

## OPIUM CONSUMPTION IN SINGAPORE, 1900-39

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*Studies on opium consumption have thus far not addressed the issue from the economic welfare perspective. This article assembles data from official sources to derive estimates of aggregate opium consumption in Singapore during the early decades of the twentieth century. It shows that an alternative measure of welfare that includes opium in the consumption basket led to a declining standard of living amongst unskilled labourers who depended on the drug for their work.*

Opium, that analgesic extracted from the poppy plant since ancient times, has occupied a curious albeit pivotal place in global economic history, and in particular the history of Southeast Asia in the eighteenth to early twentieth centuries. Starting in the late eighteenth century, Eurasian trade and colonial control transformed this drug into an item of mass consumption, making it integral to the economies and

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lifestyles of Asian nations. After Britain won the Second Opium War and forced China to legalise the drug in 1858, opium became a major global commodity, produced and traded on the scale of stimulants such as coffee and tea.<sup>2</sup> As it combined the inelastic demand of a basic foodstuff, such as rice, with the low weight and high mark-up of a luxury item, such as cloves or pepper, it was the region's and the epoch's ideal trade good. Moreover, the drug's crucial role in balancing the India-China trade has been extensively documented.<sup>3</sup>

In that region's Chinese societies at the time, the uses of opium extended from the medicinal to the recreational, adding a completely new dimension to the drug. Hence, opium was sought after for both its narcotic and soporific qualities, with the local coolie communities referring to opium smoking as 'chasing the dragon'. Its widespread consumption by the working populations of Southeast Asia has led to the suggestion that opium spearheaded the rise of capitalism and the development of other forms of business enterprises by the overseas Chinese communities.<sup>4</sup> However, few studies have examined opium consumption amongst the labouring classes in the region, although a

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<sup>2</sup> Alfred McCoy, 'From free trade to prohibition: A critical history of the modern Asian opium trade', *Fordham Urban Law Journal*, Vol. 28, No. 1, (2000): 307-349.

<sup>3</sup> See for example David Edward Owen, *British Opium Policy in China and India*, 18 (1968).

<sup>4</sup> Carl Trocki, 'Opium and the beginnings of Chinese capitalism in Southeast Asia', *Journal of Southeast Asian Studies*, 33, 2 (2002): 297-314.

couple have documented the changing colonial attitudes towards the drug as a result of rising public opprobrium, resulting in its eventual demise in the early decades of the twentieth century.<sup>5</sup>

Another important consequence of opium's induction into the economies of Southeast Asia was that it became a staple of colonial finances, providing much if not most of government budgets in British Malaya, the Dutch East Indies and French Cochinchina.<sup>6</sup> During the nineteenth century, licensed opium dens operated by the infamous 'revenue farms' became a unique Southeast Asian institution, sustaining mass addiction and generating huge revenues. By 1930, Southeast Asia had 6441 opium dens serving 272 tons of opium to 542,100 registered smokers, which by then were mostly run by colonial and state authorities.<sup>7</sup> Thus, opium was not merely of economic significance, but it financially underpinned the colonial empires in Asia.

The present study is aimed at elucidating the extent of opium consumption and its implications for economic welfare in a major consumer of the drug in Southeast Asia and a key trading port of the British Empire – Singapore. This task is effected by drawing on archival sources

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<sup>5</sup> The relevant studies are cited below.

<sup>6</sup> Hamilton Wright, *Report on the International Opium Commission and on the opium problem as seen within the United States and its possessions*, S. Doc., 61-377 (1910).

<sup>7</sup> *Annual reports of governments on the traffic in opium and other dangerous drugs for the year 1935*, League of Nations Doc. XI 5 (1937), pp. 72-75.

and the statistical records of the Straits Settlements government.<sup>8</sup> Needless to say, any attempt to reconstruct opium consumption data is subject to a number of caveats, including the verisimilitude of official records, incomplete information and in this case, underestimation due to smuggling activities. Following a brief recounting of the history of opium in Singapore, estimates of yearly opium consumption for the period 1900 to 1939 are constructed to get an idea of their magnitude in relation to total household spending. The putative forces shaping consumption patterns and trends are discussed.

Next, the study addresses a hitherto nebulous and neglected aspect of the economic historical literature on the subsistence basket of consumption goods used to compare international living standards.<sup>9</sup> This is the question of how importantly opium should figure in the daily consumption of the average worker in Asia, and to what extent it should be regarded as a basic necessity. Treating opium as an essential sedative drug for labourers in Singapore to continue their work, the implications

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<sup>8</sup> The Straits Settlements was established as a Colony of Great Britain in 1867, consisting of Singapore, Penang and Malacca.

<sup>9</sup> The notion of the subsistence basket was developed by Robert Allen, 'The Great Divergence in European wages and prices from the Middle Ages to the First World War', *Explorations in Economic History*, 38 (2001): 411-447. Articles relating to Asia are Allen, RC, Bassino, JP, Ma, D, Moll-Murata, C & Van Zanden, JL, 'Wages, prices, and living standards in China, 1738-1925 in comparison with Europe, Japan, and India', *Economic History Review*, 64 (2011): 8-38 and Choy, KM and Sugimoto, I, 'Staple trade, real wages, and living standards in Singapore, 1870-1939', *Economic History of Developing Regions*, 33, 1 (2018): 18-50.

for their living standards in the early twentieth century are drawn out.

### A short history of opium in Singapore

It is probable that opium first landed on Singapore's shores not long after Thomas Stamford Raffles discovered the island in 1819 and turned it into a free trading port. Based on the annual trade returns, Wong Lin Ken recorded the trade in opium as amounting to 1285 chests in 1836, rising to 4689 chests in 1856.<sup>10, 11</sup> He further remarked that, compared to direct exports from India, the opium routed through Singapore to China paled in importance. Partially fulfilling Raffles' vision of Singapore developing into the opium market of the Malay Archipelago, however, the drug (together with cotton goods) was a major item of export from Singapore to mainland and island Southeast Asian during this period.<sup>12</sup> After Singapore became a Crown Colony in 1867, Chiang Hai Ding noted the opium shipped out in 1875 to be 7041 chests.<sup>13</sup> This quantum increased steadily until 1910, when opium exports were valued at S\$9297

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<sup>10</sup> Wong Lin Ken, 'The trade of Singapore, 1819-1869', *Journal of the Malayan Branch, Royal Asiatic Society*, 33 (1960): 116.

<sup>11</sup> A standard chest of opium weighed about 140 lb or 63.5 kg. 1,000 chests are equivalent to about 70 tons.

<sup>12</sup> Atsushi Kobayashi, 'The role of Singapore in the growth of intra-Southeast Asian trade, c. 1820s-1852', *Southeast Asian Studies*, 2, 3 (2013): 463.

<sup>13</sup> Chiang Hai Ding, *A history of Straits Settlements foreign trade, 1870-1915* (Singapore: National Museum of Singapore, 1978), p. 200.

and imports came up to a larger S\$16,522.<sup>14</sup> Clearly, the imbalance was due to a substantial amount of imported opium being consumed in the domestic market.

At the end of 1847, there were an estimated 15,043 habitual opium smokers, who were mostly Chinese.<sup>15</sup> They were not an isolated urban phenomenon, for Carl Trocki has noted that opium found its way to the mining and planting settlements throughout Southeast Asia, made up mostly of migrant workers from China.<sup>16</sup> With the efflux of time, the number of opium users had risen in all likelihood by the time the official report of the Straits Settlements Opium Committee was published in 1908, although the Committee studiously refrained from stating the proportion of the total Chinese population in Singapore who were smokers.<sup>17</sup> The same report asserted that the habit was mostly acquired in Singapore because opium was beyond the immigrants' means in China and family sanctions served as a further deterrent.<sup>18</sup>

The increase in consumption in the late nineteenth century can

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<sup>14</sup> S\$ denotes the Straits Settlements dollar, which was pegged at 2s. 4d. in 1906.

<sup>15</sup> R. E. S. Little, 'On the habitual use of opium in Singapore', *Journal of the Indian Archipelago and Eastern Asia* (1848): 65-66.

<sup>16</sup> Carl Trocki, 'A drug on the market: Opium and the Chinese in Southeast Asia, 1750-1880', Paper presented to the International Society for the Study of the Chinese Overseas, Elsinore, Denmark (2004).

<sup>17</sup> Straits Settlements Opium Commission, *Proceedings of the commission appointed to enquire into matters relating to the use of opium in the Straits Settlements and the Federated Malay States*, Vol. I (Singapore: 1909): 18.

<sup>18</sup> *Ibid.*, p. 11.

only be understood in the context of the massive immigration that took place, and Singapore's position as the centre of the trade in both opium and people in the region. As the centre of the opium trade, Singapore was where the traders servicing the Chinese settlements – which had grown tremendously with the boom in the tin mining industry – came for their supplies. As the centre of the 'coolie traffic', labourers from China usually landed in Singapore before being shipped out to the surrounding areas. Given that the city was growing rapidly as the main export outlet for the region's tin, some of these *sinkeh* (literally, new guests) stayed on and found work as port coolies, stevedores, coal-heavers, construction workers or rickshaw pullers. Many of them indulged in opium smoking for much the same reasons as their mining and plantation brethren, as two popular documenters of Singapore history have noted:

Opium assuaged the daily aches and pains that came with their job, and it was famous for giving a superb night's sleep ... Not only rickshaw coolies succumbed to the drug, but also plantation workers and tin miners, in short, any labourer whose job entailed gruelling physical exertion.<sup>19</sup>

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<sup>19</sup> Mark Ravinder Frost and Yu-Mei Balasingamchow, *Singapore: A biography* (Singapore:

To these therapeutic properties can be added the uses of opium as a sovereign pain-killer, a cure for dysentery and an anti-malaria drug. Thus, the supply of opium from India met the huge demand for it in Singapore, British Malaya and the Dutch East Indies.

Not surprisingly then, the prevalence of opium smoking among the occupations varied according to the strenuousness of the labour required. Coal coolies, for example, were thought to contain 60 percent of smokers in their ranks while the same proportion was found among railway construction workers, although only 20 percent were habitual smokers.<sup>20</sup> At the other end of the spectrum, only 5 to 10 percent of gardeners smoked opium. But the drug's penetration into the most gruelling of vocations seems undisputed – the *jinriksha* pullers of urban Singapore. In his historical ethnography, James Francis Warren conjectured that 80 percent of rickshaw coolies were smokers, including those who used opium only at intervals.<sup>21</sup> Based on a conservative tally of 20,000 pullers in the period 1900-30, this would have put the number of opium smokers

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Editions Didier Millet and National Museum of Singapore, 2009), pp. 156-157.

<sup>20</sup> Straits Settlements Opium Commission, *Proceedings of the commission*, Vol. I, p. 12; British Malaya Opium Committee, *Proceedings of the committee appointed by His Excellency the Governor and High Commissioner to inquire into matters relating to the use of opium in British Malaya* (Singapore: 1924): B-30.

<sup>21</sup> James Francis Warren, *Rickshaw coolie: A people's history of Singapore, 1880-1940* (Singapore: NUS Press, 2003), p. 242.



among them at 16,000.<sup>22</sup>

In Singapore, the distribution of the drug to the consuming masses was intermediated by one of the most enduring institutions of colonial Chinese society – the opium ‘revenue farms’. These had originated from the Chinese settlements of the eighteenth century and dated from the earliest days of Singapore’s existence, when its first Resident William Farquhar dished out licences to sell opium to local merchants in return for periodic payments. Revenue farms had also been successfully applied to the other three of the ‘four evils’ that plagued the working classes viz., gambling, prostitution, and liquor consumption. Simply put, the opium farm consisted of monopoly rights to process raw opium into a smoking paste known colloquially as *chandu*, distribute and sell it to retail customers. These exclusive rights were auctioned off by the colonial government for a fixed number of years to successful bidders, who then operated the farms while paying a monthly ‘rent’ to the government.

When this model of taxation which was invented by the colonial authorities in the Dutch East Indies was introduced in Singapore, it made a lot of sense: first, the free port status of the Straits Settlements made import and export duties nigh impossible. Second, it

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<sup>22</sup> The estimate of the number of rickshaw pullers is from *ibid.*, p. 38.

enabled the government to collect what in effect was a consumption tax from an essentially transient population without spending scarce resources on bureaucracy, infrastructure and the policing of smuggling activities.<sup>23</sup> The farmer on his part could take advantage of the inelasticity of opium demand, charge as high a price as the market could bear – subject to government regulation at various times – and earn supernormal economic profits.<sup>24</sup> Although competition between rival bidders could in theory keep a cap on such profits, they would sometimes collude to offer a low bidding price and once the farm rights were secured, combine their interests in a joint syndicate.

Virtually all the opium farmers in Singapore were Chinese businessmen, typically the politically connected, wealthy, and powerful members of society.<sup>25</sup> This local elite could marshal the financial capital needed to invest in farm buildings, equipment, raw opium and importantly, bands of revenue peons – called *chinteng* – whose main job was to prevent the smuggling of contraband opium into the farmer's

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<sup>23</sup> The first Governor of the Straits Settlements, Sir Robert Fullerton, had remarked that “the vicious propensities of mankind are the fittest subjects of taxation”, *Straits Settlements records*, H13 (1824).

<sup>24</sup> Relevant statistics are not available for Singapore but it is revealing that the opium revenue farmers on Prince of Wales Island reaped an average profit of 70 per cent in 1825. Nordin Hussin, *Trade and society in the Straits of Melaka: Dutch Melaka and English Penang, 1780-1830* (Singapore: NUS Press, 2007), p. 258.

<sup>25</sup> For a detailed account of the operation of revenue farms in Singapore, see Carl Trocki, *Opium and empire: Chinese society in colonial Singapore 1800-1910* (Ithaca: Cornell University Press, 1990).

territory.<sup>26</sup> Most of the opium business was carried out in shophouses located in and around Chinatown, although these opium dens, as they came to be known, were also found in the vicinity of Victoria Street and the Bugis area, catering especially to the rickshaw coolies. The brothels in Chinatown also peddled the drug routinely, and it was as an habitu  of such places that the single young men who immigrated to Singapore from China with nowhere to spend their free time picked up the habit from friends who persuaded them that opium was an aphrodisiac.<sup>27</sup>

The demise of the opium revenue farms in the early twentieth century was presaged by the publication of the report of the 1894 Royal Opium Commission set up by the British House of Commons to study the opium problem in India. As a result of the report, the government of the Straits Settlements was directed to further control the farms by placing a maximum selling price on opium and excluding Malays from its use. These reforms have been interpreted variously as pre-emptive attempts by the colonial government in Singapore to protect the revenue farms, rather than abolish them, against the rise of the anti-opium movement in England.<sup>28</sup> The fact of the matter is that the government depended

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<sup>26</sup> Carl Trocki, 'Opium and the beginnings', pp. 297-314. According to Trocki, a force of about eighty men were employed in this function in the 1880s.

<sup>27</sup> Warren, *Rickshaw coolie*, p. 242.

<sup>28</sup> Cheng U. Wen, 'Opium in the Straits Settlements, 1867-1910', *Journal of Southeast Asian History*, 2, 1 (1961), p. 54 and James Francis Warren, *Rickshaw coolie*, p. 248. The latter stated that "Their line of thinking was a muddle of motives and social

heavily and absolutely on the farms for the resources needed to administer the colony, and revenue maximisation had always been the abiding principle of British opium policy in the Straits Settlements. In fact, opium consistently accounted for close to half of government revenues in the late nineteenth century and the first two decades of the twentieth century, and more in some years for Singapore.<sup>29</sup>

These tactics seem to have worked for a while as anti-opium sentiment built up in Singapore at the turn of the twentieth century, and it was only in 1907 that the Straits Settlements Opium Committee was appointed to inquire into matters relating to the use of opium. As in 1894, the attitude of the colonial government to the setting up of the Committee was ambivalent and according to Cheng U. Wen, its unofficial members were actually opposed as they viewed it to be a threat to the revenue of the colony.<sup>30</sup> As expected, the unofficials were backed by a broad coalition of opium farmers, European merchants and the English-

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attitudes that was never unanimous in its intention, except to avoid the abolition of opium smoking” .

<sup>29</sup> The estimate for the Straits Settlements is from Cheng, ‘Opium in the Straits Settlements’ , p. 52; British Malaya Opium Committee, *Proceedings of the committee*, pg. B-19. That for Singapore is from Ichiro Sugimoto, *Economic Growth of Singapore in the Twentieth Century: Historical GDP Estimates and Empirical Investigations* (Singapore: World Scientific, 2011), pp. 260-261.

<sup>30</sup> Cheng U. Wen, ‘Opium in the Straits Settlements’ , p. 63. She has the following assessment of the 1908 Opium Commission: “This implies that even if the evidence showed that opium should be prohibited, the Commission would, on purely financial considerations, still refuse to make such a recommendation. This therefore means that the Commission was more concerned with the loss of the revenue from opium than the evils arising from opium. ” , p. 72.

language press. In the event, the Committee recommended to abolish the system of farming the opium revenue, implement a ban on opium sale to women and children under 18, and suppress the use of opium in brothels. In its place, a Monopoly Department was created to take over the manufacture and sale of opium, although private retail shops continued to co-exist with government-run dens until 1926. In 1923, there were 423 of the latter, with an estimated average of 377 Chinese customers per shop.<sup>31</sup> These shops remained open from 6am to 10pm and their dark red facades belied the Spartan interiors, for apart from opium pipes, lamps and other paraphernalia, there were only wooden benches for the men to stretch out on while smoking the drug.

Meanwhile, amid increasing pressure on the British government by the international community, the local anti-opium movement gathered strength and continued to agitate for banning the drug, led by Straits-born Chinese community leaders such as Lim Boon Keng and Chen Su Lan.<sup>32</sup> By this time, the tide of local opinion had turned decisively, with opium smoking being regarded by the public as a social and moral evil. As a consequence, another official commission was set up in 1924 to look

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<sup>31</sup> British Malaya Opium Committee, *Proceedings of the committee*, p. A-25.

<sup>32</sup> Detailed accounts of the anti-opium movements internationally and domestically are given by Cheng U. Wen, 'Opium in the Straits Settlements' and Harumi Goto-Shibata, 'Empire on the Cheap: The Control of Opium Smoking in the Straits Settlements, 1925-1939', *Modern Asian Studies*, 40, 1 (2006).

into the issue and control over individual smokers was exerted in 1928 by issuing licences to them to smoke in their own premises. In the following year, supplies of opium were rationed and only adult Chinese above 21 years of age were permitted to consume it. But it was not until 1943, during the Japanese occupation, that a complete ban on opium came into place, although partial suppression was instituted in 1934 when the registers of smokers were closed to new applicants (excluding those who had a medical practitioner's certificate) and the amount of *chandu* sold to registered smokers was limited to two chees<sup>33</sup> a day.

In the end, it was international pressure on the British government, especially from the United States and the League of Nations, that appears to have been instrumental in forcing the colonial authorities to adopt increasingly strict restrictions on opium smoking. In particular, the ratification of the Hague Opium Convention in 1919 and the subsequent Geneva Conference in 1924-25 had put Britain in an awkward situation with regard to the opium policies of her empire. The Governor of the Straits Settlements, who did not think that opium smoking and taxation were in any way problematic, was caught in the resulting feud between the Colonial Office and the Home Office, which wanted to declare a

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<sup>33</sup> One chee is equal to 3.76 grammes.

complete ban on opium smoking after a certain period of time.<sup>34</sup> The latter prevailed in the end, and the British government committed itself to suppressing the use of prepared opium in her colonies within a timeframe that was tied to the stamping out of smuggling from China.

That it took more than a century for opium to be completely banished from Singapore may suggest that its economic benefits outweighed the costs. But the social and health effects of opium need to be reckoned with. The reports of successive commissions of inquiry had averred that smoking opium in moderation was not harmful, if not outright beneficial, and that the ‘evil effects’ arising from it came from excessive consumption. While the 1908 Committee acknowledged that once the opium habit was acquired by whatever means, addiction was more likely than indulgence in alcohol, excessive smoking did not seem prevalent, as could be testified to by the lack of pauperism in the Straits Settlements and the absence of the alleged devastating effects of opium.<sup>35</sup> Hence, the opium problem was not sufficiently acute to justify prohibition, which

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<sup>34</sup> Ibid., pp. 65 and 70.

<sup>35</sup> Straits Settlements Opium Commission, *Proceedings of the commission*, Vol. I, p. 15. The reasons for commencing the habit included “as a remedy for sickness”, “as an antidote to sorrow”, “for fun” and “from bad example”, *ibid.*, p. 11. The Committee also cited “the lack of home comforts, the strenuousness of their labour, the severance from family association and the absence of any form of healthy relaxation” as factors facilitating the commencement of the opium habit, p. 11.

would only lead to an increase in smuggling and induce addicts to turn to more deleterious substitutes such as morphine – an alkaloid of opium – or swallowing dross.<sup>36,37</sup>

On this score, the testimony provided by multiple witnesses called before both the 1908 and 1924 Opium Commissions, including medical doctors, colonial officials and employers, was ambiguous. The weight of the evidence would suggest that smokers were not in any way less able to perform physical work than non-smokers and moderate smokers did not suffer any severe effects on their health. In contrast, many opium smokers who appeared before the 1908 Committee said that opium was bad, but they could not work without it and tended to increase their intake over time. Rickshaw coolies in particular were adamant that they could not stand the arduous strain of their calling without it.<sup>38</sup> Within this group, there was a core of 5 to 10 percent of smokers who were the worst addicts. These ‘opium sots’ were emaciated and hardly fit for work, and their arms and legs were covered with needle marks from morphine injections. Thus, the social cost of opium was likely to have been most pernicious among the heaviest users and the impoverished, trapping them in a vicious cycle of hard labour, addiction and ultimately, death.

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<sup>36</sup> Ibid., p. 15.

<sup>37</sup> Opium dross is the residuum remaining in the opium pipe after smoking.

<sup>38</sup> Warren, *Rickshaw coolie*, pp. 241-249.



### **Estimates of opium consumption**

There is no official data on the consumption of opium in Singapore. For the purpose of estimating the expenditure on opium during the period 1900 to 1939, two approaches can be taken. The first is to rely on the government revenue from the sale of opium as an obvious proxy, but figures on gross receipts were only compiled starting from 1913, as prior to that and up to 1909, the Chinese revenue farms were exclusively responsible for distributing the drug to consumers. Even after the revenue farms were abolished, private outlets continued to operate alongside government-owned shops, although the latter gradually increased their share of the market. It is only between 1926 and 1939 that the government revenue data from the direct sale of opium to retail consumers can be expected to yield a relatively reliable estimate of aggregate opium consumption in Singapore.

The second approach is to use data on the quantity of opium purchased and the price at which it was sold to final users, which is available for the bulk of the period from 1900 to 1922. Except for lacunae in 1908 and 1923-25, this statistical information can be found in the two reports inquiring into opium use, and it is a straightforward

matter to calculate the value of opium consumption.<sup>39</sup> The missing observation for the year 1908 was dealt with by assuming that the per capita opium consumption of the Chinese population in Singapore was unchanged from the previous year, after allowing that population to increase in line with the average over 1900-07.

The interregnum between the timing of convention of the second Opium Committee and the complete phasing out of private retailers presented a greater difficulty, which necessitated the adoption of a more elaborate estimating procedure for the period 1923-25. As a first step, figures on the gross government revenue received from opium sales were obtained from the *Annual Report, Government Monopoly Department, Straits Settlements*. However, these statistics did not fully capture actual consumption as the profit margins of licensed sellers were not accounted for. The consumption of opium in these years was therefore estimated by summing up government receipts from the sales of opium to consumers at retail prices, and government receipts from the sales of *chandu* to private shops at wholesale prices, which were adjusted to their retail values by adding a trade and transport mark-up of 4.2

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<sup>39</sup> Data on the amount of prepared opium sold and its per unit price for the period 1900-1907 is found in Straits Settlements Opium Commission, *Proceedings of the commission*, Vol. I, p. 9 and Vol. III, p. 80. Thereafter until 1922, similar information was recorded in British Malaya Opium Committee, *Proceedings of the committee*, pp. B-7 and B-15, except for the quantities sold in 1909 and 1910, which were taken instead from *Annual Report, Government Monopoly Department, Straits Settlements* (1910): 101.

percent.<sup>40</sup>

With respect to the final phase of opium consumption from 1926 to 1939, the Monopoly Department made direct sales through its outlets, with no private dealers involved. Therefore, gross government revenue receipts can be taken to represent the final consumption expenditure on opium. Unfortunately, these figures were only reported sporadically in 1926-27 and 1932-34, with the consequence that the data for the other years had to be worked out by applying a conversion factor to a series on net revenue extracted from the *Blue Book, Straits Settlements*.<sup>41</sup> A further complication arose because the breakdown of net revenue into the separate entities of the Straits Settlement was only available beginning from 1929, and so the share of Singapore during the years 1926-28 had to be inferred from the average figure for the next few years (50 percent).<sup>42</sup>

The line with square markers in Figure 1 shows the estimated value of opium consumption in Singapore from 1900 to 1939. Expenditure on the

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<sup>40</sup> The mark-up is based on the estimate for 1922.

<sup>41</sup> The conversion factor used is simply the ratio of gross to net revenues for adjacent years i. e., the factor for 1928-29 is based off 1927, that for 1930-31 is from 1932, and the factor for 1935-39 is the one for 1934.

<sup>42</sup> The vexing problem of splitting Singapore from the other settlements in the colonial statistics is one that has constantly bedevilled economic historians. See for example Chong Yah Lim, *Economic Development of Modern Malaya* (Kuala Lumpur: Oxford University Press, (1967) and Ichiro Sugimoto, *Economic Growth of Singapore in the Twentieth Century: Historical GDP Estimates and Empirical Investigations* (Singapore: World Scientific, 2011).

drug rose steadily in the 1910s and then fell sharply in the following decade before stabilising. At the peak in 1920, the value of opium consumption was \$14.67 million, equivalent to 10.7 percent of private consumption spending in Singapore. In general, the share of opium in private consumption varied between 7 percent and 11 percent during the first two decades of the twentieth century, and it fell to an average of 6.2 percent in the 1920s and 3.5 percent in the 1930s. To put these numbers in perspective, note that the share of food averaged 61.1 percent over the entire period 1900-39, while that of clothing was 10 percent.

[Insert Figure 1 here]

The plot of the amount of money spent on opium would suggest that consumption of the drug increased rapidly during the 1910s, after which tightened government controls in the 1920s curtailed its usage. But a rather different picture is portrayed by the data on physical quantity consumed, at least up to 1920 (Figure 1, line with diamond markers). There is a clear long-term downward trend in the quantum of opium ingested over the period studied. After rising in the early years of the twentieth century, the quantity dropped abruptly in 1904 to 1.1 million tahils.<sup>43</sup> Although the reason for this is not evident, the revenue farmers

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<sup>43</sup> Tahil is a local measure of weight and is equivalent to about 1.33 lb or 37.6

began to furnish monthly returns of opium sales to the colonial administration beginning from 1905 whereas before that, they had supplied only annual returns, which could have resulted in over-estimation. Another explanation – the one given by the Opium Commission of 1908 – was the rise in the opium price in 1904, from \$2.20 per tahil to \$3 per tahil, a more than one-third increase.<sup>44</sup> This resulted in a fall in quantity sold in 1904 but expenditure on the drug hardly changed and in fact rose in the following year, indicating that the demand for opium was inelastic.<sup>45</sup>

To the Commission's credit, it did not recommend an increase in the opium price even though that could have brought in more revenue, for essentially the same reasons as legislative prohibition viz., it would encourage smuggling and worsen the already serious problem of smokers

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grammes.

<sup>44</sup> Since the Singapore market was too small to impact the larger trade in opium, its price was effectively determined by global demand and supply, as argued by Carl Trocki, *Opium and Empire*. Notwithstanding this, the colonial government had influence over the retail price through its monopoly of the manufacture and distribution of opium, especially after 1910.

<sup>45</sup> Research has found that addictive drugs tend to have a low price elasticity of demand. For example, van Ours reported that the price elasticity of opium was in a range from  $-0.7$  to  $-1$ , based on information collected by the colonial authorities during the *opiumregie* in the Dutch East Indies. Jan C. van Ours, 'The price elasticity of hard drugs: The case of opium in the Dutch East Indies, 1923–1938', *Journal of Political Economy*, 103, 2 (1995): 261–279. The Opium Committee of 1924 also implicitly recognised that the demand for opium was inelastic when it stated that "the reduction in consumption has not been proportionate to the increase of price", British Malaya Opium Committee, *Proceedings of the committee*, p. A-31.

switching to morphia or opium dross.<sup>46</sup> Nevertheless, the retail price of opium went up to \$4.80 in 1911 and \$12.50 per tahl in 1920, and this explains the rising expenditure on the drug, even as the quantity consumed fell. While this constitutes further evidence for the inelasticity of opium demand, the progressive price increases probably had a dampening effect on consumption, considering that the Chinese population in Singapore had risen exponentially throughout the period. In 1924, the Opium Commission called a halt to price increases at \$12 per tahl and there it stayed more or less until 1939.

Apart from price, another factor that appears to affect quantity demanded was the general economic conditions in the Colony. When tin and rubber production boomed, wages were high and workers spent their extra money on opium.<sup>47</sup> The Opium Commissions had also observed that the quantum of opium consumption by the lower classes would be limited by their incomes.<sup>48</sup> It therefore seems reasonable to postulate that the fall-off in the early 1920s was due to the world recession, which hit Singapore hard. Similarly, the onset of the Great Depression could well have been

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<sup>46</sup> Straits Settlements Opium Commission, *Proceedings of the commission*, Vol. I, pp. 34-35.

<sup>47</sup> Harumi Goto-Shibata, 'Empire on the Cheap', p. 68; Choy and Sugimoto, 'Staple trade, real wages, and living standards', pp. 34 and 36.

<sup>48</sup> Straits Settlements Opium Commission, *Proceedings of the commission*, Vol. I, pp. 34-35; British Malaya Opium Committee, *Proceedings of the committee*, p. A-14.

the principal cause of the drastic decrease in consumption in 1929.

After peaking in 1920, the changes in opium consumption in nominal and real terms basically mirror each other. Both exhibited a steep decline in the 1920s and by 1934 when the partial ban was instituted, the quantity of opium consumed had fallen to 437,000 tahils, less than a third of the peak in 1920. Clearly, the new control measures introduced from 1925 onward were effective in suppressing the use of opium. In 1936, the Governor of the Straits Settlements reported that, as of September 1935, opium addicts in Singapore did not number more than 35,000, or approximately 5 percent of the Chinese population.<sup>49</sup>

### **Implications for living standards**

The economic history literature had in recent times witnessed a ‘real wage revivalism’,<sup>50</sup> which has seen researchers collect and use long-term data series on wages and prices to make comparisons of living standards between the major regions of the world.<sup>51</sup> This approach uses a

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<sup>49</sup> Cited by Harumi Goto-Shibata, ‘Empire on the Cheap’, pg. 77.

<sup>50</sup> The term is due to Angus Maddison, ‘Measuring and interpreting world economic performance 1500–2001’, *Review of Income and Wealth*, 51, 1 (2005): 1–35.

<sup>51</sup> The newer studies have been cited at the beginning of this article while the older papers include Charles H. Feinstein, ‘Pessimism perpetuated: Real wages and the standard of living in Britain during and after the Industrial Revolution’, *The Journal of Economic History*, 58 (1998): 625–658 and Anne Booth, ‘Measuring living standards

subsistence consumption basket to reliably compare the purchasing power of real wages, and therefore has some advantages over GDP per capita as a gauge of economic well-being, but also suffers from shortcomings. Anne Booth, for example, has argued that such interspatial and intertemporal comparisons cannot be meaningfully effected given the different levels of economic development in diverse countries. Moreover, the comparisons do not take account of the functioning of labour markets, especially the phenomena of wage rigidity and segmentation.<sup>52</sup>

The historical real wage calculated in these studies is purportedly an ‘absolute’ indicator of welfare, given that the subsistence basket corresponds to something like the ‘poverty line’ in modern times, in that it tells us whether a worker is able to pay for the minimum necessities of survival.<sup>53</sup> On these grounds, opium has been excluded from the subsistence basket in the studies on Asia. Insofar as this article is concerned, its exclusion raises the issue of whether to treat opium as a necessity or a luxury. To the extent that the drug is consumed by

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in different colonial systems: Some evidence from South East Asia, 1900–1942’, *Modern Asian Studies*, 46, 5 (2012): 1145–1181.

<sup>52</sup> Anne Booth, ‘What do trends in wages tell us about living standards? Some evidence from Southeast Asia’, Paper prepared for the XIV International Economic History Congress, Helsinki (2006).

<sup>53</sup> The correspondence between the historical and modern measures is established in Robert C. Allen, ‘Poverty lines in history, theory, and current international practice’, Discussion Paper Series No. 685, Department of Economics, University of Oxford (2013).



the upper classes in Singapore as a leisure good, it can be unambiguously omitted from the subsistence basket of workers.<sup>54</sup> However, its widespread usage by the labouring class is an altogether different matter. As their testimonies showed, food, clothing and shelter aside, opium was essential for them to perform their jobs and earn the income required to purchase the subsistence basket. To be sure, consumption of the drug added neither to calorific nor protein intake – the biological basis for the calibration of the subsistence basket. Even if one were to ignore the reasons for the habit, the fact remains that opium smokers devoted a portion, possibly substantial, of their earnings to the drug.

Figure 2 is an analytical depiction of the modified poverty line for an opium smoker in Singapore. The minimum daily calories intake is taken to be 1940 and this amount determines the basic level of food expenditure. The Engel curve relates food expenditure to income and has a concave shape because of decreasing returns (consumers purchase increasingly expensive sources of nutrition as income rises). The poverty line for an opium smoker shows the amount of income required to consume

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<sup>54</sup> The Opium Commission of 1908 noted in its report that “the proportion of well-to-do amongst the Straits-born [Chinese] is much greater than the corresponding proportion in the case of the China-born Chinese and this fact, combined with the greater leisure customary amongst the richer classes, affords some explanation of the increase, which we are inclined to believe has taken place, in the prevalence of the habit among Straits-born Chinese.” Straits Settlements Opium Commission, *Proceedings of the commission*, Vol. I, p. 18.

the necessary calories and opium, as well the non-food expenditure that is typical of that level of income. This minimal level is given by the intersection of the total expenditure curve and the budget constraint. The poverty line of the smoker will be at a higher income compared to a non-smoker due to the additional spending on opium, below which the smoker would be living in poverty.

[Insert Figure 2 here]

Determining the poverty line in reality for opium users would therefore require an estimate of the amount an individual smoker spent on opium. For a start, dividing the total amount of opium consumed in each year by the Chinese male population over 15 years of age would clearly lead to an understatement of average consumption per head. Credible estimates of the proportion of smokers to the population are also hard to come by, the only statistics available being the widely divergent guesses of witnesses summoned by the Opium Commissions. In the absence of direct surveys before the registration of smokers was instituted, hospital and prison records provide the next best source of information on the incidence of opium addiction in Singapore.

It was reported that out of the 12,560 hospital admissions in Singapore from March 1907 to February 1908, some 1,626 were opium smokers,

a proportion of 13 percent.<sup>55</sup> This finding is likely to be biased downward because the admissions data did not distinguish between the races. In a small census carried out later in 1923, the incidence of opium smoking amongst Chinese hospital patients was decidedly higher, at 36 percent.<sup>56</sup> In the same year, the ratio of opium addicts amongst Chinese prisoners in Singapore was 26 percent, while a set of returns for the years 1902 to 1923 furnished by the Superintendent of Taiping Prison – the largest in Peninsular Malaya – showed that the corresponding ratio was 30 percent.<sup>57</sup> If one conservatively posits on the basis of these partial enumerations that a third of the Chinese adult male population in Singapore was given to the opium habit, the number of smokers would work out at 42,065 in 1911, rising to 56,559 in 1921.<sup>58</sup> The implied amount consumed by each smoker would be 2.6 grammes per day in 1911 and 1.9 grammes in 1921.

The veracity of these quantities can be assessed in terms of the dichotomous characterisation of smokers as ‘moderate’ or ‘excessive’ by the colonial government in Singapore – if indeed such a distinction

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<sup>55</sup> Straits Settlements Opium Commission, *Proceedings of the commission*, p. 101.

<sup>56</sup> British Malaya Opium Committee, *Proceedings of the committee*, p. B-22.

<sup>57</sup> *Ibid.*, p. A-11 and Appendix XXIII, p. B-26. The prison in Kuala Lumpur, the other Chinese-dominated city in British Malaya, returned a proportion of 25 percent.

<sup>58</sup> The number of smokers is arrived at by using the figures on the consumption per adult male per annum given in *ibid.*, p. A-17.

can be meaningfully made (another equally problematic categorisation is that of ‘occasional’ versus ‘regular’ or ‘habitual’ smokers). In this respect, the 1908 Opium Commission pointed out that the practical standard of two chees (7.5 grammes) a day laid down by the China Mutual Life Insurance Company as the maximum consumption of persons who were acceptable as first-class risks constituted an amount that “is by no means within the range of light smoking.”<sup>59</sup> Two chees a day was also the amount rationed out to registered smokers in 1934. As far as the colonial government was concerned, the reality of the situation in Singapore was that the majority of opium users were moderate smokers.<sup>60</sup> It bears pointing out that the assertion was not as disingenuous as it might seem. For example, James Rush has documented that the vast majority of Java’s opium consumers under the *opiumregie* were modest smokers and large numbers of them used very small amounts of opium.<sup>61</sup> Similarly, Xavier Paulès found that the major proportion of opium smokers in the city of Canton in China had a rather small daily consumption, of less than 3.8 grammes a day.<sup>62</sup>

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<sup>59</sup> Ibid., pp. 13 and 15.

<sup>60</sup> Ibid., pp. 15–16.

<sup>61</sup> James R. Rush, ‘Opium in Java: A sinister friend’, *The Journal of Asian Studies*, 44, 3 (1985), pp. 549–560.

<sup>62</sup> Xavier Paulès, ‘In search of smokers: A study of Canton opium smokers in the 1930s’, *East Asian History*, 29 (2005): pp. 107–128.

An idea of what would have been the amount consumed per day by a moderate smoker in Singapore can be gleaned from the aforementioned hospital records. The census of 1923 indicated that of the total number of opium smoking patients admitted into hospitals in British Malaya, a cumulative proportion of 88 percent had a daily consumption of not more than 6 hoons<sup>63</sup> (2.3 grammes).<sup>64</sup> Inquiries made at leper asylums and decrepit establishments corroborated this statistical evidence, and in fact suggested that the largest percentage of smokers (41 percent) consumed not more than three hoons a day.<sup>65</sup> Interestingly, the quantum of six hoons per diem would be consistent with the consumption per head estimates derived earlier (of between 1.9 and 2.6 grammes) if the distribution of opium users was such that there was a small number of heavy smokers, a large number of moderate smokers and a minority of light smokers. Furthermore, amongst the ranks of rickshaw pullers, six hoons a day was the most common amount mentioned and for coolies engaged in railway construction work, three to four hoons was the standard.<sup>66</sup>

To draw the implications of opium for the colony's general living standards, the consumption norm will be taken to be six hoons per day.

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<sup>63</sup> One hoon is a tenth of a chee.

<sup>64</sup> British Malaya Opium Committee, *Proceedings of the committee*, p. A-14.

<sup>65</sup> *Ibid.*, pp. A-14 and A-15.

<sup>66</sup> *Ibid.*, p. A-15.

The impact on an individual smoker's welfare would then depend on whether he consumed in excess or below the norm. Table 1 shows the subsistence consumption basket constructed by the present authors after adding opium.<sup>67</sup> The staple food in the basket was rice, supplemented by fish, vegetables and fats. The non-food items were mainly apparel, fuel (for lighting and cooking) and housing. The annual cost of the subsistence basket came up to \$169.44 in 1914 at the prices prevailing then, with the expenditure on opium being \$142.35. These calculations suggest that even for a moderate smoker, the cost of satisfying his craving dwarfed other spending.

Would a worker in Singapore have been able to afford the subsistence bundle if he smoked opium? The answer depends first and foremost on his wage earnings in a year, which in turn hinged on whether he was a skilled or unskilled labourer and the number of days he worked. Given the existence of a skill premium, the former earned much more.<sup>68</sup> The length of the work week is not known for sure, but anecdotal evidence culled from rickshaw pullers suggests that most coolies took only a few days off every month, apart from festival periods such as the Lunar New

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<sup>67</sup> Choy and Sugimoto, 'Staple trade, real wages, and living standards' .

<sup>68</sup> Ibid., p. 39. The skill premium rose in the interwar decades and reached 200 percent by 1938.

Year.<sup>69</sup> Going on this information, the total number of working days per annum would be about 300. Equally important to the question of affordability is an opium smoker's marital status, as that would determine if he needed to support a family. It seems safe to proceed on the maintained assumption that almost all opium users in Singapore were bachelors, certainly before the 1920s. Even if they were married, they had left their families in China in their sojourn to the Nanyang (literally, 'South Seas' ) .

[Insert Table 1 here]

Using information collected on the changing prices of the items in the subsistence consumption basket in conjunction with nominal wage data, it is possible to compute income/expenditure ratios by dividing total earnings in a year with the annual cost of the basket of goods inclusive of opium.<sup>70</sup> If this ratio equals or exceeds one, the worker was able to afford the consumption bundle with his wage earnings. On the other hand, if the ratio falls below one, he would encounter difficulties in maintaining even a subsistence standard of living.

Figure 3 contains the results. For skilled labourers such as artisans and craftsmen, the ratio was almost always larger than one

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<sup>69</sup> Warren, *Rickshaw coolie*, pp. 186-187.

<sup>70</sup> Readers familiar with the historical real wage studies will recognise that these are 'welfare ratios', as defined by that literature.

throughout the period studied. In the case of unskilled workers including port coolies, rickshaw pullers and other menial workers, wage data was only compiled from 1912. Those amongst them who smoked six hoons of opium or more a day would struggle to survive, especially when the retail price increased. By the 1920s, their earnings could only cover half of their expenses and they fell further into destitution when the Great Depression struck in the early 1930s. By then, addicts were spending over 90 percent of their earnings on opium. Figure 3 also shows that lighter smokers who were unskilled and consumed three hoons per day could not escape the poverty trap starting from the early 1920s.

Dismal as these conclusions may seem, there are several mitigating factors to consider. First, the wages of unskilled workers used in the comparison are the minimum received by rubber tappers in Singapore and averaged only 50¢ a day until the recession of the thirties brought it down to 25¢. Nonetheless, other labourers such as those working in factories earned somewhat more, with a per diem wage of 70¢. The rickshaw coolies also fared better, with net wages of \$1 per day in the 1920s.<sup>71</sup> Still, smokers would have been spending about 80¢ on opium by this time.

Working more hours each day offered some scope to enhance incomes – an

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<sup>71</sup> Warren, *Rickshaw coolie*, p. 246.



“industrious revolution” in pursuit of opium.<sup>72</sup> Once their earning capacity had been exhausted, opium addicts had to resort to borrowing or reduce their purchases of other goods. Given that the food requirements in the subsistence basket were already minimal, this would mean starvation.<sup>73</sup> The Opium Commission of 1908 acknowledged this, but maintained that the ‘physical evils’ of starvation are confined to excessive smokers.<sup>74</sup> More likely than not, smokers reacted to higher prices by curtailing their consumption<sup>75</sup> or by switching to the cheaper alternatives of swallowing opium dross and injecting morphia, options favoured by excessive smokers.

Summing up, the investigation of living standards in this article highlights the difference in the relatively modest macroeconomic import of opium and its outsize impact on individual economic welfare. The divergence in fortunes between the Singapore population at large and those at the bottom rungs of the social ladder was no less stark: while the former experienced material improvements through the 1920s and 1930s, the latter were faced with a declining standard of living.<sup>76</sup> Although

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<sup>72</sup> Allen, ‘The Great Divergence’, pg. 430.

<sup>73</sup> Xavier Paulès, ‘In search of smokers’, p. 125, noted that the anti-opium propaganda posters in Canton always displayed skinny smokers dressed in rags, as a way to associate opium consumption with poverty.

<sup>74</sup> Straits Settlements Opium Committee, *Proceedings of the committee*, p. 13.

<sup>75</sup> This phenomenon was observed in Java by Rush, ‘Opium in Java’, pp. 555–556.

<sup>76</sup> Choy and Sugimoto, ‘Staple trade, real wages, and living standards’, showed that general living standards in Singapore improved in the interwar period due to the

opium was arguably a necessity to the workers engaged in hard physical labour, it also condemned them to a life below the poverty line.

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city' s commercialisation and financialisation.

Table 1: Subsistence Consumption Basket in Singapore with Opium

Commodity	Quantity per person per year	Expenditure in 1914	Budget Share (%)	Nutrients/day	
				Calories	Protein (grammes)
Rice	172 kg	\$18.81	11.1	1,677	47
Fish	3 kg	\$0.57	0.3	8	2
Beans	13 kg	\$1.06	0.6	122	9
Oil	5 kg	\$1.49	0.8	112	0
Sugar	2 kg	\$0.33	0.2	21	0
Soap	1.3 kg	\$0.25	0.2		
Cotton	3 m	\$1.16	0.7		
Kerosene	2.6 litre	\$0.71	0.4		
Fuel	2 MBTU	\$0.81	0.5		
Rent		\$1.90	1.1		
Opium	0.8 kg	\$142.35	84.0		
Total		\$169.44	100.00	1,940	58

Figure 1: Opium Consumption in Singapore, 1900-39

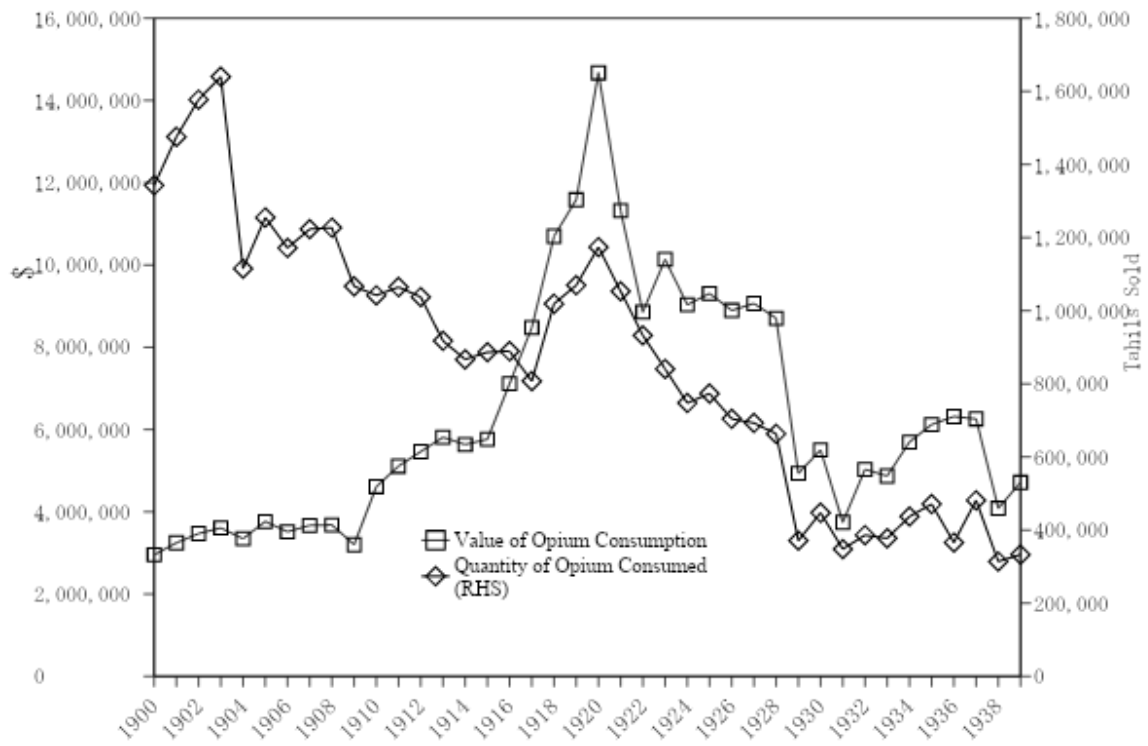


Figure 2: Poverty Line for Opium Smoker

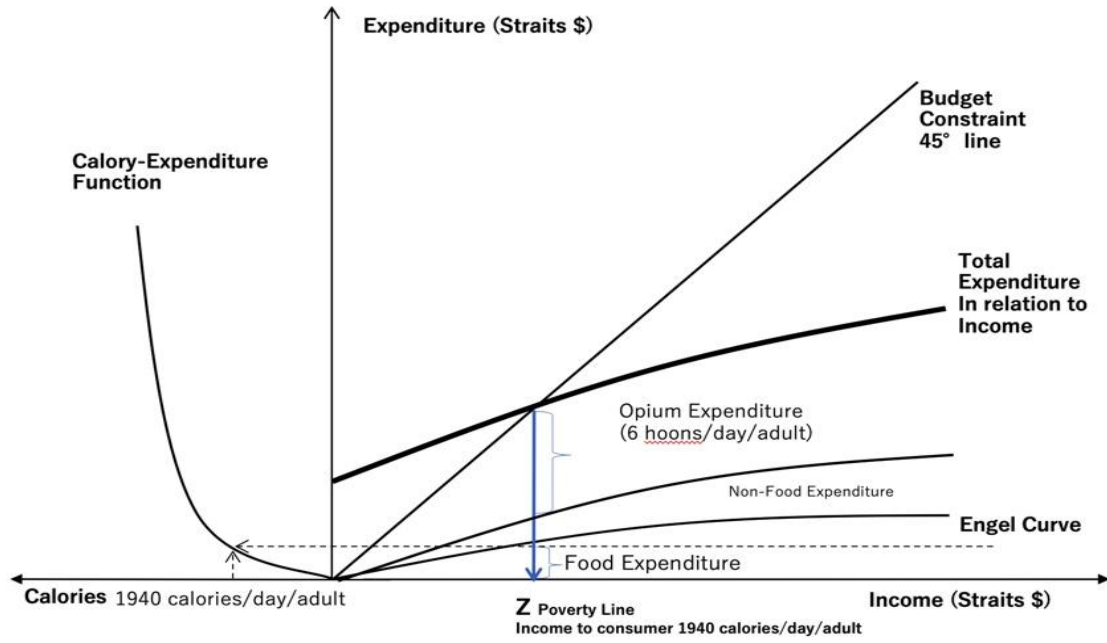


Figure 3: Affordability of Subsistence Basket, 1900-39

