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Article (Published version) (Refereed)

Original citation:

Booth, Anne and Deng, Kent (2017) Japanese colonialism in comparative perspective. Journal of World History, 28 (1). pp. 61-98. ISSN 1527-8050

DOI: 10.1353/jwh.2017.0002

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Available in LSE Research Online: July 2017

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Journal of World History, Volume 28, Number 1, March 2017, pp. 61-98 (Article)

Published by University of Hawai'i Press DOI: https://doi.org/10.1353/jwh.2017.0002



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Japanese Colonialism in Comparative Perspective

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This article examines the economic consequences of Japanese colonialism in Taiwan, Korea, and Manchuria in the years 1910 to 1945 and to compare Japanese policies with those implemented by other European powers, especially in Southeast Asia. In particular it addresses the writings of an influential group of American scholars, several based at Stanford University, who have published widely on Japanese colonial policies over the last fifty years. They contributed to several edited volumes and also authored a number of journal articles examining the economic consequences of Japanese colonialism in Taiwan, Korea, and Manchuria, as well as examining Japan's informal empire in Asia. These writers were not for the most part Japanese, although many had a deep knowledge of Japanese language as well as Western sources. To some extent, they were reacting against the work of Japanese scholars writing after 1945, who tended to be critical of aspects of Japanese colonialism.¹

By the 1980s, when rapid economic growth in both Taiwan and the Republic of (South) Korea was attracting attention from around the world, these scholars stressed the more positive aspects of the Japanese legacy, including the agricultural transformation and especially the

Journal of World History, Vol. 28, No. 1 © 2017 by University of Hawai'i Press

¹ For an overview of the Japanese literature see R. H. Myers, "Post–World War II Japanese Historiography of Japan's Formal Colonial Empire," in *The Japanese Colonial Empire*, 1895–1945, ed. Ramon H. Myers and Mark R. Peattie (Princeton, N.J.: Princeton University Press, 1984).

successful transfer of higher yielding rice varieties, as well as the development of industry and transport infrastructure. They also discussed the Japanese emphasis on expanding access to education. Gradually, this work has been used to support a "new orthodoxy," which has stressed Japanese colonial exceptionalism. This orthodoxy has been propagated by scholars who are not themselves authorities on Asian economic development. For example, David Landes argued that "the best colonial master of all time has been Japan, for no ex-colonies have done so well as (South) Korea and Taiwan." The assumption of Landes, and indeed other writers who are better known authorities on the economic history of Asia, is that the stellar performance of these two economies since 1960 must be due, in part at least, to the Japanese legacy.²

There are some obvious criticisms of such arguments. One is that North Korea and Manchuria, which accounted for around 70 percent of the total population of Japanese colonies in 1938, have not performed nearly as well as Taiwan and South Korea (Republic of Korea) in the second half of the twentieth century. While it is true that the three Manchurian provinces still had a higher per capita GDP than the average for the rest of China in the early years of the twenty-first century, they had not achieved the level of development of Taiwan or the Republic of Korea. North Korea, now ruled by the third generation of the Kim family, has become a development disaster. So Japanese "developmental colonialism" seems to have left a much more positive legacy in some parts of the former Japanese empire than in others. Another problem is that much of the writing by mainstream economists on the economic miracle in both Taiwan and Republic of Korea has taken the 1960s as the starting point. It ignores the very difficult decades from the late 1930s to the late 1950s, when there were steep declines in real GDP, and a slow recovery. According to recent estimates, Taiwan regained the 1938 level of per capita GDP only in 1962. The Republic of Korea had a lower per capita GDP than Taiwan in the late 1930s and regained the 1938 level by 1953, although the absolute level was below Taiwan, and growth through the rest of the 1950s was not very fast.³ Arguably,

² David S. Landes, *The Wealth and Poverty of Nations: Why Some Are So Rich and Some So Poor* (New York: W.W. Norton, 1999), 437. See also Bruce Cumings, *Parallax Visions: Making Sense of American-East Asian Relations at the End of the Century* (Durham, N.C.: Duke University Press, 2002), 199, and Atul Kohli, *State-Directed Development: Political Power and Industrialization in the Global Periphery* (Cambridge: Cambridge University Press, 2004), who compares Korea with India, Nigeria, and Brazil.

³ These figures are taken from the Maddison Project update of the data on per capita GDP given in Angus Maddison, *The World Economy: Historical Statistics* (Paris: OECD Development Centre Studies, 2003). See the website of the Maddison-Project http://www .ggdc.net/maddison/maddison-project/home.htm, 2013 version. For further discussion of the

the growth miracles that occurred post-1960 in both countries were influenced more by the policy responses to the problems of the late 1940s and 1950s than by the period of Japanese control.

A further reason for revising the writing on Japanese colonialism is that it does not engage with the rapidly growing literature on colonialism in other parts of Asia, or does so only in a very superficial way. A common assumption seems to be that British, Dutch, French, and American colonial regimes in Asia did not promote economic growth and structural diversification, left behind institutions that were extractive rather than inclusive, and did very little to improve living standards. This article challenges these views by examining the evidence on economic growth and structural change in the major colonies of East and Southeast Asia. It also looks at the role of government, the emergence of indigenous entrepreneurs, and changes in education and living standards. Finally the article asks whether the Japanese colonies were more profitable to the metropolitan economy than those in other parts of Asia.

Growth and Structural Change in Asia: 1900–1940

In 1913, the estimates given by the Maddison Project show that per capita GDP in colonial Asia (in 1990 international dollars) varied from \$673 in India to \$988 in the Philippines and \$1,367 in Singapore.⁴ There was considerable variation in growth rates between 1913 and 1941. In per capita terms, growth was positive between 1913 and 1929 in most parts of colonial Asia, with Taiwan having the fastest growth and India the slowest. Korean growth until 1929 was no faster than in the Philippines, and not much different from that of Burma or Indonesia (Table 1). After 1929, there was a more obvious divergence between Korea and Manchuria compared with other parts of colonial Asia. All the European colonies in Asia and the Philippines experienced a fall in per capita GDP between 1929 and 1934, although there was some

aims of the project, see J. Bolt and J. L.van Zanden, "The Madison Project: Collaborative Research on Historical National Accounts," *Economic History Review* 67 (2014): 627–51.

⁴ http://www.ggdc.net/maddison/maddison-project/home.htm, 2013 version. Singapore did not exist as a separate entity in the 1930s; it was part of the larger territory known as the Straits Settlements, which in turn was one component of British Malaya. Estimates of national income for Singapore alone from 1900 to 2000 are given in Ichiro Sugimoto, *Economic Growth of Singapore in the Twentieth Century: Historical GDP Estimates and Empirical Investigations* (Singapore: World Scientific, 2011).

	1902	1913	1929	1934	1940*
Korea	n.a.	77%	100%	112%	145%
Taiwan	54%	65%	100%	101%	100%
Manchuria	n.a.	90%**	100%	81%	121%
Philippines	47%	74%	100%	95%	106%
Indonesia	64%	80%	100%	86%	104%
India	90%	92%	100%	96%	94%
Burma***	77%	68%	100%	93%	82%
Thailand	93%	106%	100%	n.a.	104%
Singapore	58%	59%	100%	81%	102%

Table 1. Per Capita GDP as Percentage of 1929 Level, Selected AsianCountries, 1902–1940

*1938 for Thailand; 1939 for Singapore.

**1924.

***Figures refer to 1901-02, 1911-12, 1931-32, 1936-37, and 1938-39.

Sources: KOREA: Nak Nyeon Kim, Economic Growth in Korea 1910–1945 (Tokyo: University of Tokyo Press, 2008), 406–11; TAIWAN: Masahiro Sato et al., Asian Historical Statistics: Taiwan (Tokyo: Toyo Keizai, 2008), 231–33; MANCHURIA: Kang Chao, The Economic Development of Manchuria: The Rise of a Frontier Economy (Ann Arbor: Center for Chinese Studies, University of Michigan, 1983), Table A-3; PHILIPPINES: Richard Hooley, "American Economic Policy in the Philippines, 1902–1940: Exploring a Dark Age in Colonial Statistics," Journal of Asian Economics 16 (2005), Table A.1: Population Data from Yearbook of Philippine Statistics 1940; INDONESIA: Pierre van der Eng, Historical National Accounts Data for Indonesia, 1880–2012 (Canberra: Australian National University, 2013); INDIA: Siva Sivasubramonian, "Twentieth-Century Economic Performance of India" in The Asian Economies in the Twentieth Century, edited by Angus Maddison, D. S. Prasada Rao, and William F. Shepherd (Cheltenham: Edward Elgar, 2002); BURMA: Aye Hlaing, "An Economic and Statistical Analysis of Economic Development of Burma under British Rule" (PhD Dissertation University of London, 1965), 289; THAILAND: Sompop Manarungsan, "Economic Development of Thailand, 1850–1950" (PhD Dissertation, State University of Groningen, 1989), 251; SINGAPORE: Ichiro Sugimoto, Economic Growth of Singapore in the Twentieth Century: Historical GDP Estimates and Empirical Investigations (Singapore: World Scientific, 2011), 185.

recovery in Indonesia and the Philippines after 1934. Taiwan experienced little growth in per capita terms over the 1930s.

Manchuria, which had become the state of Manchukuo in 1932, under strict Japanese control, suffered a severe economic downturn in 1934. This was in part the result of the change of regime, although Kang Chao argued that the main reason for the poor performance was that Manchuria had fallen into a staple trap when the world market for its main export crop, soybeans, collapsed after 1930.⁵ Both production

⁵ Kang Chao, "The Sources of Economic Growth in Manchuria, 1920–1941," in Modern Chinese Economic History, ed. Chi-Ming Hou and Tzong-Shian Yu (Taipei: Institute of Economics, Academica Sinica, 1979), 257. Herbert P. Bix argued that the reliance on one

and exports fell sharply.⁶ The Japanese response was to implement a policy of economic diversification into mining and industry. This was also their strategy in both Korea and Taiwan. The result was accelerated economic growth after 1934, especially in Korea, but also in Manchuria. In Taiwan, per capita GDP reached a peak in 1938. But after that there was a decline, and by 1940, per capita GDP was about the same as the 1929 estimate. In British India, per capita GDP in 1940 was still below the 1929 level, although in both Indonesia and the Philippines the estimates for 1940 was above those for 1929. Perhaps the most surprising result of all was from independent Thailand, where there was virtually no growth in per capita terms between 1013 and 1038.⁷ What explains the better growth performance in the Japanese colonies, especially in Korea and Manchuria, over the 1930s? The main reason is that their trade and investment were tightly linked to the Japanese economy, which experienced faster growth during the 1930s compared with the major economies in West Europe and America. During the 1930s the Japanese colonies continued to invest in both infrastructure (especially transport) and directly productive activities, including agriculture, mining, and manufacturing. By 1938, gross domestic capital formation in Manchuria was 23.5 percent of GDP, although the proportion was lower in Taiwan and Korea.⁸ In all parts of the Japanese empire, government played a key role in promoting investment in both infrastructure and in productive activities, offering considerable

staple crop was an important reason for the widespread poverty in Manchuria even before prices fell in the 1930s; see his "Japanese Imperialism and Manchuria 1890–1931" (PhD Dissertation, Harvard University, 1971), 178. But it is also probable that the monetary crisis in China in the early 1930s, which was caused by the fall in the international price of silver, had some impact on Manchuria and led to the full integration of Manchuria into the yen bloc. See Tomoko Shiroyama, *China during the Great Depression: Market, State, and the World Economy*, 1929–1937 (Cambridge, Mass.: Harvard University Press for the Harvard University Asia Center, 2008), 170–71, and Ian Nish, *The History of Manchuria* 1840–1948: A Sino-Russo-Japanese Triangle, Vol 1, Historical Narrative (Folkestone: Renaissance Books, 2016), 176–77.

⁶ An analysis of the impact of the creation of Manchukuo on agricultural output is given by Kungtu C. Sun, *The Economic Development of Manchuria in the First Half of the Twentieth Century* (Cambridge, MA: East Asia Research Center, Harvard University, 1969), 57–58. He argues that after adjustments to the official data, the production of the main agricultural crops never regained the level of the late 1920s.

⁷ For a detailed discussion of growth in Thailand from 1870 to 1950, see Sompop Manarungsan, "Economic Development of Thailand, 1850–1950" (PhD Dissertation, State University of Groningen, 1989), and Anne Booth, "Falling Behind, Forging Ahead and Falling Behind Again: Thailand from 1870 to 2014," *Economies* (2016): 2–17.

⁸ The Manchurian figure is taken from Chao, "The Sources", 258–61. Those from Taiwan and Korea are taken from T. Mizoguchi and Mataji Umemura, eds., *Basic Economic Statistics of Former Japanese Colonies*, 1895–1938, *Estimates and Findings* (Tokyo: Toyo Keizai Shinposhain, 1988), 226–38.

subsidies to the private sector. Comparative data show that length of roads and railways in relation to area were higher in Taiwan and Korea than in any of the Southeast Asian colonies except Java.⁹

While Dutch, French, British, and American colonial administrations were all aware of the importance of investment in infrastructure. government investment was constrained by conservative fiscal policies, especially after 1930. Over the 1930s, the world slump had an adverse impact on export revenues, which in turn affected government revenues. In Indonesia, government spending on public works, including irrigation, harbor works, transport, and railways, reached a peak in real terms in 1921, and fell thereafter. In the 1930s spending on new projects was negligible.¹⁰ But in spite of these cutbacks, in 1938 road and rail densities in Java compared favorably with those in Taiwan and Korea, although outside Java there was much less development, with the exception of those regions where there were agricultural estates or large-scale mining operations. In Manchuria, a rail system had been developed by the Russians and taken over by the Japanese early in the twentieth century. The Japanese also developed a road system, although by the late 1930s, the road density (thirty-six kilometers per thousand square kilometers) was about the same as in Indochina, and less than in Burma or the Philippines. Investment in electricity generation in Southeast Asia was left to the private sector, and, with the exception of British Malaya, installed capacity was much lower in the Southeast Asian colonies than in Taiwan and Korea.¹¹ In the Japanese colonies links between the government and private investors were much tighter, to the extent that it was often difficult to disentangle public and private initiatives.

As would be expected, the economic growth that occurred across most of colonial Asia from 1913 to 1940 led to some structural change in the composition of both output and employment. The share of agriculture fell as a percentage of total output, while that of industry (mining, manufacturing, construction, and utilities) increased. The sharpest fall in the share of agriculture occurred in Korea and Manchuria, while in the Philippines and Thailand there was little change (Table 2). The decline in the share of agriculture in the Japanese colonies was accompanied by an increase in the share of the industrial sector; by 1938 indus-

⁹ Anne Booth, Colonial Legacies: Economic and Social Development in East and Southeast Asia (Honolulu: University of Hawai'i Press, 2007), 80.

¹⁰ Frida de Jong and Wim Ravesteijn, "Technology and Administration: The Rise and Development of Public Works in the East Indies," in *For Profit and Prosperity: The Contribution Made by Dutch Engineers to Public Works in Indonesia*, ed. Wim Ravesteijn and Jan Kop (Leiden: KITLV Press, 2008), 66.

¹¹ Booth, Colonial Legacies, 80.

	1913	1924	1929	1934	1938-41*
Korea	66.9%	56.9%	52.3%	49.7%	36.0%
Taiwan	45.2%	47.2%	42.2%	45.6%	39.1%
Manchuria**	n.a.	49.7%	50.7%	36.2% (52.7%)	33.9% (31.3%)
Philippines	38.5%	37.8%	39.1%	40.8%	37.3%
Indonesia	38.3%	36.6%	32.5%	34.3%	32.4%
India	60.0%	59.9%	56.1%	54.7%	50.3%
Burma***	68.6%	55.6%	55.6%	59.9%	54.3%
Thailand	44.6%	n.a.	43.8%	n.a.	44.3%

Table 2. Percentage of GDP from Agriculture: Selected Colonies,1913–1941

*1938 data for Thailand; 1940 data for Korea and the Philippines; 1941 for all others except Burma.

**Figures in parentheses are estimated from Mineo Yamanaka, Funio Makino, Z. Quan, and Quan Guan, "Economic Activities in Manchuria," in *Asian Historical Statistics: China*, ed. K. Odaka, O. Saito, and K. Fukao (Tokyo: Toyo Keizai, 2008).

***Burma percentages refer to 1911-12, 1921-22, 1926-27, 1931-32, 1938-39.

Sources: Korea: Nak Nyeon Kim, Economic Growth in Korea, 1910–1945 (Tokyo: University of Tokyo Press, 2008), 406–9; TAIWAN: Masahiro Sato et al., Asian Historical Statistics: Taiwan (Tokyo: Toyo Keizai, 2008), 233, 326. MANCHURIA: Kang Chao, The Economic Development of Manchuria: The Rise of a Frontier Economy (Ann Arbor: Center for Chinese Studies, University of Michigan, 1983), 16; PHILIPPINES: Richard Hooley, "American Economic Policy in the Philippines, 1902–1940: Exploring a Dark Age in Colonial Statistics," Journal of Asian Economics 16 (2005): 464–88, Table A.1; INDONESIA: Pierre van der Eng, "Historical National Accounts Data for Indonesia, 1880-2012," Mimeo (2013), Australian National University; INDIA: Siva Sivasubramonian, "Twentieth-Century Economic Performance of India," in *The Asian Economies in the Twentieth Century*, ed. Angus Maddison, D. S. Prasada Rao, and William F. Shepherd (Cheltenham: Edward Elgar, 2002), 136; BURMA: T. Saito and Lee Kin Kiong, Statistics on the Burmese Economy: The 19th and 20th Centuries (Singapore: Institute of Southeast Asian Studies, 1999), 214; THAILAND: Sompop Manarungsan, "Economic Development of Thailand, 1850–1950" (PhD Dissertation, State University of Groningen, 1989), 251.

try accounted for around 28 percent of total GDP in Korea, 24 percent in Taiwan, and 20 percent in Korea (Table 3). Industry accounted for around 20 percent of total GDP in the Philippines, but a lower proportion in Indonesia, India and Thailand. The reason for these outcomes will be discussed further below.

What impact did the growth of output in the various colonies have on patterns of employment? By the late 1930s, the available data, mainly from population censuses, showed that around 25 percent of the labor force was employed outside agriculture in Korea and Manchuria, and 36 percent in Taiwan. In the Philippines, the 1939 Population Census showed that 31 percent of the working population was employed

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	1913	1924	1929	1934	1938-41**
Korea	6.4%	10.4%	12.3%	15.6%	27.9%
Taiwan	12.1%	15.7%	21.3%	20.6%	23.7%
Manchuria***	n.a.	14.7%	12.9%	19.8% (9.5%)	20.3% (19.5%)
Philippines	16.1%	18.8%	18.5%	23.8%	19.6%
Indonesia	16.1%	14.3%	15.6%	13.1%	17.6%
India	12.3%	11.5%	13.5%	14.6%	13.7%
Thailand	17.1%	n.a.	17.1%	n.a.	17.3%

Table 3. Percentage of GDP from Industry*: Selected Colonies, 1913–1941

*Mining, manufacturing, construction, and utilities.

1938 data for Thailand; 1940 data for Korea and the Philippines; 1941 for all other countries. *Figures in brackets from Mineo Yamanaka, Funio Makino, Z. Quan, and Quan Guan, "Economic Activities in Manchuria," in *Asian Historical Statistics: China*, ed. K. Odaka, O. Saito and K. Fukao (Tokyo: Keizi Inc, 2008).

Sources: KOREA: Nak Nyeon Kim, Economic Growth in Korea, 1910–1945 (Tokyo: University of Tokyo Press, 2008), 406–9; TAIWAN: Masahiro Sato et al., Asian Historical Statistics: Taiwan (Tokyo: Toyo Keizai, 2008), 233, 326. MANCHURIA: Kang Chao, The Economic Development of Manchuria: The Rise of a Frontier Economy (Ann Arbor: Center for Chinese Studies, University of Michigan, 1983), 16; PHILIPPINES: Richard Hooley, "American Economic Device Policy in the Philipipines, 1902–1940: Exploring a Dark Age in Colonial Statistics," Journal of Asian Economics 16 (2005): 464–88, Table A.1; INDONESIA: Pierre van der Eng, "Historical National Accounts Data for Indonesia, 1880–2012," Mimeo (2013), Australian National University; INDIA: Siva Sivasubramonian, "Twentieth-Century Economic Performance of India," in *The Asian Economies in the Twentieth Century*, ed. Angus Maddison, D. S. Prasada Rao, and William F. Shepherd (Cheltenham: Edward Elgar, 2002), 136; BURMA: T. Saito and Lee Kin Kiong, Statistics on the Burmese Economy: The 19th and 20th Centuries (Singapore: Institute of Southeast Asian Studies, 1999), 214; THAILAND: Sompop Manarungsan, "Economic Development of Thailand, 1850–1950" (PhD Dissertation, State University of Groningen, 1989), 251.

outside agriculture.¹² Population censuses held in Burma in 1931 and in Indonesia in 1930 both found that around 30 percent were employed outside agriculture; this proportion probably increased over the 1930s. In British Malaya, the 1931 census found that the percentage was close to forty.¹³ In all these colonies, the majority of workers employed outside

¹² The 1939 labor force data for the Philippines included workers in domestic and personal services, such as housekeepers and housewives. As these workers were not included in other censuses carried out in the 1930s, the Philippine census is not strictly comparable. The inclusion of domestic workers has more impact on the female labor-force data; the male data show that 29 percent of workers were in nonagricultural occupations. See Commonwealth of the Philippines, *Summary for the Philippines and General Report for the Census of Population and Agriculture*, 1939 (Manila: Bureau of Printing for the Commission of the Census, 1941), 505ff.

¹³ Booth, *Colonial Legacies*, 30. A population census planned for 1940 in Indonesia never took place; the 1941 census in Burma did go ahead, but the data were lost in the Japanese invasion.

agriculture were in wholesale and retail trade and other services, with a smaller proportion in manufacturing industry, construction, and mining. But growing numbers were also employed in government administration and the professions. By the 1930s, indigenous workers comprised the great majority of those employed in government and the professions in the Philippines, Indonesia, Thailand, and Burma. The percentage was lower in Taiwan and Korea, where Japanese workers were more numerous.¹⁴

Growth of Agriculture and Industry

Most studies of agricultural development in both Taiwan and Korea in the decades from 1010 to 1040 have stressed the successful transfer of Japanese high-vielding rice varieties, although in both colonies the period of accelerated agricultural growth was quite short. Teng-hui Lee and Yueh-eh Chen found that there were three distinct phases of growth in Taiwanese agriculture during the Japanese era. In the first, from 1013 to 1923, growth in gross value added in agriculture was quite modest at 1.9 percent per annum; in these years, expansion of cultivated area was the main factor contributing to the growth in output. The second phase, from 1923 to 1937, was marked by accelerated growth in output and value added to around \varDelta percent per annum, which resulted from both growth in yield and further growth in cultivated area. This was the period when production of the *ponlai* rice variety took off, mainly for export to the Japanese market.¹⁵ Sugar production, entirely for the Japanese market, also grew rapidly. The third phase from 1937 to 1945 saw a decline in output as a result of bad weather and wartime dislocation, which meant that Japan could no longer supply crucial inputs such as fertilizer. It also became increasingly difficult to transport rice, sugar, and other products to the Japanese market.

Sung Hwan Ban also distinguished three phases in the growth of agricultural output in Korea. During the 1920s, growth in agricultural output was slow; gross value added grew at only around 0.3 percent per

¹⁴ Comparative data on nonagricultural employment in Japanese and other colonies in the 1930s is given in Booth, *Colonial Legacies*, 127.

¹⁵ Teng-hui Lee and Yueh-eh Chen, "Agricultural Growth in Taiwan, 1911–1972," in *Agricultural Growth in Japan, Taiwan, Korea and the Philippines*, ed. Yujiro Hayami, V.W. Ruttan, and Herman Southworth (Honolulu: University of Hawai'i Press, 1979), 60–62. The dissemination of the *ponlai* varieties is also discussed in Randolph Barker and Robert W. Herdt, with Beth Rose, *The Rice Economy of Asia* (Washington, D.C.: Resources for the Future, 1985), 56–57.

annum. Japanese attempts to increase rice production were plagued by problems, including farmer resistance. Output growth did increase over the 1930s, to 2.9 percent per annum, mainly as a result of increasing fertilizer application in rice production, together with the dissemination of higher yielding varieties. The percentage of rice land under irrigation also increased, permitting more double cropping. From 1930 to 1939, gross value added grew at around 2.6 percent per annum. But as in Taiwan, agricultural growth was negative in the years from 1939 to 1945. The reasons were similar: Less fertilizer was available to Korean farmers, and marketing channels were broken as transport to and from mainland Japan became increasingly disrupted.¹⁶

In Manchuria, gross value added in agriculture fell steeply between 1929 and 1934, mainly because of the collapse in world markets for soybean. Ramon Myers argued that from 1932 to 1937, Japanese agricultural policy in Manchuria was "vague," with little attempt to grapple with the rural depression. Cadastral surveys were carried out, mainly to facilitate the implementation of a land tax. An important concern of the Japanese government after 1932 was to settle large numbers of Japanese farmers together with soldiers retiring from the Kwantung Army on land in Manchuria. But Japanese were reluctant to move, and the targets were never achieved.¹⁷ With the implementation of the five-year plan in 1937, agricultural policy became more activist, and government controls over pricing more pervasive.

By 1939, output of staple farm crops had increased from the very low level of 1934, but was still below the 1929 figure. Area under

¹⁶ Sung Hwan Ban, "Agricultural Growth in Korea, 1918–1971," in *Agricultural Growth in Japan, Taiwan, Korea and the Philippines*, ed. Yujiro Hayami, V.W. Ruttan, and Herman Southworth (Honolulu: University of Hawai'i Press, 1979), 92; Barker and Herdt, *The Rice Economy*, 42, find that the annual average growth rate in rice production in Korea between 1911–20 and 1931–40 was only 1.1 percent per annum. This was slower than in Taiwan (3.2 percent), the Philippines (3.5 percent), British Malaya (3.0 percent), Thailand (1.7 percent), and Java (1.4 percent). Only Indochina and Burma had lower growth rates.

¹⁷ On agricultural policy, see Ramon Myers, *The Japanese Economic Development of Manchuria*, 1932 to 1945 (New York: Garland, 1982). On population movement, see Bruno Lasker, *Asia on the Move* (New York: Henry Holt and Company for the American Council, Institute of Pacific Relations, 1945), 100. Lasker states that in 1936 the Japanese government planned to settle 100,000 families (around 500,000 people) in Manchuria, but by 1943 only around 57,000 households had actually moved. There were also over 100,000 youth volunteer and other workers, but how many were involved in agriculture is unclear. In some districts, both Chinese and Korean farmers were evicted from their land in order to give it to Japanese settlers, and little or no compensation was paid. See S. Yamamuro, *Manchuria under Japanese Domation* (Philadelphia: University of Pennsylvania Press, 2006), 202–6, and Nish, *The History of Manchuria*, 190.

cultivation expanded, but yields per hectare fell, suggesting diminishing returns. $^{18}\,$

In Southeast Asia, the forces driving agricultural growth after 1900 were different from those in the Japanese colonies. Especially after 1018, Japanese policy in both Korea and Taiwan emphasized food selfsufficiency within the empire; in practice this meant increased production of rice, sugar, and other crops for shipment to the Japanese market. In Southeast Asia, agricultural production was determined to a much greater extent by global market demand. Rice exports from the three deltas (South Vietnam, Central Thailand, and Southern Burma) grew rapidly after 1870.¹⁹ Most of these exports went to rice-deficit parts of Asia, including eastern and southern India, British Malaya, Indonesia, and the Philippines. In Indonesia and British Malaya new staples such as rubber and palm oil were cultivated on large estates and exported to both European and American markets. Smallholder production of rubber also increased in the 1920s, especially in Indonesia, where smallholder production of other export crops such as coffee, pepper, and spices also grew. In the Philippines production of sugar and tropical fruits developed rapidly, mainly oriented to the American market. Much of the growth in output of export crops across Southeast Asia came from bringing more land under cultivation, although large estates invested in research into higher yielding varieties of both sugar and rubber. In some parts of Southeast Asia, notably Java, there was substantial government investment in irrigation systems, which led to an increase in double-cropping, but little change in yields. By the 1930s, the doublecropping ratio on rice land in Java was estimated to be around 1.4.²⁰

In their analysis of agricultural output growth in the Philippines, C. C. David and Randolph Barker found that Philippine agricultural output (in 1938 prices) grew at around 4 percent per annum between 1902 and 1938.²¹ This would appear to be much faster than in either Taiwan or Korea. But when the data are broken into two subperiods,

¹⁸ On agricultural output and area expansion, as well as agricultural policy, see Myers, The Japanese Economic Development of Manchuria, 95; Kang Chao, The Economic Development of Manchuria: The Rise of a Frontier Economy (Ann Arbor: Center for Chinese Studies, University of Michigan, 1983), 32; and E. B. Schumpeter, The Industrialization of Japan and Manchukuo 1930–40: Population, Raw Materials, and Industry (New York: Macmillan, 1940), 302.

¹⁹ On the growth of rice output in the three deltas, see Norman G. Owen, "The Rice Industry in Mainland Southeast Asia, 1850–1914," *Journal of the Siam Society* 59, no. 2 (2008): 75–143.

²⁰ Booth, Colonial Legacies, 102.

²¹ C. C. David and Randolph Barker, "Agricultural Growth in the Philippines, 1948– 71," in Agricultural Growth in Japan, Taiwan, Korea and the Philippines, ed. Yujiro Hayami, V.W. Ruttan, and Herman Southworth (Honolulu: University of Hawai'i Press, 1979).

1902–1918 and 1918–1938, there was a very sharp decline in the growth rate (from 7 percent per annum to 1.1 percent per annum). The very rapid growth in the earlier period was from a very low base. The available evidence suggests that agricultural output in the early 1900s was lower than in the 1890s because of drought, cattle disease, and the impact of the Philippine-American War. After 1918, David and Randolph's estimates show falling land and labor productivity, which persisted until 1938.

In both Thailand and Indonesia, the national accounts data prepared by Sompop Manarungsan and Pierre van der Eng both show that value added in the agricultural sector grew at around 2 percent per annum between 1900 and the late 1930s. Unlike in the Philippines, there does not seem to have been a marked slowdown after 1918; in Thailand growth over the 1030s was actually higher than in the 1000– 1938 period as a whole. In Indonesia there was also an acceleration in agricultural growth, to slightly over 2 percent per annum after 1920. In Burma, the data on value added in agriculture assembled by Aye Hlaing show an increasing trend from 1001/1002 to 1031/1032, albeit with fluctuations. The 1930s saw a decline in value added of around 3.1 percent per annum. Although world prices of most export staples fell after 1918, production continued to increase in most parts of Southeast Asia until the late 1020s, and in some cases into the 1030s. Smallholders proved to be more resilient in the face of adverse international market trends than large estates and gained a greater market share for crops such as rubber.²²

To sum up, the evidence indicates that there was considerable variation in the Japanese colonies and in Southeast Asia in agricultural performance in the first four decades of the twentieth century. While output growth in Taiwan was faster than in most other regions, the performance of both Manchuria and Korea was less impressive. Ramon Myers and Saburo Yamada argue that Taiwan benefited from an earlier start in the adoption of the Meiji agrarian strategy, together with large investments in agriculture. They stress the positive impact of greater market exchange within the colony and greater trade with Japan. But they also drew attention to "two dysfunctions, economic in charac-

²² For data on the national accounts of Thailand, Indonesia, and Burma, see Sompop Manarungsan, "Economic Development of Thailand"; Pierre van der Eng, "The Sources of Long-Term Growth in Indonesia, 1880–2008," *Explorations in Economic History* 47 (2010): 294–309; and Aye Hlaing, "An Economic and Statistical Analysis of Economic Development of Burma under British Rule" (PhD Dissertation, University of London, 1965). For estimates, see also T. Saito and Lee Kin Kiong, *Statistics on the Burmese Economy: The 19th and 20th Centuries* (Singapore: Institute of Southeast Asian Studies, 1999), 214.

ter," which affected all areas of rural life in both Taiwan and Korea. The first was the unequal distribution of wealth and income in rural areas, which resulted from the very unequal distribution of land, while the second was the low income and purchasing power of rural populations.²³ These problems were not unique to the Japanese colonies; their impact on living standards will be discussed further below.

One consequence of the sustained growth in agricultural output in most colonies in East and Southeast Asia in the early decades of the twentieth century was the rapid growth of agricultural processing industries. Rice milling was important almost everywhere, as was sawmilling; these two industries dominated manufacturing output in Thailand and Burma. In Java and the Philippines, the role of sugar refining increased from the late nineteenth century onward. The processing of natural rubber into a form that could be exported to the United States and Europe also became important in both British Malaya and Indonesia. By 1925, Singapore had become the main port for the processing and onward shipment of rubber from both British Malaya and Indonesia.²⁴ In Taiwan, food processing accounted for 70 percent of manufacturing output in 1914–1916, and in spite of some attempt at diversification, the share of food processing increased to 73 percent in 1938–1940. In Manchuria, the processing of soybean dominated manufacturing until the decline in output and exports in the 1030s.

During the 1930s, there was a rapid acceleration in industrial growth, and particularly in manufacturing growth, in both Korea and Manchuria, while in Taiwan the growth of mining and manufacturing slowed after 1927.²⁵ In Korea the growth in manufacturing was from a very low base; as late as 1929, the industrial sector (mining, manufacturing, construction, and utilities) accounted for around 12

²³ Ramon Myers and Saburo Yamada, "Agricultural Development in the Empire," in *Japanese Colonial Empire*, ed. Ramon H. Myers and Mark R. Peattie (Princeton, N.J.: Princeton University Press, 1984), 446–48.

²⁴ Gregg Huff, *The Economic Growth of Singapore: Trade and Development in the Twentieth Century* (Cambridge: Cambridge University Press, 1994), 195–203.

²⁵ Samuel Pao-san Ho, "Colonialism and Development in Korea, Taiwan, and Kwantung," in *Japanese Colonial Empire*, ed. Ramon H. Myers and Mark R. Peattie (Princeton, N.J.: Princeton University Press, 1984), 366. From the mid-1930s, Japanese strategy was to promote industrialization in Taiwan through processing raw materials from China and Southeast Asia. Bauxite from Indonesia was to be processed using electricity from the newly constructed facility at Sun-Moon Lake. But wartime transport problems prevented most of these schemes from coming to fruition. See Adam Schneider, "The Taiwan Government-General and Prewar Japanese Economic Expansion in South China and Southeast Asia, 1900–1936," in *The Japanese Empire in East Asia and Its Postwar Legacy*, ed. Harald Fuess (Munich: Iudicium Verlag, 1998), 82.

percent of GDP, which was low in comparison with most other Asian colonies (Table 3). Some scholars have argued that it was deliberate Japanese policy to keep industrialization to a minimum in this period so that Korea would remain a market for Japanese products. The growth during the 1930s was based on agricultural processing only to a limited extent; especially in the north, the fast-growing sectors were wood products, chemicals, ceramics, and machinery. By 1938–1940, almost 62 percent of total manufacturing output in the north came from chemicals and a further 17 percent from metals, machinery, and ceramics.²⁶

Most of the investment in the modern factory sector in Korea came from Japan. It has been estimated that 94 percent of paid-up capital in the Korean factory sector was owned by Japanese interests in 1940.²⁷ In sectors such as electricity, gas, and ceramics, Japanese firms accounted for 100 percent of paid-up capital. Many of the Japanese firms were owned by large Japanese conglomerates (*zaibatsu*), which were often given monopolies in particular sectors. These firms were closely tied to the Japanese government and pursued the goals it set, which during the 1030s were determined by the military, rather than according to civilian interests.²⁸ As Japan consolidated its power in Manchuria and Japanese strategy became more oriented to building an empire stretching across northeastern Asia, the goals of Japanese policy in Korea became more tightly linked to development needs in Manchuria. Korea was viewed as a base for advance into the whole of North Asia. This had important consequences for Korean business ventures in Manchuria and for Korean migration, which will be considered further below.²⁹

Between 1934 and 1941, the growth of the modern factory sector in Manchuria was remarkably rapid at almost 20 percent per annum in

²⁶ On Japanese policies towards Korean industrial growth, see Kwang Suk Kim, "An Analysis of Economic Change in Korea," in *Korea under Japanese Colonial Rule*, ed. Andrew C. Nahm (Kalamazoo: Center for Korean Studies, Western Michigan University, 1973), 103. For data on output growth in industry, see T. Mizoguchi, "Economic Growth of Korea under the Japanese Occupation—Background of Industrialization of Korea. 1911–1940," *Hitotsubahsi Journal of Economics* 20, no. 1 (1979): 1–19, and Sang-Chul Suh, *Growth and Structural Changes in the Korean Economy*, 1910–1940 (Cambridge, Mass.: Harvard University Press, 1978).

²⁷ Stephan Haggard, David Kang, and Chung-In Moon, "Japanese Colonialism and Korean Development: A Critique," *World Development* 25 (1997), Table 5. The figure is contradicted by data given in Carter J. Eckert, who argued that it ignored the many Japanese-Korean joint ventures; see his Offspring of Empire: The Koch'ang Kims and the Colonial Origins of Korean Capitalism, 1876–1945 (Seattle: University of Washington Press, 1991), 54.

²⁸ On this point, see Young-Iob Chung, Korea under Seige, 1876–1945: Capital Formation and Economic Transformation (New York: Oxford University Press, 2006), 242–45.

²⁹ Yunshik Chang, "Colonization as Planned Change: The Korean Case," *Modern Asian* Studies 5, no. 2 (1971): 161–86.

real terms. The whole industrial sector grew more slowly, at almost o percent per annum, but this was still a very fast rate in comparison with most other parts of the world at that time. By 1941, mining, manufacturing industry, and construction accounted for 20.3 percent of GDP (Table 3). The role of heavy industry became more important: In 1938, metal industries, machinery, chemicals, electricity, and gas accounted for 69 percent of paid-up capital in the manufacturing sector to sustain Japan's war in Asia. The Japanese government, now running a war economy, had ambitious plans for the further development of Manchuria's industrial capacity after 1942, when the second five-year plan was initiated.³⁰ Output of steel, pig iron, and iron ore was to be nearly doubled by 1946. Further development of hydroelectricity, coal, and shale oil was also planned. Had these targets been achieved, Manchuria would have had a more developed industrial sector than any other part of Asia, with the exception of Japan itself. But the Soviet Army's invasion of Manchuria in 1945 led to massive falls in industrial output, from which the economy was slow to recover. Kungtu Sun quotes an American estimate that valued the loss of plants at almost \$1 billion. This was confirmed by a Japanese estimate.³¹

The very rapid development of industry in both Korea and Manchuria until the early 1940s can be contrasted not just with Taiwan, but also with most colonies in Southeast Asia. It was only in the 1930s that the Dutch began to encourage the growth of large-scale manufacturing through foreign investment in sectors including automobiles, rubber tires and tubes, soaps and cosmetics, batteries, cigarettes, electrical appliances, and brewing. A measure of protection was granted to the domestic textile sector, mainly by placing quotas on Japanese imports, and encouragement was given to small-scale weaving through the distribution of

³⁰ On Japanese plans for growth of the modern factory sector, see Myers, *The Japanese Economic Development of Manchuria*, 143, and Chao, *Economic Development of Manchuria*, 32. Sun argues that the first five-year plan (1937–1941) was basically the work of the Kwantung Army, which was also in control of implementation. The army distrusted the older industrial groups such as Mitsui and Mitsubishi and preferred to deal with the Nissan group. Sun, *Economic Development of Manchuria*, 79–80.

³¹ Sun, Economic Development of Manchuria, 88. Further discussion of the damage to basic Manchurian industries inflicted during the Soviet occupation is given in F. C. Jones, Manchuria Since 1931 (New York: Oxford University Press, 1949), 227–31. Details of the post-1945 collapse are also given in several Chinese sources; see Ministry of Education, Zhonghua Minguo Jianguo Shi (A History of State-building of the Republic of China), (Taipei: National Compilation and Translation Bureau, 1989), vol. 13, and Xu Dixin and Wu Chengming, eds., Zhongguo Ziben Zhuyide Mengya (Germination of Capitalism in China) (Beijing: People's Press, 1985).

improved handlooms.³² The processing of crude petroleum into a number of refined products also grew rapidly. By 1941, the industrial sector accounted for 17.6 percent of GDP (Table 3). Jack Shepherd argued that the severe impact of the world depression forced colonial authorities to take industrial policy more seriously in both Indonesia and Vietnam, whereas in the Philippines, export producers had the advantage of preferential access to the American market.³³ This helped producers of sugar, vegetable oils, and other processed agricultural products, in the same way that rice and sugar producers in Taiwan were assisted by access to the Japanese market. The policy in the Philippines meant that any serious discussion of industrial policy was deferred until after 1945. In British Malaya, the powerful planter lobby resisted British plans to restrict imports of textile goods from Japan; they needed to hold down wage costs, and cheap imports of food and textiles were crucial. They did not much care where the imports came from, and indeed were incensed that "the low paid Asiatic is to be taxed in the interests of the Lancashire manufacturer."34

Government Policies and the Development of the Private Sector

By the first decade of the twentieth century, all the colonial powers in East and Southeast Asia, were trying to establish effective administrative structures that prioritized the centralization and reform of fiscal systems. But there were considerable differences in outcomes of revenue policies in different parts of colonial Asia. Government revenues per capita in 1910 varied between approximately one dollar in Vietnam to about fifteen dollars in the Federated Malay States.³⁵ Although several of the colonies with low revenues per capita in 1910 improved their revenue performance over the next two decades, none caught up

³² See Jack Shepherd, *Industry in South East Asia* (New York: Institute of Pacific Relations, 1941), 73. For further discussion of the measures taken by the Dutch to limit the growth of Japanese imports into Indonesia in the 1930s, see Anne Booth, *The Indonesian Economy in the Nineteenth and Twentieth Centuries: A History of Missed Opportunities* (Basingstoke: Macmillan, 1998), 39–45.

³³ Shepherd, Industry in South East Asia, chap. 1.

³⁴ Ian Brown, "The British Merchant Community in Singapore and the Japanese Commercial Expansion in the 1930s," in *International Commercial Rivalry in Southeast Asia in the Interwar Period*; Monograph 39, ed. Shinya Sugiyama and Milagros C. Guerrero (New Haven, Conn.: Yale University Southeast Asia Studies, 1994), 119.

³⁵ The very low figure for Vietnam could be partly the result of the exclusion of villagelevel imposts.

with either the FMS or the Straits Settlements. By 1929, government revenues in Indonesia, the Philippines, Korea, and Burma were around five to six dollars per capita, more than in Thailand and Vietnam, but still well below Taiwan, the Federated Malay States, and the Straits Settlements. With the onset of the world depression, revenues fell in terms of dollars per capita in most colonies and had not recovered to 1929 levels by 1938.³⁶

These differences in revenue performance can be explained partly by differences in taxable capacity, as proxied by per capita GDP, and partly by a reluctance on the part of several colonial regimes to increase taxes on the indigenous populations for fear of provoking unrest. A frequent criticism of colonial revenue systems in Asia was that they were regressive, in the sense that their incidence fell more heavily on indigenous populations than on foreign companies and individuals. Critics pointed to the high reliance on land taxes, excises, and export and import duties. Income taxes on both corporations and individuals were either not assessed at all, as in British Malaya, or assessed at low rates with many exemptions. Non-tax revenues, including those from opium, tobacco, and alcohol monopolies, were also considered regressive. These accounted for at least one-third of all government revenues in most Asian colonies in the late 1930s, including Taiwan and Korea. Andrew Grajdanzev argued that 80 to 90 percent of all taxes in Taiwan fell on the mass of the population and only 10 percent on the relatively wealthy, many of whom were Japanese. Mitsuhiko Kimura also argued that Japanese revenue policies in Korea were regressive, and wealthier people, whether Japanese or Korean, escaped quite lightly.³⁷

On the expenditure side, all colonial governments in Asia had by 1913 begun to assume responsibility for a much broader range of activities than simply the maintenance of law and order and the collection of revenues. Atul Kohli describes the colonial state in Korea as a "busy state," which became increasingly involved in many developmental activities.³⁸ But this was true in Southeast Asia as well. Increasingly, it was recognized that ambitious programs of infrastructural develop-

³⁶ Booth, Colonial Legacies, Table 4.3.

³⁷ For a discussion of the incidence of taxation in colonial Taiwan, see Andrew J. Grajdanzev, Formosa Today: An Analysis of the Economic Development and Strategic Importance of Japan's Tropical Colony (New York: Institute of Pacific Relations, 1942), 135. The Korean case is analyzed by Mitsuhiko Kimura, "Public Finance in Korea under Japanese Rule: Deficit in the Colonial Account and Colonial Taxation," Explorations in Economic History 26 (1989): 285–310. A breakdown of government revenues by source for Japanese and other colonies is given in Booth, Colonial Legacies, Table 4.1.

³⁸ Kohli, State-Directed Development, 40.

ment were necessary for economic development and would have to be funded, or at least subsidized, by government rather than the private sector, with government funds derived in part at least from loan finance. In Indonesia, where government expenditures had grown in real terms continuously after 1870, public works (including railways) accounted for 40 percent of total government expenditure in 1920. In Burma, civil public works accounted for almost 24 percent of government expenditures by 1901–1904, although the percentage fell somewhat thereafter. In Indochina, especially the three provinces comprising what is now Vietnam, public works already accounted for 20 percent of total government expenditures in 1901; by 1909 the share had risen to over 40 percent. The concept of *mise en valeur*, stressed by successive French administrators after 1900, meant in effect increased expenditures on public works, in order to facilitate the exploitation of the colony's natural resources.³⁹

But in spite of the increased emphasis on infrastructure, there were marked differences in spending priorities across colonial Asia. The comparative study carried out by E. B. Schwulst showed that the percentage of total budgetary expenditures on policing and defense varied from over 30 percent in the Netherlands Indies and Siam to only 8 percent in the Philippines.⁴⁰ The percentages in both the Netherlands Indies and Siam were higher than in Taiwan and Korea in 1935 and 1936, respectively (Table 4). The percentage of total expenditures devoted to public works and agriculture also varied considerably, although it was lower in most Southeast Asian colonies than in either Taiwan or Korea. The percentage on health and education was under 15 percent in most colonies; the exceptions were the Philippines and the Federated Malay States. The former spent over a third of the budget on health and education, and the latter around 20 percent; elsewhere the proportions were much lower.⁴¹ In both Taiwan and Korea, spending on edu-

³⁹ A breakdown of government expenditures in Indonesia is discussed in Anne Booth, "The Evolution of Fiscal Policy and the Role of Government in the Colonial Economy," in *Indonesian Economic History in the Dutch Colonial Era, Monograph Series* 35, ed. Anne Booth, W. J. O'Malley, and Anna Weidemann (New Haven: Yale University Southeast Asia Studies, 1990), Table 10.5. The figures for Burma are given in Hlaing, "An Economic and Statistical Analysis," Table 22. The development of public works in French Indochina is given in Paul A. Doumer, *Rapport: Situation de l'Indochine*, 1897–1901 (Hanoi: F-H Schneider, 1902), and H. Simoni, *Le Role du capital dans la mise en valeur de l'Indochine* (Paris: Helms, 1929).

⁴⁰ See E. B. Schwulst, "Report on the Budget and Financial Policies of French Indo-China, Siam, Federated Malay States and the Netherlands East Indies," *Report of the Governor General of the Philippine Islands*, 1931 (Washington, D.C.: U.S. Government Printing Office, 1932), 42–59.

 $[\]frac{41}{10}$ One reason for the emphasis on health expenditures in the Philippines was probably a recognition that the general health of the population at the end of the Spanish era was low

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	Law/Police/ Defense	Public Works/Agriculture	Education/ Health
Manchuria (1934)	32%	5%*	3%**
Indonesia (1931)	32%	7%	12%
Thailand (1931)	31%	15%	8%
French Indochina (1931)	14%	36%	4%
Korea (1936)	11%	31%	7%
FMS*** (1931)	8%	28%	20%
Philippines (1931)	8%	18%	36%
Taiwan (1935)	7%	28%	8%

Table 4.	Percentage	e of Budgetary	Outlays on	Law/Defer	1se, Public
Works/A	griculture,	and Education	n/Health: S	elected Col	lonies, 1930s

* Expenditures on industry and communications.

**Expenditures on education only.

***Federated Malay States.

Sources: KOREA: A. J. Grajdanzev, Modern Korea (New York: Institute of Pacific Relations, 1944), 218; TAIWAN: A. J. Grajdanzev, Formosa Today: An Analysis of the Economic Development and Strategic Importance of Japan's Tropical Colony (New York: Institute of Pacific Relations, 1942), 137; MANCHURIA: The Japan-Manchoukuo Year Book Co., ed., The Manchoukuo Year Book 1941 (Tokyo), 203–4; OTHERS: E. B. Schwulst, "Report on the Budget and Financial Policies of French Indo-China, Siam, Federated Malay States and the Netherlands East Indies," in Report of the Governor General of the Philippine Islands 1931 (Washington, D.C.: United States Government Printing Office, 1932), 57.

cation fell as a proportion of total expenditures after 1920 and never exceeded 10 percent of total expenditures.⁴² The outcomes in terms of educational and health indicators in various parts of colonial Asia will be examined further below.

In Manchuria, government revenues and expenditures per capita in 1932 were lower than in either Taiwan or Korea in terms of yen per capita, although they increased rapidly after 1933 and by 1938, they had

even by Asian standards. An analysis of the anthropometric evidence is given in Jean-Pascal Bassino, Marion Dovis, and John Komlos, "Biological Well-Being in the Late 19th-Century Philippines," *NBER Working Paper 21410* (Cambridge, Mass. National Bureau of Economic Research, 2015). This working paper finds evidence of a decline in heights in the years from the early 1870s to the late 1880s. Z. C. Zablan presents data on infant mortality rates which were very low in the early part of the twentieth century, although they increased thereafter; Zablan, "Trends and Differentials in Mortality," *Population of the Philippines: Country Monograph Series No. 5* (Bangkok: United Nations Economic Commission for Asia and the Pacific, 1978), 100–105.

⁴² Booth, Colonial Legacies, Table 4.2.

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	Taiwan	Korea	Kwantung*	SMR Zone**	Manchuria
1925	29	10	12	14	
1929	34	12	11	14	
1932	25	11			4
1934	28	14			9
1936	33	17			9
1938	42	25			21

Table 5. Revenues Per Capita (in Yen): Japanese Colonies, 1925–1938

*Kwantung leased territory.

**SMR Zone refers to land along the South Manchurian Railway.

Sources: Taiwan, Korea, Kwantung and SMR Zone: Toshiyuki Mizoguchi and Mataji Umemura (eds), Basic Economic Statistics of Former Japanese Colonies, 1895–1938, Estimates and Findings (Tokyo: Toyo Keizai, 1988), 291–93, 313–34 Revenues for Manchuria, 1932 to 1938; The Manchoukuo Year Book Co. (ed.), *The Manchoukuo Year Book 1941* (Hsinking: The Manchoukuo Year Book Co., 1941).

almost caught up with Korea.⁴³ But they remained much lower than in Taiwan (Tables 5 and 6). The share of spending on defense and policing fell from over 40 percent in 1932 to 27.5 percent in 1935, which was lower than in either Siam or the Netherlands Indies (Table 4). Much of the military expenditure was for regional pacification. Most of the rest of the general account budget was devoted to administrative expenditures; expenditures on infrastructure were taken from the special account and from other sources. Myers argued that dependence on the special account to finance development expenditures continued throughout the period of Japanese control of Manchuria, but after 1938 reliance on debt to fund special account expenditures grew.⁴⁴

One of the most severe criticisms of colonial policies in many parts of the world is that colonial governments trapped the great majority of the population in unproductive activities, mainly in small-scale agriculture and in traditional manufacturing and services. This prevented the emergence of indigenous entrepreneurs, capable of managing modern firms. In Southeast Asia, this argument became entwined with the concept of the plural economy, characterized by a marked division of labor along ethnic lines. J. S. Furnivall argued that the plural economy characterized most parts of Southeast Asia by the early twentieth

⁴³ Sun, *Economic Development of Manchuria*, 78, points out that historically public finance in Manchuria had been decentralized; the Manchukuo government was determined to reform the system. Kanai gives an account of the reforms until 1935 from a Japanese perspective in Kiyoshi Kanai, *Economic Development in Manchoukuo* (Tokyo: Japanese Council, Institute of Pacific Relations, 1936), chap. 5.

⁴⁴ Myers, Japanese Economic Development of Manchuria, 237–40.

	Taiwan	Korea	Kwantung*	SMR Zone**	Manchuria
1925	22	9	7	14	
1929	27	11	7	14	
1932	20	10			4
1934	22	12			9
1936	25	15			9
1938	33	22			21

Table 6. Expenditures Per Capita (in Yen): Japanese Colonies, 1925–1938

*Kwantung leased territory.

**SMR Zone refers to land along the South Manchurian Railway.

Sources: Expenditures for Korea, Taiwan, Kwantung and SMR Zone fromToshiyuki Mizoguchi and Mataji Umemura (eds), Basic Economic Statistics of Former Japanese Colonies, 1895–1938, Estimates and Findings (Tokyo: Toyo Keizai, 1988), 291–93, 313–34;

Expenditures for Manchuria, 1932 to 1938: Manchoukuo Year Book Co. (ed.), *The Manchoukuo Year Book 1941* (Hsinking: The Manchoukuo Year Book Co., 1941), 201.

century.⁴⁵ In several Southeast Asian cities, migrant Asians, mainly Chinese and Indian, comprised a significant share of the population and accounted for the majority of workers in manufacturing, retail trade, construction, and transport. In the Federated Malay States and in Indonesia outside Java, over 40 percent of Chinese workers were in agriculture, mainly as estate laborers, but elsewhere the Chinese tended to work in manufacturing, commerce, transport, and personal services, with a small number in the professions.⁴⁶

As a broad generalization, it was true that no colonial government in Southeast Asia adopted policies that fostered the development of an

⁴⁵ J. S. Furnivall, Colonial Policy and Practice: A Comparative Study of Burma and Netherlands India (Cambridge: Cambridge University Press, 1948), 304–5.

⁴⁶ Historians have contrasted British policy in Malaya with that of the Americans in the Philippines after 1900. The British were concerned mainly with the strategic goals of maintaining freedom of navigation through the Straits of Malacca and the South China Sea; to this end, Singapore was developed as an important naval base and commercial entrepôt. The Malay states were seen as important for the viability of Singapore, but indigenous Malays had to be protected from modern capitalism. A small number of Malay boys from elite families were given British education, but the rest were supposed to remain in traditional occupations. In the Philippines, the Americans aimed to assimilate Filipinos into a modern state, resembling the Western states of the United States. In the words of one historian, "The Americans aimed to cultivate the Filipinos in their own image, while the British sought to conserve Malay society to allow Malays to grow at their own racial pace" (Daniel P. S. Goh, "Resistance and the Contradictory Rationalities of State Formation in British Malaya and the American Philippines," in Sociology and Empire: The Imperial Entanglements of a Discipline, ed. George Steinmetz (Durham, N.C.: Duke University Press, 2013), 474. See also Anne Booth, "The Plural Economy and Its Legacy in Asia," in Beyond Empire and Nation: Decolonizing Societies in Africa and Asia, 1930s-1970s, ed. Els Bogaerts and Remco Raben (Leiden: KITLV Press, 2012), 74.

indigenous entrepreneurial class, although the expansion of post-primary education in the Philippines must have encouraged many graduates to move into professional and administrative occupations. To a greater or lesser extent, many colonial officials tended to view indigenous populations as lacking any talent for, or interest in, modern industry and commerce. Sometimes, this attitude manifested itself in outright racism. But other officials, both Dutch and British, were aware that at least some of the criticisms made of the business capacities of indigenous populations were unfair. Richard Windstedt, a prominent official in British Malava, argued that because most Malays were independent farmers with little need to work for hire, they had acquired an underserved reputation for idleness. But Winstedt, like most other administrators in British Malaya, thought that the provision of English-language education to Malays should be restricted, lest they become restless and forsake their traditional way of life for one that would inevitably lead to exploitation and destitution.

In Indonesia, Jacob van Gelderen stressed that indigenous cultivators were likely to be exploited in their dealings with the market economv because of the great difference in bargaining power between the buyer on the one hand and the seller on the other.⁴⁷ Paradoxically, in spite of Dutch concerns about the ability of indigenous Indonesians, and especially the Javanese, to participate in the "modern economy," by 1030 indigenous workers accounted for a higher proportion of the labor force in both Java and the Outer Islands of Indonesia than in the Straits Settlements, the Federated Malay States, or Burma. The proportion was also higher than in Taiwan, about the same as Korea, and only slightly lower than in the Philippines. In Java, indigenous workers accounted for a higher proportion of workers in nonagricultural occupations than in any other colony except the Philippines.⁴⁸ Although it was probably true that many jobs occupied by indigenous Javanese required few skills (many were petty traders and homeworkers in cottage industry), they also outnumbered the Chinese and Europeans in professional occupations and in the civil service. Even in trade, where the Chinese were certainly important, indigenous workers comprised the majority of workers both in Java and elsewhere.

In Taiwan, Samuel Pao-san Ho claimed that the Japanese never encouraged the emergence of an indigenous business class. In fact he

⁴⁷ Jacob van Gelderen, "The Economics of the Tropical Colony," in *Indonesian Economics: The Concept of Dualism in Theory and Practice*, ed. W. F.Wertheim (The Hague: W. van Hoeve, 1961), 147.

⁴⁸ Booth, "The Plural Economy," 120.

argued that the whole policy of the Japanese government "was directed toward preventing the emergence of such as class." Until 1924, native Taiwanese were not allowed to organize or operate corporations unless there was Japanese participation. As a result, the modern sector of the economy became a monopoly of the Japanese capitalists.⁴⁹ This changed little until 1945. In Korea, Daniel Juhn pointed out that in the 1930s, when the Japanese authorities were trying to attract the large Japanese industrial conglomerates (*zaibatsu*) to invest in Korea, some officials did argue for a strategy that would encourage Korean small and medium enterprises. But there is little evidence that Korean firms received much encouragement. Neither did the activities of the Japanese-established cooperatives have any impact, especially when compared with small producers' cooperatives in Japan.⁵⁰

But in spite of unsupportive Japanese policies, some Korean enterprises did emerge and grow during the colonial era. The outstanding example of an indigenous Korean industrial family that rose to wealth in the Japanese era was the Kim brothers, who founded the Kyongsong Spinning Company. They managed to withstand competition from better-funded Japanese firms, consolidate their position in Korea and move into southern Manchuria.⁵¹ Dennis McNamara argued that the founding of the spinning factory in Manchuria was "a dramatic example of Kim's ability to gain extensive Japanese support for a Korean-owned and managed industrial venture abroad."52 Other Korean enterprises were established in Manchuria, and Koreans also worked for both Japanese enterprises and the Manchurian government. Kohli argues that, although much of the heavy industry was concentrated in the north, the Japanese left behind a "considerable density" of entrepreneurship in the south, which facilitated the post-1950 development of large-scale manufacturing.⁵³

⁴⁹ Samuel Pao-san Ho, "The Development Policy of the Japanese Colonial Government in Taiwan, 1895–1945," in *Government and Economic Development*, ed. Gustav Ranis (New Haven, Conn.: Yale University Press, 1971), 323.

⁵⁰ Daniel S. Juhn, "Nationalism and Korean Businessmen," in *Korea's Response to Japan: The Colonial Period 1910–1945*, ed. C. I. Eugene Kim and Doretha Mortimore (Kalamazoo Center for Korean Studies, Western Michigan University, 1977), 48, and D. S. Juhn, "The Development of Korean Entrepreneurship," in *Korea under Japanese Colonial Rule*, ed. Andrew C. Nahm (Kalamazoo: Center for Korean Studies, Western Michigan University, 1973), 28.

⁵¹ Dennis L. McNamara, *The Colonial Origins of Korean Enterprise*, 1910–1945 (Cambridge: Cambridge University Press, 1990), 117.

⁵² Dennis L. McNamara, "Entrepreneurship in Colonial Korea: Kim Yon-su," *Modern* Asian Studies 22 (1988): 173.

⁵³ Kohli, State Directed Development, 55.

Korean as well as Japanese migrants moved to Manchuria; by 1939, there were 642,300 Japanese in Manchuria who occupied senior positions in government and business.⁵⁴ Official figures reported another 1.16 million Koreans, comprising 2.9 percent of the local population. Koreans comprised the same percentage of the population in Manchuria as Japanese did in Korea. The Koreans worked mainly in intermediate occupations, while large numbers of migrants from China moved mainly into unskilled laboring jobs. Indigenous Manchurians were employed mainly in agriculture, although small numbers moved into other occupations. Indeed, by the late 1930s, Manchuria was beginning to take on the characteristics of a plural economy in the Furnivall sense, where ethnicity and occupation were tightly linked. As Shin'ichi Yamamuro argues, in spite of the substantial in-migration, Manchuria was hardly an ethnic melting pot. The Japanese had little or no contact with the other ethnic groups and lived apart from them.⁵⁵ This was probably also true of the other migrant groups that did not have a common language and would have found communication with other migrants or with the indigenous population very difficult.

LABOUR MIGRATION AND LABOUR EXPLOITATION

By the early twentieth century, large numbers of people were on the move across Asia. Between 1881 and 1910, gross immigration to Southeast Asia from India and China has been estimated at around 3.7 million, rising to 6.8 million in 1911–1929. In the 1930s, numbers fell to 4.76 million. From 1911 onward, gross flows to Southeast Asia exceeded those to the United States by a considerable margin.⁵⁶ Net flows were much lower, because many of the migrants returned home; in British Malaya net flows were negative over the 1930s, although in other parts of the region, they remained positive. While most migrants came to Southeast Asia with the aim of saving money and eventually returning home, by the interwar years many stayed and formed families in their host country. The decision to settle was the result of both adverse

⁵⁴ Population data from *The Manchoukuo Year Book 1941*, 116. Yamamuro, *Manchuria under Japanese Domination*, 118–19, gives figures for the number of officials in Manchuria, derived from a document dated December 1935. Out of a total of 7,100 officials, 46 percent were Japanese.

ⁱ⁵ Ibid., 201–2.

⁵⁶ Gregg Huff and G. Caggiano, "Globalization, Immigration, and Lewisian Elastic Labor in Pre–World War II Southeast Asia," *Journal of Economic History* 67, no. 1 (2007), Table 1.

conditions at home and improving opportunities for migrant workers in Southeast Asia. $^{\rm 57}$

But migration from China and India to Southeast Asia was only part of the story of population movement across Asia in the early decades of the twentieth century. Migration from the Chinese mainland to Taiwan was small compared to the flows to Southeast Asia, although Adam Schneider claimed that between 1905 and 1935, the numbers of Chinese workers in Taiwan grew from 4,000 to 40,000. After a pause in the late 1930s, labor recruitment started again in 1940.⁵⁸ Many mainlanders were admitted for seasonal work and had to go home after their contracts expired. All Chinese citizens in Taiwan were treated by the Japanese as foreigners, and from 1905 onward, their numbers were much lower than the numbers of Japanese on the island. Bruno Lasker estimated that by 1942, there were 310,000 Japanese in Taiwan, although only a small proportion would have been engaged in farming. A further 1.4 million were estimated to be in Korea and Manchuria.⁵⁹

Koreans were far more mobile than Japanese, moving in large numbers both to mainland Japan and to Manchuria in search of higher wages and better conditions than were available at home. By 1940, the number of Koreans living outside Korea exceeded 2.5 million, or about 10 percent of the total population in that year.⁶⁰ The great majority would have been in either Japan or Manchuria. Most were unsponsored. Mineo Yamanaka and colleagues show that 1.36 million Koreans and Taiwanese were living in Manchuria by 1940; the number rose to 1.6 million by 1942. Lasker stated that the 1939 census in the Soviet Union found that over 180,000 Koreans were living in the Soviet Far East. During the Pacific War, Korean labor crews were found as far south as Papua New Guinea.⁶¹

⁵⁷ Sugihara points out that many migrants who arrived in the Straits Settlements did not stay there but moved to both the Malay states and to Sumatra to take advantage of job opportunities in the estates and mining. Some migration flows, such as those from Bangkok to British Malaya, were not included in the official data. See Kaoru Sugihara, "Patterns of Chinese Emigration to Southeast Asia, 1869–1939," in *Japan, China, and the Growth of the Asian International Economy*, 1850–1949, ed. Kaoru Sugihara (Oxford: Oxford University Press, 2005), 254.

⁵⁸ Schneider, "The Taiwan Government-General," 169.

⁵⁹ On Taiwan, see Grajdansev, Formosa Today, 25, and Lasker, Asia on the Move, 99.

⁶⁰ Mitsuhiko Kimura, "Standards of Living in Colonial Korea: Did the Masses Become Worse Off or Better Off under Japanese Rule?" *Journal of Economic History* 53, no. 3 (1993): 629–52.

^{629–52.} ⁶¹ These data on Korean migration are taken from Chang "Colonization as Planned Change"; Mineo Yamanaka, Funio Makino, Zhenan Quan, and Quan Guan, "Economic

While Koreans were probably the most mobile of all the major ethnic groups, relative to their total population, in colonial Asia, other ethnic groups were also on the move in search of employment opportunities. By the late 1930s, there were probably around 1.5 million ethnic Javanese living outside Java. Of these, the majority were in other parts of Indonesia, particularly Sumatra. Many had gone to work on the estates in Eastern Sumatra as indentured laborers; the 1930 census found that 31.4 percent of the indigenous population on the East Coast division had been born in Java. Conditions on the estates for migrant workers were often harsh, although the Dutch colonial government did introduce some measures to protect them as their numbers grew.⁶² The same census found that there were 1.14 million people from Javanese ethnic groups living in other parts of Indonesia. Numbers of Javanese living elsewhere in the archipelago probably increased over the 1030s. not least because of the official government settlement policy, which moved families from Java over the course of the 1930s.⁶³ In addition some 170,000 Javanese were reported in the 1931 census to be living in British Malava.

In Manchuria, the Japanese considered that economic development was held back by an acute shortage of labor, and government policy increasingly encouraged in-migration from China. E. B. Schumpeter gives a time series from 1926 to 1938 showing that arrivals peaked at over one million per year between 1927 and 1929 and fell thereafter, although they seldom dropped below 500,000 until 1938.⁶⁴ As in Southeast Asia, net migration was lower, but only negative in two years. From 1937 to 1941, migrant workers in the prime working age groups were recruited by Manchuria-based Japanese companies and by the military, and their numbers grew rapidly over these years. The accumulated new entries from China proper to Manchuria from 1932 to 1945 were estimated to be close to nine million. They played a key role in the mining and construction sectors.

Activities in Manchuria," in Asian Historical Statistics: China, ed. K. Odaka, O. Saito, and K. Fukao (Tokyo: Keizi, 2008), 480; and Lasker, Asia on the Move, 95.

⁶² A useful summary of the debate on Dutch policies can be found in Jan Breman, "New Thoughts on Colonial Labour in Indonesia," *Journal of Southeast Asian Studies* 33, no. 2 (2002): 335–39.

⁶³ See Graeme Hugo, "Population Movements in Indonesia during the Colonial Period," in *Indonesia: The Making of a Culture*, ed. J. J. Fox (Canberra: Research School of Pacific Studies, Australian National University, 1980), 109–10. Pelzer estimated the number of colonists, mainly from Java and Bali, living in other parts of Indonesia trebled from 66,000 to 206,000 over the 1930s; see Karl Pelzer, *Pioneer Settlement in the Asiatic Tropics* (New York: American Geographical Society, 1945), 202.

⁶⁴ Schumpeter, The Industrialization, 69.

But labor shortages did not push up the workers' wages despite initial promises made by the Japanese employers. Once inside Manchuria, these migrant workers were subject to systematic coercion and had little protection. They were forced to live and work in harsh conditions characterized by daily violence, long working hours, inadequate housing, hunger, and diseases. In a systematic investigation into largescale forced labor under Japanese rule in Manchuria, Li Binggang and colleagues estimated that life expectancy among the Chinese workers who were purposely recruited to work on Japanese projects in Manchuria (mainly in the mining and building sectors) was only 1.3 years after entering Manchuria. These were worse figures than for any other group of migrants in colonial Asia. As a result, according to a Japanese report of 1941, less than 20 percent of the Chinese workers ever returned home alive.⁶⁵

The Development of Education and Health Care and Changing Living Standards

The issue of the treatment of migrant workers has become part of wider debates about the provision of education and health facilities and about changing living standards across colonial Asia. Some scholars have argued that the Japanese placed more emphasis on educational development than other colonial powers in Asia. Hideo Kobayashi claimed that "the most immediate postwar legacy of the Japanese colonial era was the existence of the hundreds of thousands of educated South Koreans and Taiwanese who became the core of the postwar political and economic elites."66 Other studies have also emphasized Japanese educational policies and contrasted them with much poorer outcomes in other colonies.⁶⁷ Does the evidence support such claims? The Japanese were quite successful in increasing school attendance in Taiwan at the primary level; by 1940, close to 60 percent of school-age children attended primary school. But for the great majority of children in Taiwan, their education ceased after the primary cycle. Ten middle schools were located in the main towns; they were open to most

⁶⁵ Li Binggang, Gao Songfeng, and Quan Fangmin, *Riben Zai Dongbei Ruyi Laogong Diaocha Yanjiu* (Investigation in Japanese Use of Slave-Labourers in Manchuria) (Beijing: Social Science Academic Press, 2009).

⁶⁶ Hideo Kobayashi, "The Postwar Economic Legacy of Japan's Wartime Empire," in *The Japanese Wartime Empire*, 1931–1945, ed. Peter Duus, Ramon H. Myers, and Mark Peattie (Princeton, N.J.: Princeton University Press, 1996), 325.

⁶⁷ For example, Cumings, Parallex Visions, 89.

Japanese, but only carefully selected Taiwanese could attend.⁶⁸ At the tertiary level there were very few opportunities in Taiwan, although a small number went to mainland Japan. After Taiwan was returned to China in 1945, the "Japanese legacy" was systematically removed by the Republican Government in a campaign of "de-Japanisation" (qu ribenhua). All forms of Japanese political, economic, and cultural influence were banned, and most Japan-trained bureaucrats, military personnel, and teachers were removed from office. As a result, whatever their skills and experience, they had little input in post-1045 government administration.

In Korea, the Japanese modernized primary education, introducing subjects such as geography, arithmetic, and the Japanese language. Primary enrollment rates increased to over 70 percent for boys and 20 percent for girls by 1940.⁶⁹ Many parents objected to the new syllabus, and some changes were made in the 1930s. Students often rebelled against what was seen as indoctrination to become loyal subjects of a foreign emperor. The use of the education system to inculcate Japanese values into Korean children and turn them against Christian and other "Western beliefs" intensified over the 1930s.⁷⁰ By 1939, 1.3 million children were enrolled in "short course elementary schools" although numbers in middle and high schools were much lower. At the tertiary level, it was estimated that in 1943, there were twenty-eight institutions of higher learning; eleven were government-run and the rest private. They enrolled 4,541 students, but only 1,337 were Korean and the rest Japanese. Jong-chol Kim argues that the Japanese attitude to higher education in Korea was that it was "something dangerous and superfluous."71 This was, to a considerable extent, the attitude of most other colonial governments in Asia, with one important exception, which will be discussed below.

In Manchuria, the government of Manchoukuo also prohibited the use of textbooks, which were considered anti-Japanese, but at the same time, they tried to modernize the curriculum, introduce vocational training, and improve the training of teachers. There was a considerable expansion in numbers of children attending school; as in Taiwan

⁶⁸ George Kerr, "Formosa: Colonial Laboratory," *Far Eastern Survey*, February 23, 1942, 50-55; George Barclay, Colonial Development and Population in Taiwan (Princeton, N.J.: Princeton University Press, 2015), 68.

⁶⁹ Kimura, "Standards of Living," 641.

 ⁷⁰ David Brudnoy, "Japan's Experiment in Korea," Monumenta Nipponica 25 (1970):
^{155–95.} See also Kim, "An Analysis," 139.
⁷¹ Jong-chol Kim, Education and Development: Some Essays and Thoughts on Korean Educa-

tion (Seoul: Seoul National University Press, 1985), 166-68.

and Korea, most of this expansion was at the primary level. Kiyoshi Kanai found that the great majority of children enrolled in school were at the primary level, although there was some growth in post-primary enrollments.⁷² In 1939, 3,820 students were enrolled in government and private higher education institutions; compared with Korea, a higher proportion, around 67 percent, were from Manchuria. A small number were sent to Japan for higher education.⁷³ In the late 1930s, only about 4.4 percent of the Manchurian population was enrolled in school—a lower proportion than in Korea and much lower than in Taiwan. But as E. Patricia Tsurumi argued, Japanese policy in all three colonies was to replicate the "lower track of the two-track Meiji education system." Education for eventual self-government was never part of Japanese colonial policy.⁷⁴

This was also the case in the European colonies, where colonial regimes shared the Japanese reluctance to expose the indigenous populations to anything more than basic primary education. A partial exception was British Malaya, where a number of schools were established by, and mainly for, the Chinese population, often supported by philanthropists and churches. By the interwar years, tertiary education was available in British Malaya, Burma, Indonesia, Vietnam, and Thailand, but only a very small number of students enrolled. The exception was the Philippines; in 1940–1941 it was estimated that over two million students were enrolled in the public school system and a further 180,000 in private schools. Of these, around 40,000 were in post-secondary institutions, some of which were religious foundations and some, including the University of the Philippines, established by government.⁷⁵

The American emphasis on education, especially at the secondary and tertiary levels, reflected the intention of successive American administrations to grant self-government and eventual independence to the Philippines. It was argued that a substantial number of professional, technical, and administrative workers would be required, and that the great majority would have to be educated in the colony. Even so, American educational policy was hardly an unqualified success. Many children, particularly in the more remote rural areas, either did not enter school at all or dropped out before finishing sixth grade. A

⁷² Kanai, Economic Development, 66.

⁷³ The Manchoukuo Year Book 1941 (Hsinking: The Manchoukuo Year Book, 1941), 677–80.

⁷⁴ E. Patricia Tsurumi, "Colonial Education in Korea and Taiwan," in *Japanese Colonial Empire*, ed. Ramon H. Myers and Mark R. Peattie (Princeton, N.J.: Princeton University Press, 1984), 308.

⁷⁵ Booth, Colonial Legacies, 139–40.

commission of enquiry in 1925 found that many classes were badly taught by teachers with little command of English. But in spite of the obvious deficiencies of the system, many bright young people from relatively humble backgrounds did manage to complete secondary and even tertiary schooling and move into employment in government administration or the private sector. By the end of the 1930s, almost all workers in manufacturing, trade, and commerce, as well as in public administration and the professions in the Philippines, were indigenous, which was not the case in either the European or the Japanese colonies.⁷⁶

After 1901, the Dutch government was increasingly concerned about living standards in Java and initiated several policies to increase food production, improve access to education, and encourage migration from Java to Sumatra and Sulawesi. The Dutch were not alone in their concern about the living standards in their colony. In the early decades of the twentieth century, most colonial regimes in Asia were aware of the growth of nationalist movements wanting at least a greater measure of self-government, if not complete independence. By the 1920s, in the wake of the Russian Revolution, colonial regimes had to deal with the threat of Communist infiltration of independence movements, a threat that was present in the Japanese as well as the European colonies. Colonial statistical agencies were established, or expanded, and indicators of changing living standards carefully scrutinized.⁷⁷

One widely used indicator was food availability per capita. Although rice yields per hectare were higher in both Korea and Taiwan than in Southeast Asia, per capita availability of rice was lower than in several parts of Southeast Asia, including British Malaya, Thailand, and French Indochina. Furthermore, the statistics indicated that rice consumption per capita fell in both Korea and Taiwan, particularly during the 1930s, although in Korea the fall was continuous from 1915–1919 to the 1930s.⁷⁸ The decline in Korea was attributed to the increasing amounts of rice land under the control of landlords, many of them Japanese. Much of the rice they grew was exported to Japan. Many Korean farmers subsisted off pearl millet, barley, and wheat. There

⁷⁶ Ibid., Table 6.4. Indonesia was a partial exception.

⁷⁷ The work of the Institute of Pacific Relations was particularly important in carrying out research on living standards across the Pacific region in the 1920s and 1930s. See in particular W. L. Holland, "Memoirs of William L. Holland," in *Remembering the Institute of Pacific Relations*, ed. Paul F. Hooper (Tokyo: Ryukei Shyosha, 1995).

⁷⁸ On food availability in Southeast Asia, see Anne Booth, "Measuring Living Standards in Different Colonial Systems: Some Evidence from South East Asia, 1900–1942," *Modern Asian Studies* 46, no. 5 (2012), Table 1. For Korea, see Andrew J. Grajdanzev, *Modern Korea* (New York: Institute of Pacific Relations, 1944), 118–19.

does seem to have been some improvement in average rice availability per capita in the latter part of the 1930s, although it was still below the average for 1011–1013 (Table 7).

In Taiwan, it has also been estimated that rice availability per capita fell steadily from the early twentieth century onward (Table 7). To compensate for falling rice consumption, farmers consumed more sweet potatoes. Han-Yu Chang argued that the substitution of rice for sweet potatoes reflected relative price changes rather than falling incomes.⁷⁹ This is supported by the evidence that real per capita consumption expenditures in Taiwan increased steadily from 1911–1913 to the end of the 1930s. This was also the case in Korea, although Kimura argued against reading too much into the average consumption data. Inequalities in consumer expenditure almost certainly increased in both Taiwan and Korea after 1910, although the average increase over the 1930s must have reflected some improvement in consumption standards for the majority.⁸⁰

Myoong Soo Cha attributes much of the fall in food consumption in Korea in the interwar years to a "population explosion initiated by a health campaign and aggravated by the interwar agricultural depression."⁸¹ That mortality dropped in both Taiwan and Korea after 1910 is confirmed by the data on crude death rates for both colonies (Table 7). Similar decreases also occurred in most parts of Southeast Asia, where governments tried to reduce mortality, especially infant and child mortality, through greater use of vaccination and a variety of public health campaigns, including better education of mothers in child-feeding practices. In those colonies for which we have a reliable time series, infant and child mortality, as well as crude death rates, did fall after 1900.⁸² By the late 1930s, infant deaths per thousand births were around 140 in the Philippines, Taiwan, and British Malaya, but higher in Java, French Indochina, and Burma. Crude death rates were

⁷⁹ Han-Yu Chang, "A Study of the Living Conditions of Farmers in Taiwan, 1031– 1950," Developing Economies 7, no. 1 (1969): 51. Further data on food availability in Taiwan is given in Samuel Pao-san Ho, The Economic Development of Taiwan, 1860–1970 (New Haven, Conn.: Yale University Press, 1978), Table 6.2. ⁸⁰ Kimura, "Standards of Living," 632.

⁸¹ Myung Soo Cha, "Imperial Policy or World Price Shocks? Explaining Interwar Korean Consumption Trend," Journal of Economic History 58, no. 3 (1998): 751.

⁸² Figures from various parts of Southeast Asia are given in Booth. "Measuring Living Standards," 1165–70. While there was evidence of declining infant mortality rates in most parts of Southeast Asia, differences between ethnic groups were quite marked. Kimura, "Standards of Living," 643, argues that death rates in Korea were under-reported in the early twentieth century and that reporting improved after 1920, so the actual mortality decline could have been faster than official figures show. This was probably true in other parts of colonial Asia as well.

	Per Capita Consumption Expenditures (Yen: 1934–36 prices)	Rice Consumption Per capita (Kg)	Crude Death Rates (per 1,000)
Taiwan			
1911–13	90*	134	26
1926–28	104*	131	22
1936–38	119*	92	20
Korea			
1911–13	60	106**	34***
1926–28	80	77**	26***
1936–38	89	96**	23***

Table 7. Per Capita Consumption Expenditures, Rice Intake, and Crude Death Rates in Taiwan and Korea: 1910–1940 (Annual Data)

*Data refer to 1910-14, 1925-29, and 1935-39.

**Data refer to 1915–19, 1925–29, and 1935–39.

***Data refer to 1910-1915, 1925-30, and 1935-1940.

Sources: POPULATION AND CRUDE DEATH RATES FOR TAIWAN: Masahiro Sato et al., Asian Historical Statistics: Taiwan (Tokyo: Toyo Keizai, 2008), 233; DATA ON RICE AVAILABILITY FOR TAIWAN: Samuel Pao-san Ho, The Economic Development of Taiwan, 1860–1970 (New Haven, Conn. Yale University Press, 1978), 94; DATA ON CONSUMPTION EXPENDITURES FOR TAIWAN AND KOREA AND ON POPULATION FOR KOREA: Toshiyuki Mizoguchi and Mataji Umemura, eds., Basic Economic Statistics of Former Japanese Colonies, 1895–1938, Estimates and Findings (Tokyo: Toyo Keizai, 1988), 234, 238–39; RICE CONSUMPTION FOR KOREA: Yunshik Chang, "Planned Economic Transformation and Population Change," in *Korea's Response to Japan: The Colonial Period 1910–1945*, ed. C. I. Eugene Kim and Doretha Mortimore (Kalamazoo: Center for Korean Studies, Western Michigan University, 1977), 58; CRUDE DEATH RATES FOR KOREA: Tai Hwan Kwon, Hae Young Lee, Yunshik Chang, and Eui Young Yu, *The Population of Korea* (Seoul: The Population and Development Studies Center, Seoul National University, 1975), 23.

also higher in both Burma and Java than in Korea and Taiwan, or in British Malaya, Thailand, and French Indochina.

The factors identified by Cha in the Korean case probably also caused the fall in rice and corn availability per capita in the Philippines between 1920–1924 and 1935–1939 Although the American administration tried to increase smallholder agricultural productivity, its policies had only limited success, while population grew rapidly, from an estimated 7.6 million in 1903 to 16 million in 1939. As in other parts of Asia, Filipinos compensated for declining availability of food grains by eating more root crops, but studies carried out in the 1930s suggested that malnutrition was widespread in parts of the country.⁸³ Elsewhere

⁸³ Booth, Colonial Legacies, 133–37. See also Booth, "Measuring Living Standards," 1156–57 for further discussion of the data from the Philippines.

in Southeast Asia, the evidence is more mixed, although there was some fall in rice consumption in both Java and British Malaya in the 1930s.⁸⁴

Were the Japanese Colonies More Profitable?

An argument frequently made by critics of Western colonialism is that large profits were often made by capitalists, usually from the metropolitan country, and that these were remitted abroad, rather than benefiting the local populations. In Southeast Asia, the most notorious example of the colonial drain in the nineteenth century was Java under the cultivation system. Remittances from Java to the Netherlands amounted to at least 6 percent of Java's GDP between 1835 and 1865. Most of these remittances took the form of contributions to the Dutch budget. Although the budgetary contributions fell after 1870, remittances on private account grew from the late nineteenth century onward and were substantial until the 1930s.⁸⁵ In other colonies in Southeast Asia, commodity export surpluses were also considerable and funded the outward flow of capital on the part of both large corporations and migrant workers.⁸⁶ Colonial officials frequently defended the repatriation of profits on the grounds that they were a "fair return" on often risky investments made by capitalists in Europe and elsewhere. But postcolonial scholars have argued that the profits that expatriate firms in many parts of Southeast Asia made were larger than those made by firms in the metropolitan countries or in other parts of the world.⁸⁷

To what extent did the drain through the balance of payments also occur in the Japanese colonies? In the early years of the Japanese occupation of Taiwan, the balance of payments was in deficit, which was

⁸⁴ The series compiled by A. M. P. A. Scheltema, *The Food Consumption of the Native Inhabitants of Java and Madura* (Batavia: Ruygrok and Company for the Institute of Pacific Relations, 1936), 12, showed that rice availability per capita fell from 117 kg. in 1913–17 to 95 kg. in 1928–32.

⁸⁵ On the contributions to the Dutch budget in the nineteenth century, see Jan Luiten van Zanden and Daan Marks, *An Economic History of Indonesia:* 1800–2010 (Abingdon: Routledge, 2012), 50. See also Angus Maddison, "Dutch Income in and from Indonesia, 1700–1938," *Modern Asian Studies* 24, no. 4 (1989): 645–70. A further analysis of balance of payments surpluses that continued in Indonesia to the 1960s is given in Booth, *The Indonesian Economy*, 210–14.

⁸⁶ Booth, Colonial Legacies, 104–7.

⁸⁷ Jacques Marseille, Empire colonial et capitalisme français: Histoire d'un divorce (Paris: Albin Michel, 1984), 109–15; J. Thomas Lindblad, Foreign Investment in Southeast Asia in the Twentieth Century (Basingstoke: Macmillan, 1998), 80–81.

funded by Japanese government transfers to the new colony.⁸⁸ But after 1909, the Taiwanese balance of payments became positive, and remained so for most years until the end of the 1930s. The surpluses were used to finance remittances on both government and private account to Japan. As Grajdansev argued, these remittances represented interest and profits on the capital invested by the Japanese in Taiwan. Did this represent a fair return on capital invested? Grajdansev suggested that the amounts remitted to Japan were rather more than a legitimate return on Japanese managerial and entrepreneurial ability, and reflected the protection from both local and foreign competition granted to Japanese companies in the colony.⁸⁹

In sharp contrast to Taiwan, the balance of payments in Korea was persistently in deficit for much of the period from 1010 onward. This was the result of the long-term government subsidy and private capital flows from Japan; T. Mizoguchi and Mataji Yamamoto estimated that these flows were large enough to cover government spending on capital formation for most years until 1935. They argued that these flows reflected the inability of the colonial government to mobilize funds from within the colony, rather than a lack of profits on the part of private investors.⁹⁰ Much the same was true of Manchuria, where the balance of payments was also in deficit from 1934 onward. As in Korea, imports exceeded exports over these years, a tendency that was expected to persist for many years to come.⁹¹ But critics pointed out that the terms of trade favored Japanese enterprises: The price level of imports from Japan to Manchuria increased by up to 30 percent while the prices of exports to Japan declined.⁹² In the process, Japanese firms often earned high profits, especially in the mining sector.⁹³ Wu Chengming argued that large sums, worth over a third of Japan's total investment in Manchuria, were remitted back to Japan from 1932 to 1944.94

But in spite of the evidence that some Japanese investments in their colonies were profitable, by the 1930s both foreign scholars and Japanese business groups were voicing doubts about the benefits of the

⁸⁸ See Grajdanzev, Formosa Today, 158–59, and Toshiyuki Mizoguchi and Yuzo Yamomoto, "Capital Formation in Taiwan and Korea," in Japanese Colonial Empire, ed. Ramon H. Myers and Mark R. Peattie (Princeton, N.J.: Princeton University Press, 1984), 407–11.

⁸⁹ Grajdansev, Formosa Today, 158–59.

⁹⁰ Mizoguchi and Yamomoto, "Capital Formation," 411.

⁹¹ The Manchoukuo Year Book 1941, 311.

⁹² Xie Xueshi, *Mantie Yu Huabei Jingii*, 1935–1945 (The South Manchuria Railway and the Economy of North China, 1935–1945) (Beijing: Social Science Academic Press, 2007), 548.

⁹³ Li, Gao, and Quan, Investigation into Japanese Use of Slave Labourers, 359.

⁹⁴ Wu Chengming, *Diguozhuyi Zai Jiuzhongguode Touzi* (Imperial Investments in pre-1949 China) (Beijing: People's Press, 1955), 93.

colonies to the Japanese economy. An American study of the Japanese economy claimed that at the end of the 1920s, from a fiscal point of view, "the colonies as a whole have thus far clearly been a liability rather than an asset."⁹⁵ In the early part of the 1930s, the private sector in Japan looked to the colonies, especially Manchuria, for relief from slowing growth at home. In addition, the need for new markets for consumer goods exports became more pressing as access to markets in South and Southeast Asia and Africa was curtailed by the protectionist policies of Britain, France, the Netherlands, and the United States. But demand in Korea and Manchuria was for producer goods; local populations were too poor to provide a large market for consumer products. Even the growing demand for capital goods was not viewed as an unmitigated blessing to Japan. Louise Young quoted a speech by the president of Mitsubishi Heavy Industries in 1940, pointing out that the diversion of plant and equipment to Manchuria was causing shortages at home.⁹⁶ Bankers also complained at what were seen as excessive demands for loans in Manchuria, which were causing problems in the Japanese financial market.

A complete assessment of the costs and benefits of the empire to Japan has yet to be carried out. It is possible that such an assessment would reach the same conclusion as that of Lance Davis and Robert Huttenback for the British Empire. These authors argued that the British economy as a whole did not benefit from the empire, even if individual companies did.⁹⁷ Certainly it is difficult to agree with the assertion of Peter Liberman that "empire paid handsomely for Japan, at least until

⁹⁵ Harold G. Moulton, *Japan: An Economic and Financial Appraisal* (Washington, D.C.: Brookings Institution, 1931), 180.

⁹⁶ Louise Young, Japan's Total Empire: Manchuria and the Culture of Wartime Imperialism (Berkeley: University of California Press, 1998), 234.

⁹⁷ Lance E. Davis and Robert A. Huttenback, Mammon and the Pursuit of Empire: The Political Economy of British Imperialism, 1860–1912 (Cambridge: Cambridge University Press, 1986). It is likely that British Malaya was of greater benefit to the British economy than most of its other possessions. The colony was an important earner of dollars for the sterling area both before and after the Pacific War through its exports of rubber and tin to the United States. See Nicholas J. White, "Gentlemanly Capitalism and Empire in the Twentieth Century: The Forgotten Case of Malaya, 1914–1965," in *Gentlemanly Capitalism and British Imperialism: The New Debate on Empire*, ed. Raymond E. Dummett (Harlow: Addison Wesley Longman, 1999). Mitsuhiko Kimura tried to establish who benefited from Japanese control of Korea in the years from 1910 to 1939. He concluded that Japanese farmers were penalized by imports of cheap rice, while Japanese workers benefited, but the total economic impact on the Japanese economy was small. Non-economic motives dominated economic ones. See Mitsuhiko Kimura, "The Economics of Japanese Imperialism in Korea, 1910–1939", Economic History Review, 48 (1995): 555–74.

the invasion of China in 1937."⁹⁸ Only Taiwan, with its relatively high per capita GDP, was profitable to the mother country in the sense that several Southeast Asian colonies were. Korea and Manchuria received considerable direct government support, as well as government subsidies to encourage private firms to invest in mining, manufacturing, and services. In the longer run the massive Japanese investment in Korea and Manchuria might have paid off, but the defeat at the hands of the Allies in 1945 meant that Japan was unable to reap the benefits.

Conclusions

The main purpose of this article has been to assemble statistical and other evidence on economic and social development across colonies in East and Southeast Asia in the decades from 1900 to 1940. Our main conclusion is that the argument that Japanese policies were uniformly more "developmental" than the policies pursued by other colonial powers in Southeast Asia is not always supported. The strongest case for Japanese exceptionalism can probably be made for Taiwan, although even here access to post-primary education was very limited, and other indicators of living standards including food consumption and mortality were little different from the Philippines and most parts of British Malava. While it is true, as Peattie argued, that the Japanese administration could have transferred its own successful modernization efforts to Taiwan, in fact Japanese policies came increasingly to resemble those in other parts of colonial Asia.⁹⁹ Trade with the rest of the world was severely constrained, while that with Japan was based mainly on the exchange of agricultural products for manufactures. Industrialization was limited to agricultural processing, and for most years after 1010, the balance of payments was in surplus, and substantial sums were remitted back to Japan. Education was restricted to primary schooling, and there were few opportunities for indigenous Taiwanese to occupy skilled jobs in the nonagricultural sector. By the late 1930s per capita GDP in Taiwan was higher than in Indonesia, Burma, and Thailand, but probably little different from the Philippines or British Malaya.

In Korea, per capita GDP was almost certainly lower than in Taiwan, and other indicators including educational attainment, mortality, and consumption expenditures were also lower. While it is possible that the

⁹⁸ Peter Liberman, Does Conquest Pay? The Exploitation of Occupied Societies (Princeton, N.J.: Princeton University Press, 1996), 112.

⁹⁹ Mark Peattie, Introduction, Japanese Colonial Empire, 23.

massive Japanese investment that took place in both Korea and Manchuria would have paid off in the longer run, Japan's defeat and subsequent political upheavals in both these regions wiped out much of the progress that occurred during the Japanese occupation. But in Korea there was already a small class of educated Koreans when Japanese colonial control was established. Given that the Japanese dominated the upper echelons of the civil service, some chose to go into business; some moved to Manchuria to pursue commercial opportunities there. When the Republic of Korea was established after the bitter civil war of the early 1950s, there was already an indigenous business class driving the rapid industrial growth for which Korea has become famous.

The Americans were unique in Asia in their policy of encouraging self-government and eventual independence in the Philippines, which meant a much greater emphasis on secondary and tertiary education than in other colonies, whether French, British, Dutch, or Japanese. By the 1930s, Filipinos occupied almost all the posts in the civil service, and many moved into private business and the professions. American policy in the Philippines has been contrasted with that of the British in Malaya. Here colonial officials felt that the Malays had to be protected from capitalism, which meant keeping them in the traditional occupations while encouraging in-migration from China and India in order to provide wage labor in estates and mines. The Dutch shared the doubts of the British concerning the entrepreneurial abilities of indigenous Indonesians and limited access to Dutch-language education to a small number of Indonesians from elite families. The French also paid little attention to the development of formal education.

Many studies of Japanese colonial policies have stressed the achievements in building infrastructure. But here there were many similarities with the achievements of the British, Dutch, and French colonial regimes in other parts of Asia. In all cases, colonial engineers were able to draw on expertise in the metropolitan countries, built up over many decades, to construct railways, roads, and irrigation works. Dutch achievements in Java were broadly comparable to those of the Japanese in Taiwan; the Dutch were able to draw on centuries of experience in managing water in their homeland to build large-scale irrigation works, which survive to this day. Railway and road construction was also developed in both islands, at least partly to serve the needs of agricultural processing industries, especially sugar, since cane had to be transported to the mills rapidly after cutting. Critics of infrastructure development in colonial Asia have argued that it occurred largely to serve the needs of investors from the metropolitan power. This was often the case, but it seems to be just as true in Japanese-controlled regions as elsewhere.

We are left with a final, very important question. If indeed it was the case that Japanese policies were not unique in their emphasis on economic development, then how do we explain the remarkable growth performance of Taiwan and the Republic of Korea after Japanese colonialism was ended in 1945? How do we explain the slower pace of economic growth in Indonesia, the Philippines, Burma, Vietnam, and Malaysia after these countries became independent? A full answer to these questions is beyond the scope of this article. But the nature of the decolonization process was of crucial importance. In several cases, notably Indonesia and Vietnam, independence was only conceded after bitter conflict with the Dutch and French armies. In Vietnam, the country was divided into two opposing regimes, which triggered two decades of further conflict until reunification in 1975. Elsewhere the newly independent nations faced regional rebellions, often based on the resentment felt by ethnic and religious minorities against the central government. In Malaysia, the federation put together by the British lasted only two years before Singapore withdrew to become an independent state. Southeast Asia remained a turbulent region for more than three decades after the end of the Pacific War. In seeking to explain the stellar growth of at least part of the former Japanese empire, and the slower growth of other Asian colonies, we must focus on developments after 1945.