)mobility and Dormitory Regimes," *Antipode* 49, no. 5 (2017): 1346–66.
33. Glick Schiller, N., and N. B. Salazar, "Regimes of Mobility across the Globe," *Journal of Ethnic and Migration Studies* 39, no. 2 (2013): 183–200; Schewel, K., "Understanding Immobility: Moving Beyond the Mobility Bias in Migration Studies," *International Migration Review* 54, no. 2 (2020): 328–55.
34. Mezzadri, A., *The Sweatshop Regime: Labouring Bodies, Exploitation and Garments Made in India*, 2nd ed. (Cambridge: Cambridge University Press, 2021).
35. Verité, "Forced Labor in the Production of Electronic Goods in Malaysia."
36. Lindquist, J., B. Xiang, and B. S. A. Yeoh, "Opening the Black Box of Migration: Brokers, the Organization of Transnational Mobility and the Changing Political Economy in Asia," *Pacific Affairs* 85, no. 1 (2012): 7–19; Kaur, A., "Labour Brokers in Migration: Understanding Historical and Contemporary Transnational Migration Regimes in Malaya/Malaysia," *International Review of Social History* 57, S20 (2012): 225–52.

https://doi.org/10.1017/S0147547926100453

37. Goss, J., and B. Lindquist, "Placing Movers: An Overview of the Asian-Pacific Migration System," *The Contemporary Pacific*, no. 2, (2000): 385–414.
38. Xiang, B., and J. Lindquist, "Postscript: Infrastructuralization: Evolving Sociopolitical Dynamics in Labour Migration from Asia," *Pacific Affairs* 91, no. 4 (2018): 759–73; Lindquist, J., B. Xiang, and B. S. A. Yeoh, "Opening the Black Box of Migration."
39. Nah, A. M., "Globalisation, Sovereignty and Immigration Control: The Hierarchy of Rights for Migrant Workers in Malaysia," *Asian Journal of Social Science* 40, no. 4 (2012): 486–509; Piper, N., "Temporary Migration and Permanent Precarity," *Journal of Ethnic and Migration Studies* 48, no. 7 (2022): 1479–500.
40. Jones, K., A. Ghimire, and Y. Khor, "Living at Work: Migrant Worker Dormitories in Malaysia," *Work in the Global Economy* 4, no. 1 (2024): 89–108.
41. Franck, A. K., and J. T. Anderson, "The Cost of Legality: Navigating Labour Mobility and Exploitation in Malaysia," *International Quarterly for Asian Studies* 50, no. 1–2 (2019): 19–38; Piper, "Temporary Migration and Permanent Precarity."
42. Bastide, L., "Incorporating Transnational Labour."
43. Pun, N., and C. Smith, "Putting Transnational Labour Process in Its Place: The Dormitory Labour Regime in Post-Socialist China" (2007).
44. Fraser, N., "Behind Marx's Hidden Abode: For an Expanded Conception of Capitalism," in *Critical Theory in Critical Times* (New York: Columbia University Press, 2017), 141–59.
45. Mezzadri, "The Sweatshop Regime."
46. Dong, Y., "The Crisis of Social Reproduction and 'Made-in-China' Feminism," *Soundings* 79, no. 79 (2021): 10–23.
47. Verité, "Forced Labor in the Production of Electronic Goods in Malaysia."
48. Ibid.
49. Ibid.
50. Yotwilai, N., "Migrant Workers in Malaysia: Human Rights Issues in the Workplace," *SAGE Open* 15, no. 2 (2025): 21582440251337546; Sha, H., and Y. Khor, "Cross-Border Mobility, Inequality and Migration Intermediaries: Labour Migration from Nepal to Malaysia," *International Migration* 62, no. 2 (2024): 93–109.
51. Goodburn, C., and S. Mishra, "Beyond the Dormitory Labour Regime: Comparing Chinese and Indian Workplace–Residence Systems as Strategies of Migrant Labour Control" (2024).
52. Ngai, P., and C. Smith, "Putting Transnational Labour Process in Its Place."
53. The Remedy Project, *Breaking the Circuit: Why Malaysia's Electronics Supply Chains Must Shift from Reactive Compliance to Proactive Prevention*, Forced Labour Series: Are We Fighting Forced Labour or Just Managing It? (Hong Kong: The Remedy Project, December 2025).
54. International Labour Organization, *Final Independent Evaluation: Advancing the SDGs by Improving Livelihoods and Resilience via Economic Diversification and Digital Transformation* (Final Report, 5 June 2025) (Geneva: International Labour Organization).
55. Verité, "Forced Labor in the Production of Electronic Goods in Malaysia."
56. Amnesty International. *Trapped: The Exploitation of Migrant Workers in Malaysia* (London: Amnesty International, 2010).
57. Associated Press, "Migrant Workers in Malaysia Seek Unpaid Wages from a Supplier to Japanese Companies," May 20, 2025; Somoy News, "Bangladeshi Workers in Malaysia Remain Unpaid for 5 Months," August 31, 2024.
58. Ibid.
59. Bormann, S., P. Krishnan, and M. E. Neuner, *Migration in a Digital Age: Migrant Workers in the Malaysian Electronics Industry: A Case Study on Jabil Circuit and Flextronics* (Berlin: World Economy, Ecology and Development (WEED), 2010).
60. Pun, N., *Made in China: Women Factory Workers in a Global Workplace* (Durham, NC: Duke University Press, 2005).
61. Baglioni, E., L. Campling, N. M. Coe, and A. Smith, eds, *Labour Regimes and Global Production* (Newcastle: Agenda Publishing, 2022).
62. Kaur, A., "Labour Migration in Southeast Asia: Migration Policies, Labour Exploitation and Regulation," *Journal of the Asia Pacific Economy* 15, no. 1 (2010): 6–19; Kaur, A., "Plantation Systems, Labour Regimes and the State in Malaysia, 1900–2012," *Journal of Agrarian Change* 14, no. 2 (2014): 190–213.
63. Hamashita, T., *China, East Asia and the Global Economy: Regional and Historical Perspectives* (London: Routledge, 2013).

https://doi.org/10.1017/S0147547926100453

64. Trocki, C. A., "Chinese Revenue Farms and Borders in Southeast Asia," *Modern Asian Studies* 43, no. 1 (2009): 335–63.
65. The Company and British merchants initially depended on imported Indian slave and convict labor for sugar and coffee estates established around the same time and for government public works projects. The abolition of slavery, the collapse of the Company in 1858, the separation of the Straits Settlements from India in 1867, and the prohibition of labor migration to the Straits subsequently foreshadowed the establishment of new arrangements for recruitment of Indian labor.
66. Huff, G., and G. Caggiano, "Globalization and Labor Market Integration in Late Nineteenth-and Early Twentieth-Century Asia," in *Research in Economic History* (Bingley: Emerald Group Publishing Limited, 2007), 285–347.
67. Reid, A., *Southeast Asia in the Age of Commerce, 1450–1680*, vols. 1–2 (New Haven: Yale University Press, 1988).
68. Selvaratnam, "Malaysia's South Indian 'Coolies.'"
69. Brass, T., and M. van der Linden, eds., *Free and Unfree Labour: The Debate Continues* (Bern: Peter Lang, 1997).
70. Brass, T., "Some Observations on Unfree Labour, Capitalist Restructuring, and Deproletarianization," *International Review of Social History* 39, no. 2 (1994): 255–75.
71. Kaur, "Plantation Systems, Labour Regimes and the State in Malaysia."
72. Sandhu, K. S., *Indians in Malaya: Some Aspects of Their Immigration and Settlement (1786–1957)* (Cambridge: Cambridge University Press, 1969); Kaur, "Plantation Systems, Labour Regimes and the State in Malaysia."
73. Gamba, C., "Labour and Labour Parties in Malaya," *Pacific Affairs* 31, no. 2 (1958): 117–30; Jain, R. K., *South Indians on the Plantation Frontier in Malaya* (Kuala Lumpur: University of Malaya Press, 1970); Kaur, "Labour Migration in Southeast Asia."
74. Hansard, UK Parliament, "The Straits Settlements – Coolie Labour and Labour Contracts," 11 December 1888.
75. Sandhu, *Indians in Malaya*.
76. Marx, K., "Marx's Economic Manuscript of 1867–68 (excerpt)," *Historical Materialism* 27, no. 4 (2019): 162–92.
77. Erman, E., "Chinese Taukeh, Labourer, and State Control: Case Study of Panglong in Eastern Region of Sumatra (1890-1930)," *Wacana* 18, no. 2 (2017): 514.
78. Ibid.
79. Smyth, H. W., "On the Malay States and Labour," *Journal of the Royal Asiatic Society* 30, (1898): 320–40.
80. Warren, J. F. "Opium and the Mortality of Coolie Labour," *Modern Asian Studies* 37, no. 1 (2003): 1–23; Choy, K. M., and I. Sugimoto, "Opium Consumption and Living Standards in Singapore, 1900 to 1939," *Journal of Southeast Asian Studies* 54, no. 1 (2023): 116–31.
81. Brook, T., and B. T. Wakabayashi, eds, *Opium Regimes: China, Britain, and Japan, 1839–1952* (Berkeley: University of California Press, 2000).
82. Ibid.
83. Drabble, J. H., "The Plantation Rubber Industry in Malaya up to 1922," *Journal of the Malaysian Branch of the Royal Asiatic Society* 40, no. 1 (211) (1967): 52–77; Jain, *South Indians on the Plantation Frontier in Malaya*; Trocki, C. A., "Opium, Empire and the Global Political Economy" (2011).
84. Trocki, C. A., "Opium and Empire: Chinese Society in Colonial Singapore, 1800–1910" (1990); Trocki, C. A., "Opium and the Beginnings of Chinese Capitalism in Southeast Asia" (2002); Trocki, C. A., "Chinese Revenue Farms and Borders in Southeast Asia" (2009); Trocki, C. A., "Opium, Empire and the Global Political Economy" (2011); Trocki, C., "Opium, Empire and the Global Political Economy: A Study of the Asian Opium Trade 1750–1950" (2012).
85. Kaur, "Plantation Systems, Labour Regimes and the State in Malaysia."
86. Hutchinson and van Grunsven, "Industry Dynamics," 48.
87. Bormann, Krishnan, and Neuner, "Migration in a Digital Age," 12.
88. Wayland, S., "Migration Management and Safe Migration along the Indonesia-Malaysia Corridor," *E-International Relations* (2021).
89. Mezzadra, S., and B. Neilson, *The Rest and the West: Capital and Power in a Multipolar World* (London: Verso Books, 2024).

https://doi.org/10.1017/S0147547926100453

90. Moody, K., "High Tech, Low Growth: Robots and the Future of Work," *Historical Materialism* 26, no. 4 (2018): 3–34; Moody, K., "Motion and Vulnerability in Contemporary Capitalism: The Shift to Turnover Time," *Historical Materialism* 30, no. 3 (2022): 47–78; Pun, "China's Deepening Infrastructural Capitalism."
91. Mezzadra, S., and B. Neilson, "The Rest and the West."
92. Moody, "Motion and Vulnerability in Contemporary Capitalism."
93. Marx, K., *Capital*, ed. F. Engels (Moscow: Progress Publishers, 1894), vol. 3; Manzerolle, V., and A. M. Kjøsen, "The Communication of Capital: Digital Media and the Logic of Acceleration," *tripleC* 14, no. 1 (2016):151–70.
94. Okishio, N., "Technical Changes and the Rate of Profit," *Kobe University Economic Review* 7, (1961): 85–99; Heinrich, M., "Crisis Theory, the Law of the Tendency of the Profit Rate to Fall, and Marx's Studies in the 1870s," *Monthly Review* 64, no. 11 (2013): 15-31.
95. Carchedi, G., and M. Roberts, eds, *World in Crisis: A Global Analysis of Marx's Law of Profitability* (Chicago: Haymarket Books, 2018).
96. Marx, *Capital*.
97. Raj-Reichert, "The Electronics Industry in Malaysia"; Xiaodong, "The SIJORI Growth Triangle"; Sum, "China's 'Going Out' and BRI as Spatial Fixes."
98. Meehan, P., and S. Plonski, "Brokering the Margins: A Review of Concepts and Methods" (2017).
99. Arrighi, G., "Spatial and Other Fixes of Historical Capitalism," *Journal of World-Systems Research* 10, n 2 (2004): 527–39.
100. Harvey, D., "Globalization and the 'Spatial Fix'" (2001).
101. Baglioni, E., L. Campling, N. M. Coe, and A. Smith, eds, *Labour Regimes and Global Production* (2022).
102. Ngai, M., and S. Loy-Wilson, "Thinking Labor Rights through the Coolie Question," *International Labor and Working-Class History* 91, (2017): 5–7; Rioux, S., G. LeBaron, and P. J. Verovšek, "Capitalism and Unfree Labor: A Review of Marxist Perspectives on Modern Slavery," *Review of International Political Economy* 27, no. 3 (2020): 709–39.
103. Fink, L., "The First Precariat?" *International Labor and Working-Class History* 91, (2017): 99–108.
104. Hobsbawm, E., *Industry and Empire* (London: Weidenfeld & Nicolson, 1969); Hobsbawm, E., *Worlds of Labour* (London: Weidenfeld & Nicolson, 1981); Hobsbawm, E., *Fractured Times: Culture and Society in the Twentieth Century* (London: Abacus, 2015).
105. Hevia, J. L., "Opium, Empire, and Modern History," *China Review International* 10, no. 2 (2003): 307–26; Stenson, M., *Class, Race and Colonialism in West Malaysia* (Brisbane: University of Queensland Press, 1980).
106. Bhattacharyya, G., *Rethinking Racial Capitalism: Questions of Reproduction and Survival* (Lanham: Rowman & Littlefield, 2018); Lin, L., and A. Leung, "Global South Data Labour and Epistemic Hierarchies," *Information, Communication & Society* 26, no. 5 (2023): 1041–61.
107. Selvaratnam, "Malaysia's South Indian 'Coolies'."
108. Brass, T., "Some Observations on Unfree Labour, Capitalist Restructuring, and Deproletarianization," *International Review of Social History* 39, no. 2 (1994): 255–78.

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