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Abstract

This paper uses expenditure-based PPPs to create direct estimates of GDP per capita for 12 Asian countries in comparable prices for six benchmark years during 1913-1969. The paper finds that levels of real GDP per capita were in several countries comparable to those in Japan in 1913. GDP per capita of Japan and other Asian countries diverged during and after World War I. The paper questions whether Asia's 'little divergence' between Japan and other Asian countries dates back to the late-18th century. It draws attention to the different resource endowments of Japan, China and India compared to other Asian countries, and their implications for the development trajectories of Asian countries. The paper also demonstrates that using historical PPP estimates yields estimates of GDP per capita that diverge from those based on retropolations of the single 1990 PPP-converted benchmark year. It concludes that historical estimates of PPPs are needed to confirm analyses of comparative economic performance based on GDP per capita data.

Key words: Asia, PPPs, economic growth, Great Divergence, little divergence
JEL-codes: N15, O47, P52
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1. Introduction

Several studies of comparative long-term economic development have brought to light that a 'little divergence' took place within Europe alongside the 'Great Divergence' between Europe and Asia (*e.g.* De Pleijt and Van Zanden 2013; Fouquet and Broadberry 2015). This has helped to sharpen debate about the possible reasons for the diverging paths of long-term economic growth between the North Sea area and the rest of Europe, and between Europe and Asia. In this debate, China, Japan and India have individually and together been used to represent the Asian continent. However, just like there is a need to identify and analyse the timing and reasons for the little divergence in Europe, there is also scope for further research to enrich our understanding of comparative economic development in Asia.

To date, our understanding of comparative paths of economic development across Asian countries is largely informed by the work of Angus Maddison. It reveals that Asian countries started their development experiences from broadly comparable levels of GDP per capita in the early 19th century (Maddison and Van der Eng 2016: Table 2). Recent new estimates of aggregate output over a longer time period for particularly Japan, China and India have led to revisions of Maddison's long-term estimates of GDP per capita. This led Broadberry (2016: 36-37) to date the start of a 'little divergence' in Asia to the second half of the 18th century, when GDP per capita in Japan overtook that in China and India. Nascent research started to probe the reasons for this little divergence in Asia (Sng and Moriguchi 2014; Dong *et al.* 2015).

Before progressing the analysis of this little divergence since the late-18th century further, it would be pertinent to reach consensus on the timing of this development across all of Asia. Two issues need to be considered. Firstly, Japan, China and India together made up about 80 to 85% of the population in Asia until 1913, but their development experience is not likely to be representative for the whole of Asia. An issue in the long-term economic development of particularly the countries of Southeast Asia is that they were long relatively underpopulated. They experienced significant inward labour migration, especially from India and China and to a lesser extent Japan until the 1930s (Huff and Cagiano 2007). Most Asian countries had therefore very different relative endowments of productive resources compared to Japan, China and India. Such different endowments of land (natural resources) and labour may have been the key parameters that determined economic development options and outcomes across Asia (Van der Eng 2004ab).

One possible difference is that relatively high population density caused economic development in Japan, China and India to be characterised by the different degrees to which they advanced an 'industrious revolution' on the basis of the mobilisation of the relatively abundant resource of people for productive purposes in manufacturing industry (Sugihara 2007). While in other Asian countries economic development may have been characterised by

processes that (a) created nation states and national economies through internal market integration, particularly during the long 19th century, and (b) mobilised the abundant natural resources (land and minerals) to specialise export production on primary commodities.

Secondly, while Maddison's work has sharpened the debate and analysis of relative economic performance and living standards, it retains methodological issues that need further discussion. In particular, there is now a growing understanding that the use of a single 1990 benchmark year for conversions of GDP per capita with Purchasing Power Parities (PPPs) and for retropolations needs further consideration (Bolt and Van Zanden 2014). The main concern is that the choice of the benchmark year and the use of a single benchmark year may influence the historical levels of GDP per capita across national economies Using a single benchmark year may have been appropriate for European countries, as high levels of intra-European trade resulted in broadly comparable relative price structures, at least during the 20th century. However, non-European countries are more likely to have had price structures that in the past deviated from the European norm and/or deviated from the 1990 international norm. The reason is that the relative purchasing power of currencies was not fixed in time, but changed as the forces that govern international trade of goods and services caused domestic price structures to resemble or deviate from international or foreign price structures to a greater or lesser extent (Heston 1993).

The arbitrary choice of a single benchmark year for the purpose of conversion and retropolation of GDP per capita therefore affects historical estimates of GDP per capita. Prados (2000) drew attention to this and proposed an alternative approach, using Paasche price indices for largely OECD countries, and a short-cut method for countries and years for which such indices were not available. Ward and Devereux (2003, 2004) set out to base US-UK productivity comparisons back to the 1870s on historical estimates of relevant whole-economy expenditure-based PPP, rather than retropolations. This work spawned further research into the need for and (im)possibilities of making historical PPP-based conversions and comparisons of sectoral value added and productivity, or overall GDP per capita, also in the context of East Asia (*e.g.* Yuan *et al.* 2010; De Jong and Woltjer 2011). The issue of using a single benchmark year is potentially a significant problem across Asia. Van der Eng (2011) pointed to the fact that extrapolation and retropolation of GDP per capita data for different benchmark years in comparable units yields very different relative levels of GDP per capita across Asian countries for the same years. This of course influences any assessments of the reasons for these different historical levels of economic performance. Unfortunately the short-cut approach of Prados (2000) cannot be replicated for Asian countries, it requires historical data to approximate price levels that are not readily available for most Asian countries.

Consequently, there is not necessarily a reason to be confident about estimates of relative levels of GDP per capita extrapolated back to the late-18th century or further (as in the case of Japan, China and India) and therefore about the moment when Asia's little divergence appears to have started. If the little divergence in Asia started in the 18th century and was characterised by Japan surging ahead of other Asian countries, it must have generated levels of GDP per capita in Japan that by 1913 exceeded levels in other Asian countries by far. And a range of other indicators of economic development should confirm those outcomes.

Maddison's estimates show that GDP per capita in 1913 in Japan was around twice the levels in other Asian countries. However, such relative levels are not confirmed by other indicators of development. For example, a recent revision of Japan's historical national accounts reveals that manufacturing industry contributed 15% to GDP in 1913 (Fukao *et al.* 2015); not so different from 16% in the Philippines (Hooley 2005) and 14% in Indonesia (Van der Eng 2016). Real unskilled wages in Tokyo were not so different from Bengal by the 1910s (Allen *et al.* 2011: 28), and until the 1920s below those in cities in Korea, Taiwan and Manchuria (Cha 2015: 37-39). Males born in the 1900s in Japan were 1.9 centimetres shorter than the average for their counterparts in Southeast Asia (database of Blum and Baten 2012).

Hence, was Japan's GDP per capita so much higher than in other parts of Asia by 1913, and was that due to the little divergence that took place in Asia since the late-18th century? Or has our impression of relative standards of living across Asian countries, been a consequence of the backward retropolation of the 1990 benchmark of GDP per capita in the Maddison database?

This paper seeks to address these questions with direct comparisons of GDP per capita, based on historical estimates of binary expenditure-based PPPs for six benchmark years, 1913, 1922, 1938, 1952, 1958 and 1969, across twelve Asian countries: Burma, Ceylon, India, Indonesia, Japan, (South) Korea, Malaya-West Malaysia, the Philippines, Taiwan, Siam-Thailand, Vietnam and to some extent China.[1] Such PPPs may in principle be more appropriate to addressing the issue of economic divergence or convergence in Asia, and the possibility that Japan's level of economic development was ahead of the rest of Asia before World War I, than retropolations of the 1990 benchmark year.

The paper estimates binary PPPs relative to Japan. Japan is used as the benchmark because it is often hailed as a point of reference to compare economic development in other Asian countries with (*e.g.* Broadberry 2016). In terms of economic performance, colonial Indonesia and Vietnam may serve as a contrast to Japan, because they are often regarded as colonies where extractive institutions introduced by Dutch and French colonial authorities depressed general living standards to low levels until improvements after independence[2], or – to put it differently – where colonial rule seems to have placed countries on a disappointing development trajectory. By contrast, Korea and Taiwan are often seen as two colonies where Japanese rule, although oppressive in many ways, implemented economic development policies that established development-conducive foundations on which these countries were able to draw at later stages (Bassino 2000a; Booth 2007)?

Additional reasons for selecting Japan as the benchmark for comparison is that it was an important driver of the development of intra-Asian trade before World War II and after (Sugihara 1990, 1998; Petri 2006). Hence, if they converged, price levels across Asia may have converged with those in Japan. Japan also had, by far, the best statistical reporting

[1] The use of the country names is anachronistic. Vietnam was divided during 1955-1975, and was part of French Indochina before 1955. In addition, Siam became Thailand in 1939, Malaya became part of Malaysia in 1963, Ceylon became Sri Lanka in 1972, Burma became Myanmar in 1989. The Netherlands East Indies were already, but not widely, known as Indonesia during the Dutch colonial era up to the late-1940s.

[2] See for instance Murray (1980) on French Indochina.

system. Time series of Japanese unit prices and estimates of per capita consumption or expenditure are readily available from the 1880s onwards. Unfortunately that is not the case for other Asian countries, including those in the sample in this paper. Consequently, the estimation of PPPs is limited by the availability of price and per capita consumption or supply data, as well as the availability of GDP per capita data. It is for that reason not possible to estimate the binary PPPs consistently across years and countries.

The period 1910-1970 was in broad terms one during which the regulatory intervention of governments in markets, particularly through trade, monetary and industry policies in different combinations, created the greatest deviations between domestic price structures across Asian countries. As a consequence, deviations of PPPs from currency exchange rates can be expected for that fact only, if not the fact that the 'law of one price' is known not to hold in both the short or medium term, because international markets for goods and services have long been far less well-integrated as domestic markets are (Rogoff 1996; Murray and Papell 2005). The period is also chosen because it precedes the years for which the International Comparisons Project (ICP) started to provide much more extensive and detailed estimates of expenditure-based PPPs for Asian countries from 1970 onwards.

A further issue underlying this paper is that – with the exception of Japan – it covers a period during which national accounting practices in many ways were still in their infancy in Asian countries (see *e.g.* Van der Eng (2013) on Indonesia). The paper uses revised GDP in current prices from historical national accounting projects for Japan, India, Indonesia, Korea, Malaya, the Philippines, Taiwan and Vietnam. But for Burma, Ceylon and Thailand it can only use the existing and possibly underestimated data on GDP in current prices.

The next section explains the methodology used in this paper to estimate PPP-based converters. Section 3 discusses the results, in terms of their deviation from exchange rates. Section 4 uses the estimated PPPs to compare times series of per capita GDP and assess economic divergence in Asia during 1910-1970. Section 5 compares the estimates of GDP per capita with those from retropolations of the 1990 benchmark in the New Maddison Project Database. Section 6 concludes.

2. Methodology to approximate PPPs

A major problem in international comparative research is the fact that many economic variables, such as wages or per capita GDP, are denominated in national currencies. Exchange rates can be used for conversion of such variables into a common currency, but there are several problems associated with them. Most importantly, exchange rates do not take account of the actual domestic purchasing power of currencies, because they tend to reflect the demand for currency as a consequence of only the foreign trade of goods and services, rather than trade of all goods and services in an economy. Currency exchange rates in principle tend to reflect the differences between the price structures of goods and services that enter foreign trade, rather than the price structures of national economies at large (Kravis 1984).

An alternative to exchange rates are approximations of the relative purchasing power of currencies. Thanks to the World Bank and United Nations-sponsored ICP, and subsequent

work by Heston and Summers at Pennsylvania University, such approximations of PPPs have become widely available and used (*e.g.* Summers and Heston 1991). The methodology to calculate PPPs is in principle simple, although use of the PPPs may have to consider the basis for their estimation. For instance, ICP uses an expenditure approach, not the much more involved output approach. In basic terms, the ICP methodology involves the collection of retail prices of goods and services, and the use of expenditure-based weights. By country, prices and weights in expenditure can be compared with their international averages, and used to calculate PPPs. ICP has done this for a growing number of Asian countries for benchmarks years since 1970, but not all. For example, Indonesia was only included in the 1985 round, and the latest 2011 round excluded Burma. To overcome this, Heston and Summers developed a shortcut approach to estimate PPPs for countries that were not in the ICP samples, which they applied to successive rounds of the Penn World Tables.[3] However, like Prados (2000), data limitations make it simply impossible to replicate the ICP approach for missing Asian countries and/or for years before 1970.

For the purpose of this paper, the PPP-based converter of country j relative to Japan (per yen) is calculated using the Fisher index as a geometric average of the Paasche and Laspeyres price indices:

$$PPP_{jJ} = \sqrt{\frac{\sum_{i=1}^{n}(p_{iJ} \times q_{ij})}{\sum_{i=1}^{n}(p_{ij} \times q_{ij})} \times \frac{\sum_{i=1}^{n}(p_{iJ} \times q_{iJ})}{\sum_{i=1}^{n}(p_{ij} \times q_{iJ})}}$$

Where p_{ij} is the price of item i for country j, q_{ij} is the quantity of item i consumed per capita in country j, p_{iJ} is the average price in Japanese yen of item i, and q_{iJ} is the quantity of item i consumed in Japan.

This approach is attractive because of its simplicity. Nevertheless, there are several factors that may impact on the results it yields.

1. The Appendix of this paper explains that the numbers of matched products for which price data were available was relatively small. They mainly concerned food products. On the other hand, given that rice and some other staple crops generally comprised more than half of average household expenditure, and that possibly 70 to 80 percent of total expenditure was private consumption, such products help to capture a large part of the differences in the domestic purchasing power of national currencies.
2. The quality of the products that could be matched was not entirely uniform. For instance, preferred rice varieties tend to vary by country. Consumers in East Asia prefer short grain, glutinous varieties, while in Southeast Asia they lean towards long grain, drier varieties. Hence, the quality of the rice used in the product matching may not be equally appreciated across the countries. But it is not possible to account for this.

[3] See: http://www.rug.nl/research/ggdc/data/pwt/

3. The weights used are in terms of quantities consumed, used or supplied per person per year. They were obtained as estimates of implicit consumption (quantities of production + imports – exports, divided by population), and from cost of living surveys and household expenditure surveys. Quantities were not available for all products, and in many cases they had to be approximated as reasonable estimates of consumption per capita.
4. Where possible, national average urban retail prices were used, because these do not only encompass differences in production costs, but also differences in the costs of relevant services that supplied products to end users, such as transport and distribution costs. Nevertheless, in some cases retail prices had to be approximated on the basis of wholesale and producer prices.

3. Discrepancies between exchange rates and PPPs

Leaving aside price differences between countries caused by differences and variations in the relative cost of immobile production factors – particularly land – we may expect significant fluctuations in the discrepancy between currency exchange rates and PPPs between the end of the classical gold standard at the beginning of World War I and the introduction of variable exchange rates in most Asian countries in the 1980s.

Until World War I, most Asian countries used the gold standard (or rather the gold-exchange standard, see Van der Eng 1999), except China, Hong Kong and French Indochina. Hence, foreign trade imbalances automatically triggered monetary adjustments that in principle led to modifications in the domestic price levels of countries. To the extent that domestically produced goods and services were trade-exposed, the PPPs of national currencies would in principle be maintained. Consequently, international trade settled through the exchange rate mechanism in principle caused domestic price structures across most Asian countries to resemble international price structures.

During World War I, most Asian countries suspended the gold-exchange standard. They resumed it during the 1920s, while French Indochina, China and Hong Kong continued the silver standard until respectively 1930 and 1937. In the 1930s, devaluations of currencies relative to gold and mounting number of trade regulations aimed to discourage imports and encourage exports. Apart from increasing the tariff revenues taken by governments on imports, trade regulations significantly enhanced the discrepancies between domestic and foreign price structures. During the 1930s, most Asian countries opted for a nominal peg, following the pound, the US dollar, the French franc and the Dutch guilder in their devaluations in respectively 1931, 1933, and 1936.

Table 1 shows differences in the implementation of trade policies across Asian countries.[4] Up to 1913, countries had modest trade protection in place with tariffs serving the purpose of raising public revenue. Average tariff rates increased significantly during the 1920s and 1930s. The exception is the Philippines, where the American colonial government

[4] The ratio of the values of trade tax revenues and imports is an imperfect indicator of how governments used tariff rates. For example, in Japan the average tariff was indeed low, but the tariff on all dutiable imported goods was 20% by 1913, and 24% in 1931 (Yamazawa 1973: 24).

after 1902 continued the Spanish practice of high import tariffs. During most of the 1920s and 1930s, the Philippines used a preferential trade agreement with the United States to support Filipino producers, rather than relying on tariff protection across all trade partners for that purpose.

Table 1: Annual Average Import Tariff Rates of Asian Countries, 1870-1992

	1870-99	1900-29	1930-50	1951-73	1974-87	1988-92
Philippines	10.3	13.9	7.6	12.0	13.8	18.6
Burma - Myanmar	4.0	13.2	24.9	26.4	23.1	46.9
Japan	6.2	6.4	5.8	2.8	2.7	3.7
Siam - Thailand	3.6	7.5	21.8	18.2	13.0	31.5
Ceylon - Sri Lanka	6.2	7.7	18.7	20.1	10.7	27.0
Indonesia	4.9	6.0	14.1	21.9	5.6	13.1
India	3.4	7.1	25.7	23.2	34.0	40.7
Malaya - Malaysia	-	-	-	12.5	8.9	9.4
South Korea	-	-	-	10.3	8.2	10.6
China	3.2	3.6	20.4	-	-	32.1
Unweighted average	5.2	8.2	17.4	17.1	13.3	23.4

Notes: - = not available. 1870-1987 tariff rates defined as revenue from import duties over the value of total imports.
Sources: Calculated for 1870-1987 from the dataset of Clemens and Williamson (2004, 2012), and for 1988-1992 from World Development Indicators, http://data.worldbank.org

Table 2 confirms that the Philippines was significantly less integrated in intra-Asian trade networks – because of its orientation towards the US – than other countries in the region. In addition, two other facts should be noted. Firstly, although by 1913 Asian countries had few trade restrictions, their openness to foreign trade may have been limited. It is difficult to express the value of trade as a percentage of GDP for all countries, but the per capita value of total exports was the equivalent of just one to two pounds sterling in most Asian countries, including Japan, with the exception of Malaya where it was 10 pounds (Van der Eng 1999: 76). Secondly, despite the growth of intra-Asian trade from the 1880s to the 1930s (Sugihara 1990, 1998), there may have been limits to the degree to which intra-regional trade contributed to the adjustment of domestic price structures to international price structures in Asia, because exposure to intra-Asian trade varied considerably across countries, as Table 2 shows. On the other hand, international commodity markets were relatively well-integrated, as comparisons of Japan with the UK and USA during 1900-1940 show (Takagi 1989: 199).

Table 2: Share of Intra-Asian Trade in Trade of Asian Countries, 1928-1959 (percentages)

	1928		1938		1953		1968	
	I	E	I	E	I	E	I	E
Thailand	63	87	65	83	46	73	47	63
China	58	54	45	64	-	-	-	-
Japan, Korea, Taiwan	43	43	41	63	30	46	33	34
Japan	-	-	-	-	27	45	30	34
South Korea	-	-	-	-	46	22	55	33
Taiwan	-	-	-	-	38	68	53	45
Indonesia	36	45	32	34	41	34	57	40
Indochina - South Vietnam	47	68	31	28	26	33	53	23
Malaya - West Malaysia	70	29	67	28	48	18	65	45
India, Burma	23	26	24	24	19	29	16	24
India	-	-	-	-	14	19	15	25
Burma	-	-	-	-	52	76	36	8
Philippines	21	9	17	9	12	14	41	42
Ceylon	61	7	62	6	41	20	43	24

Notes: I = imports, E = exports, - = not available. 1953 South Vietnam is 1955. 1953 and 1968 intra-Asian trade refers to trade with all ECAFE member countries.
Sources: Calculated from League of Nations 1942: 142-148; ECAFE 1961: 142-145; ECAFE 1970: 246-254.

Table 1 reveals that trade protection persisted after World War II, and that it in most cases increased. National trade tariff rates differed across traded products, with manufactured goods general attracting the highest rates. For example, in Indonesia the average nominal tariff on manufactured imports was 36% in 1969 (Myint 1971: 250-251), compared to an overall average of 22% in Table 1. The last column in Table 1 suggests that tariff protection remained high across Asian countries, with the exception of Japan. Especially the average tariff on manufactures remained generally higher than the overall average. For example, in Thailand the average tariff for manufactures in 1988-1992 was still 42% (Nicita and Olarrega 2006), compared to an overall average of 32% in Table 1.

Table 1 takes no account of the fact that since the 1930s countries used an increasing range of differential non-tariff trade barriers (NTBs), particularly bilaterally negotiated quota. Like import tariffs, NTBs were also continued after World War II and became increasingly restrictive as a consequence of efforts of governments in several Asian countries to further import-substituting production of both manufactured and agricultural goods. While most countries conceded to tariff liberalisation since the 1970s or later in the context of multilateral rounds of negotiations under the General Agreement of Trade and Tariffs (GATT), differential NTBs have generally been maintained until today.

Table 3: Exchange Rates of Asian Currencies and the US$, 1913-1969

	1913	1922	1938	1952	1958	1969
Japan (yen)						
Free/official	2.03	2.09	3.56	361	361	360
Unofficial				514	423	401
Burma (rupee/kyat)						
Free/official	3.08	3.48	2.73	4.77	4.77	4.81
Unofficial				5.90	11.16	17.40
Ceylon (rupee)						
Free/official	3.08	3.48	2.73	4.76	4.76	5.95
Unofficial				5.60	6.28	11.33
China (yuan)						
Free/official	1.67	1.47	4.76	22,935	2.46	2.46
Unofficial				33,748	6.97	3.57
India (rupee)						
Free/official	3.08	3.48	2.73	4.77	4.77	7.58
Unofficial				5.52	5.43	10.78
Indonesia (guilder/rupiah)						
Free/official	2.49	2.68	1.83	11.40	36.00	327
Unofficial				19.63	71.74	408
Korea - South Korea (yen/hwan/won)						
Free/official	2.03	2.09	3.56	6,000	500	308
Unofficial				10,500	1,173	309
Malaya - Malaysia (S$/M$)						
Free/official	1.76	1.97	1.72	3.05	3.06	3.06
Unofficial				3.49	3.17	3.08
Philippines (peso)						
Free/official	2.01	2.05	2.00	2.02	2.02	3.93
Unofficial				2.82	3.39	4.95
Taiwan (yen/NT$)						
Free/official	2.03	2.09	3.56	15.65	22.56	40.00
Unofficial				24.25	42.29	41.04
Siam - Thailand (baht)						
Free/official	2.67	2.48	2.27	18.87	20.97	20.90
Unofficial				18.56	21.58	21.02
Indochina - South Vietnam (piastre)						
Free/official	2.08	1.85	3.52	20.59	35.00	118
Unofficial				38.50	81.31	225
North Vietnam (dong)						
Official					3.59	3.75
Unofficial					10.25	17.73

Sources: 1913, 1922 and 1938: Burma, India and Ceylon (Indian rupee) *Statistical Abstract of the United States*; China Hsiau (1974: 190-192); Indonesia *Mededeelingen van het Centraal Kantoor voor de Statistiek 19, 146*, *Economisch Weekblad voor Nederlandsch-Indië*; Japan, Korea and Taiwan JSA (1987: 104); Malaya, *Blue Book of the Straits Settlements*; Philippines *Statistical Yearbook of The Philippines* (1941); Thailand Ingram (1971: 37), Vietnam, *Annuaire statistique de l'Indochine Française*; 1952, 1958 and 1969: *Pick's Currency Yearbook* (various years), except North Vietnam dong, converted with official rate of the China RMB for 1958 and the Soviet Union ruble for 1969 and their US$ black market rates.

In addition, during the 1930s, monetary authorities of most Asian countries suspended the gold-exchange standard and later the free convertibility of currencies by imposing capital controls, although in different combinations (*e.g.* Takagi 1989 on Japan). To different degrees therefore they maintained closed capital accounts.

After World War II, most Asian countries became members of the International Monetary Fund. This was not an obstacle to their continuation of closed capital accounts with restrictions and controls on monetary flows into and out of the country. Asian countries generally used a dollar-exchange system. Reserves of mainly US dollars would in principle be used to maintain the local currency at a stable and realistic rate of exchange with the US dollar, and thus gold, until the US ended gold convertibility in 1971. However, many Asian countries ran current account deficits. Occasional foreign exchange shortages therefore made it difficult for them to maintain a realistic official exchange rate, contributing discrepancies between official and unofficial exchange rates.

An indication of the combined impact of trade and monetary policies on exchange rates is the emergence of 'black markets' for currencies, due to the fact that capital controls were generally imperfect. Table 3 shows significant discrepancies between the official and unofficial exchange rates of currencies. Except for Thailand and Malaya, the post-war official exchange rates of Asian currencies were clearly undervalued, including in Japan. This only changed when countries started to liberalise capital controls in the 1970s, restored convertibility and implemented variable exchange rate regimes in the 1980s (*e.g.* Japan in 1981, Indonesia in 1986 and the Philippines in 1987). In all cases, except Burma, Vietnam and China, unofficial currency markets disappeared in the 1980s.

Table 4 presents the results from the method to estimate PPPs outlined in section 2. For the purpose of comparing GDP per capita with Japan, the exchange rates and PPPs are expressed relative to the Japanese yen. The table shows that before World War II, exchange rates underestimated the domestic purchasing power of currencies relative to Japan; in some cases more than others. It seems likely that Japan's trade policies are a significant factor in explaining the discrepancies between exchange rates and PPPs in 1913 and after. Japan had started to protect its rice farmers through a 15% import tariff in 1904, which increased the domestic price of rice. Japanese farmers also became recipients of an increasing variety of indirect input subsidies, which in turn may have reduced the domestic retail price of rice. Given the high weight of rice in the calculations of the PPPs, this is likely to be a key reason for the discrepancies between exchange rates and PPPs in most cases. But Japan's use of other tariffs, such as on meat and garments (Yamazawa 1973: 28) to protect domestic producers, also added to the cost of living in Japan relative to other Asian countries. In addition, most services in Asia were not formally traded across borders. To the degree that the price of goods to end users had a domestic service content, the non-trade exposure of services is also likely to have restricted price convergence.

Table 4: Exchange Rates and PPPs of Asian Currencies per 100 Japanese Yen, 1913-1969

	1913	1922	1938	1952	1958	1969
Burma (rupee/kyat)						
Exchange rate	152	166	78	1.32	1.33	1.34
PPP	71	63	39	1.00	0.71	1.05
Ceylon (rupee)						
Exchange rate	152	166	78	1.32	1.32	1.66
PPP	106	-	54	1.43	1.35	0.86
China (yuan)						
Exchange rate	101	90	134	6,371	0.68	0.68
PPP	82	-	73	-	-	-
India (rupee)						
Exchange rate	152	166	78	1.32	1.32	2.12
PPP	71	59	37	1.03	0.78	0.77
Indonesia (guilder/rupiah)						
Exchange rate	124	130	51	3.16	10.00	91.25
PPP	68	72	33	3.57	6.47	29.35
Korea - South Korea (yen/hwan/won)						
Exchange rate	100	100	100	1,662	139	85.94
PPP	56	93	95	9,262	158	43.76
Malaya - Malaysia (S$/M$)						
Exchange rate	87	94	48	0.84	0.85	0.85
PPP	54	44	23	1.24	0.63	0.36
Philippines (peso)						
Exchange rate	99	98	56	0.56	0.56	1.10
PPP	62	50	41	0.91	0.48	0.51
Taiwan (yen/NT$)						
Exchange rate	100	100	100	4.71	9.73	11.16
PPP	66	58	72	4.13	5.20	5.44
Siam - Thailand (baht)						
Exchange rate	132	119	64	5.23	5.83	5.83
PPP	107	71	42	3.28	2.94	2.21
Cochinchina - South Vietnam (piastre)						
Exchange rate	100	91	72	5.70	9.73	32.93
PPP	39	26	33	8.03	8.13	36.03
Tonkin - North Vietnam (piastre/dong)						
Exchange rate	100	91	72	5.70	998	0.82
PPP	37	25	33	10.10	421	-

Notes: - = not available. Exchange rates of some currencies are calculated via the yen and the official exchange rates of the pound sterling or the US dollar. For countries with a multiple exchange rate system, the export or effective rate was used.
Sources: Exchange rates see Table 1; PPPs see Appendix; 1913 PPP China is the 1910 whole economy China-UK PPP from Ma and De Jong (2015: 30), converted with the yen/pound exchange rate; 1938 PPP China is the 1934-36 consumer expenditure PPP from Fukao *et al.* (2007: 507).

As discussed, since World War I, and particularly during the 1930s, increasing tariffs and also the growing volume of trade regulations aimed at discouraging imports and encouraging exports, are the likely reason for growing discrepancies between domestic and

foreign price structures during the interwar years. For example, in Japan the tariff rate on rice increased to 35% and the nominal rate of protection of rice to 45% in the 1930s (Yamazawa 1973: 28; Hayami 1988: 42). This was a key factor in the discrepancies between exchange rates and PPPs in 1938 in Table 4, albeit that the governments in Indonesia, the Philippines, and Indochina had started to take their own measures to support rice farmers in the 1930s. Thus, a growing range of trade barriers, often aimed against Japanese manufactures (Booth 2001), reduced the comparability of price structures across Asian countries before World War II. In addition to monetary policies outlines above, the continuation and further variation and/or increases of trade tariffs help to understand the sustained discrepancies between exchange rates and PPPs.

4. GDP per Capita, Economic Divergence in Asia during 1910-1970

Section 3 indicated that for several reasons exchange rates are imperfect approximations of the actual purchasing power of currencies across Asia for the purpose of international comparisons. It demonstrated the degree to which the use of exchange rates may cause biases in such comparisons. In order to avoid those, this paper uses the PPPs in Table 4 to deflate GDP per capita in national prices and compare those with Japan. Arguably, there are intuitive issues with such an exercise, because this paper's 'basic' PPPs cannot in principle be assumed to approximate whole economy PPPs. The basic PPPs are largely based on food items, and do not include, for example, capital goods for investment and produced by local manufacturing industries. Severe data limitations make a whole economy-based approximation of PPPs as good as impossible for all Asian countries across all years under consideration.

The availability of price and expenditure data only improved across Asia since the 1970s, which made it possible for ICP to include more Asian countries in successive ICP rounds. The only exception to limited data availability are Japan and its colonies in the 1930s, which allowed Fukao *et al.* (2006, 2007) to estimate PPPs for Taiwan, Korea, and China relative to Japan for 1934-1936, using the expenditure and output approaches. Table 5 compares the basic PPPs of this paper with the more elaborate PPPs for the 1930s and the 1970s. The table shows that for both decades the differences with the basic PPPs are relatively marginal, which yields credence to using the basic PPPs in Table 4 to convert GDP per capita. The main exceptions in Table 5 are the PPPs in 1974. However, those are estimates of PPPs based on regressions and extrapolations that are, therefore, according to Kravis *et al.* (1978b: 238), 'subject to wider margins of error than the 1970 data'.

A significant reason why the basic PPPs are comparable to the whole economy PPPs is most likely related to both the high share of consumer expenditure in GDP and the high share of rice in the consumer expenditure and personal consumption baskets used in the PPP calculations. In addition, rice was an important wage good that determined a large part of the production costs of non-rice commodities, products and services in economies in which most production was still largely the consequence of the productive mobilisation of human labour, rather than labour-replacing capital goods. Lastly, as noted, the retail prices used to estimate the basic PPPs capture not just the raw material production costs of the goods included in the

baskets, but also the related manufacturing and services activities that brought the goods from producers to end-users. In the case of rice, for example, the retail price included the cost of paddy trade from the farm gate, rice milling, wholesale and retail trade as well as the associated finance costs. In other words, retail prices reflect a broader range of productive activities than just raw material production.

Table 5: Comparisons of estimated PPPs for Asian countries, 1930s and 1970s

	1930s (per Yen)			1970s (per 100 Yen)			
	Fukao *et al.* (2006)	Yuan *et al.* (2010)	This study	This study	Kravis *et al.* (1978a)	Kravis *et al.* (1978b)	Kravis *et al.* (1982)
Benchmark year	1934-36	1935	1938	1969	1970	1974	1975
Methodology	WE, e	Mf, q	B, e	B, e	WE, e	extrap.	WE, e
Korea - South Korea	0.86	0.88	0.95	43.76	38.53	60.48	64.21
Taiwan	0.84	-	0.72	-	-	-	-
India	-	-	0.37	0.77	0.63	0.97	0.88
Philippines	-	-	0.41	0.51	0.53	1.18	0.98
Malaya - Malaysia	-	-	0.23	0.36	0.36	0.47	0.41
Ceylon	-	-	0.54	0.86	-	0.79	0.99
Thailand	-	-	0.42	2.21	-	3.44	2.58
Burma	-	-	0.39	1.00	-	0.61	-
Indonesia	-	-	0.33	29.35	-	59.42	-
South Vietnam	-	-	0.33	36.03	-	47.32	-

Notes: PPPs from Kravis *et al.* (1978ab, 1982) are converted to PPPs with yen/US$ exchange rates. - = not available, WE = Whole Economy, Mf = Manufacturing sector, B = Basic, e = expenditure approach, q = output approach, extrap. = extrapolation.

Table 6 shows GDP per capita in current prices for benchmark years converted with the basic PPPs, as far as estimates of GDP in current prices are available. The level of GDP per capita in 1913 is broadly the same in Japan, India, Burma, Taiwan and Vietnam, and lower than the Philippines and especially Malaya, which contradicts the current estimates in the New Maddison Database, which have Japan in 1913 at twice the level of GDP per capita relative to other Asian countries. The GDP per capita gap between Japan and the rest opens up after 1913, with the exception of Malaya. Table 6 also shows that most Asian countries had a level of GDP per capita ahead of China in 1913, and in all cases well ahead of China by 1938. A possible reason why the gap between Japan and particularly Burma, Ceylon and Thailand is pronounced in 1922 and later is that levels of GDP in current prices have not yet been re-estimated retrospectively for those four countries, unlike Japan, India, Indonesia, Korea, Malaya, the Philippines, Taiwan and Vietnam. Based on the experience with historical national accounts projects, re-estimation of GDP in current prices may lift per capita GDP levels of those first four countries in Table 6 relative to Japan.

Table 6: GDP per Capita in Asian Countries, 1913-1969

	1913	1922	1938	1952	1958	1969
A. In current Japanese yen (1,000 yen in 1952, 1958 and 1969)						
Japan	98	271	377	72	126	607
Burma	86	152	231	24	42	35
Ceylon	-	141	276	40	53	132
China	61	-	64	-	-	-
India	117	225	210	24	51	107
Indonesia	92	141	132	28	37	81
Korea - South Korea	78	104	151	43	55	154
Malaya - West Malaysia	236	526	624	68	115	304
Philippines	166	294	262	45	106	229
Taiwan	99	223	281	52	87	254
Thailand	-	-	152	43	59	168
Vietnam	78	167	159	25	42	29
B. Index, Japan = 100						
Burma	87	56	61	34	34	6
Ceylon	-	52	73	55	42	22
China	62	-	17	-	-	-
India	118	79	56	34	47	18
Indonesia	94	52	35	38	30	13
Korea - South Korea	80	38	40	60	43	25
Malaya - West Malaysia	239	194	165	94	92	50
Philippines	168	108	69	63	84	38
Taiwan	95	82	74	71	69	42
Thailand	-	-	40	60	47	28
Vietnam	80	62	42	35	33	5

Note: - = not available.

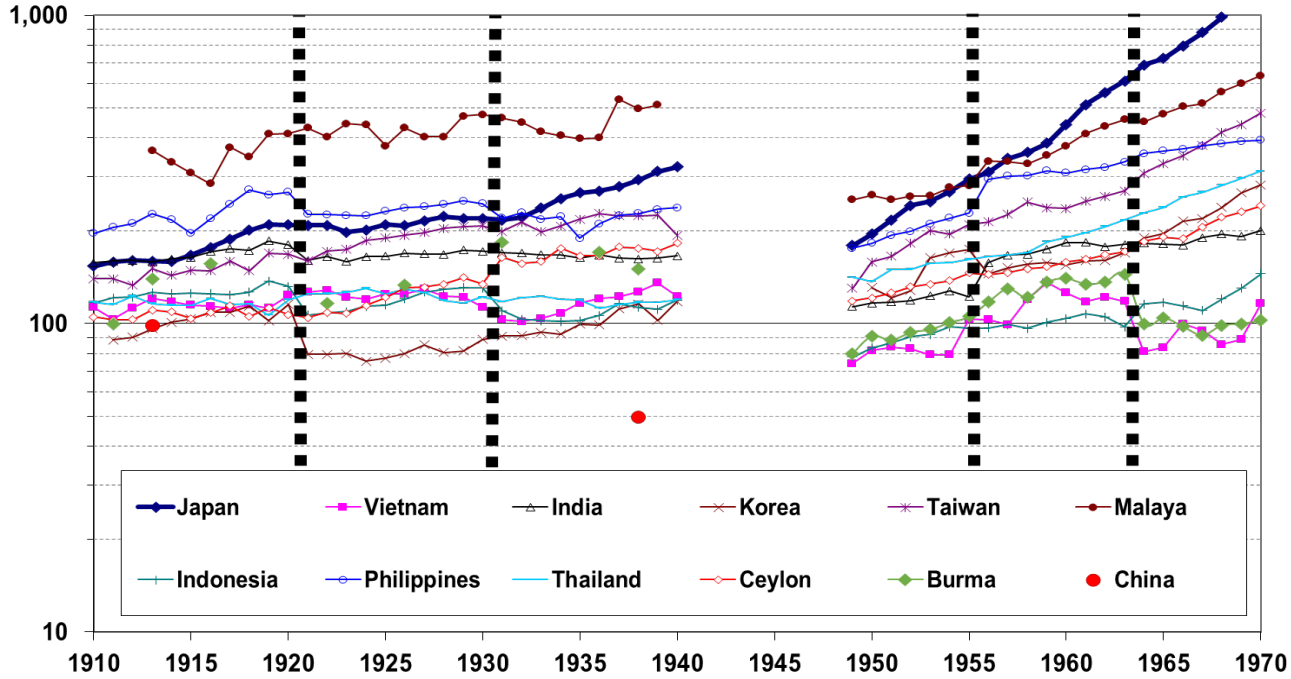
Sources: PPPs from Table 4, except 1922 Ceylon PPP which is an average of Ceylon's 1913 and 1938 PPPs, 1913-1958 Vietnam PPP which is an average of Cochinchina and Tonkin, and 1969 Vietnam PPP is an average of South Vietnam's PPP and North Vietnam's implicit PPP after extrapolating 1958; GDP in current prices: Burma 1913 (is 1911), 1922 (is 1921) and 1938 Hlaing (1964), 1947-1969 *National Income of Burma* and *Burma Quarterly Bulletin of Statistics*; Ceylon 1920-1938 Salgado (2011), 1950-1969 Savundranayagam (1982/83); China 1913 is 1912 GDP Ma and De Jong (2015: 19), China 1938 is 1935 GDP Minami *et al.* (2014); India 1910-1947 Sivasubramonian (2000), 1948-1969 CSO (1964) and *National Accounts Statistics (India)*; Indonesia 1921-1969 Van der Eng (2001); Japan JSA (1987); Korea and South Korea Kim *et al.* (2012); Malaya 1913-1939 Nazrin (2001), 1947-1969 Rao (1976); Taiwan Mizoguchi *et al.* (2008); Philippines 1910-1940 Hooley (2005) with 1985 prices converted to current prices by dividing GDP with value added in agriculture in current prices from Eto (2010: 76) with Hooley's % share of agriculture in GDP, 1948-1969 NEDA (1978); Thailand 1938 and 1949-1969 Trescott (1968/69) and *National Income of Thailand*; Vietnam 1910-1970 Bassino (2000b).

The benchmark estimates in Table 6 allow us to construct GDP per capita series in PPP-converted yen that may be more consistent over time than the retropolation of a single benchmark year. For that purpose, the benchmark estimates were retropolated and extrapolated for each country, and the resulting series were converted into indices relative to Japan (=100). For 1913-1920 the index for each country is an average of the indices of GDP per capita in 1913 and 1922 yen (except for Ceylon, which is in 1922 yen only, and Thailand, which is in 1938 yen only). For 1921-1930 the index is derived from GDP per capita in 1922 yen (except for Thailand, which is in 1938 yen only). For 1931-1940 the index is derived as an average of indices of GDP per capita in 1922 and 1938 yen (except for Thailand, which is in 1938 yen only). For 1949-1955 the index is derived from the average of the indices of GDP per capita in 1952 and 1958 yen; for 1956-1963 the index is derived from the series in 1958 yen; for 1964-70 the index is the average of the indices of GDP per capita in 1958 and 1969 yen. The choice of these sub-periods is somewhat arbitrary, as there is no reason to assume that the price structure remained unchanged across all countries and throughout each of the sub-periods mentioned.

These indices are used to calculate GDP per capita in constant PPP yen. The indices of per capita GDP of Japan and other countries were expressed as a proportion of GDP per capita in Japan 1910-1970 at 1934-36 yen. Figure 1 presents the resulting time series of GDP per capita of Asian countries during 1910-1970, while Figure 2 presents the same data relative to Japan. As for 1913 in Table 6, before World War I per capita GDP in Japan was lower than in Malaya and broadly comparable to Burma, the Philippines, Taiwan and Vietnam, while China, Ceylon, Indonesia, Thailand and Korea were at broadly comparable lower levels of GDP per capita. GDP per capita in Malaya was most likely well-ahead of other countries was that its relatively small economy benefited from the boom in rubber production and prices before and during World War I.

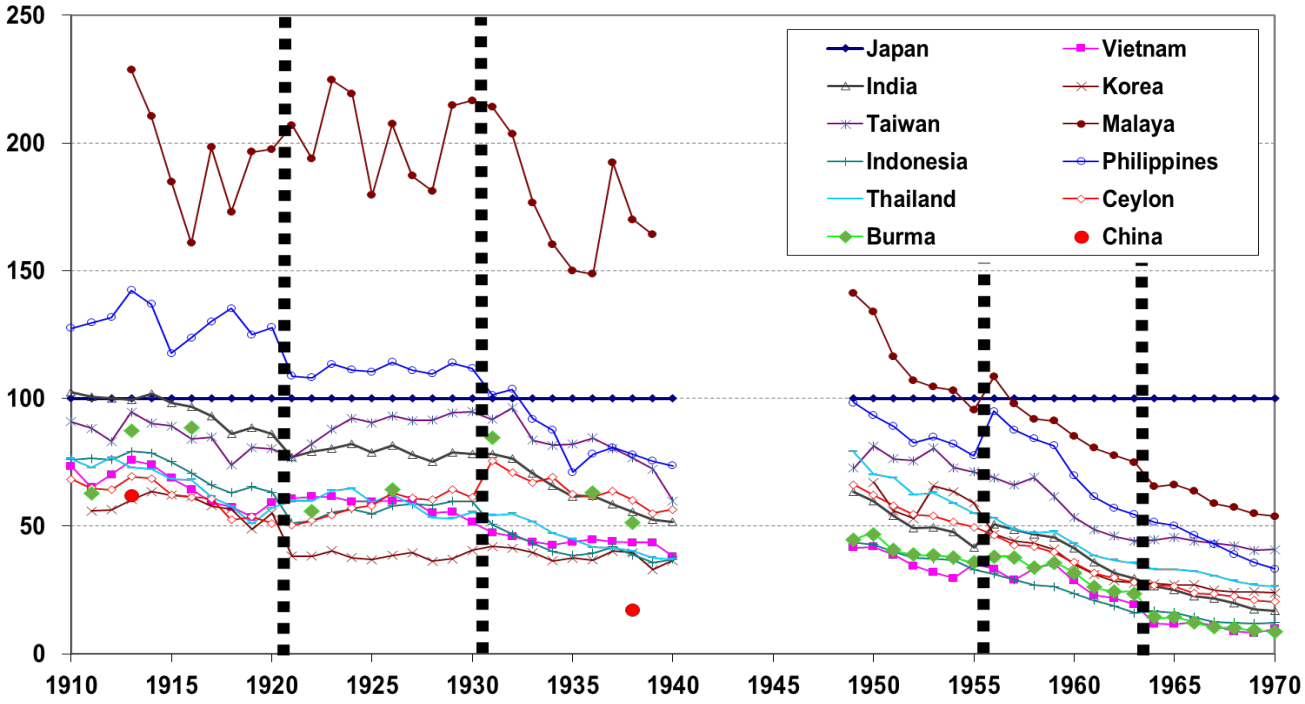
Figures 1 and 2 indicate that Japan's GDP per capita started to pull ahead of that of the other Asian countries during World War I and during the 1920s. A significant difference between Japan and the other countries is that it increased its exports of manufactures, particularly of textiles, to other East Asian countries, while other countries remained successful exporters of primary commodities. However, international commodity prices fluctuated significantly in the 1920s and 1930s as a consequence of – successively – overproduction, production restriction schemes, and increasing trade barriers.

Figure 1: Per Capita GDP in Selected Asian Countries, 1910-1970 (1934-36 Japanese yen)



Notes: Logarithmic Y axis. The dashed vertical bars indicate breaks caused by changes in the reference years (see main text).
Sources: As for Table 6, except constant price series Indonesia 1910-1970 Van der Eng (2010); Thailand 1910-1950 updated annual estimates based on Manarungsan (1989); Ceylon 1910-1950 Maddison and Van der Eng (2014); Philippines 1910-1970 Hooley (2005).

Figure 2: Per Capita GDP in Selected Asian Countries, 1910-1970 (Japan = 100)



Note: The dashed vertical bars indicate breaks caused by changes in the reference years (see main text).
Sources: See Table 6, GDP per capita Japan from Ohkawa *et al.* (1974), extrapolated with GDP in constant prices from *Annual Report on the National Accounts of Japan*.

For instance, Malaya's economy experienced the boom and bust consequences of fluctuating rubber prices (Huff 2002). In the same way, Indonesia's economy was affected by fluctuating prices of rubber, sugar and oil, as well as other commodities (Van der Eng 2002, 2016). Ceylon's economy was highly exposed to fluctuations in rubber and tea prices; the Philippines to price fluctuations of abaca, copra and sugar; Burma, Thailand, South Vietnam and Korea to rice prices; Taiwan to rice and sugar prices. Unlike Japan, changing international commodity prices caused fluctuations in the terms of trade of these countries throughout the 1920s and 1930s, which limited opportunities for investment in manufacturing industry for export beyond commodity processing. In addition, between 1913 and 1938, the barter terms of trade is likely to have decreased in these countries, compared to Japan. For example, taking 1913 as 100, the barter terms of trade of Japan decreased to 91 in 1938, but the unweighted average for commodity exporters Burma, Ceylon, Indonesia, the Philippines and Thailand decreased to 78 (calculated from the database underlying Blattman *et al.* 2007).

In the 1950s, the Japanese economy recovered faster from the setback of World War II than other Asian countries. There were a few key developments that set Japan's case apart from that of other Asian countries. Generous American support in various forms, including the US armed forces using Japan as a supply basis during the Korea war, assisted Japan's economic recovery. More important was perhaps Japan's ability to tap into the booming world trade with low-cost manufactures, unlike other Asian countries. The latter generally resumed exports of primary commodities and continued to endure the vagaries of international commodity prices in the form of fluctuations in their barter terms of trade. Their commitments of scarce resources to engineer structural change took the form of encouraging the establishment and growth of new import-substituting manufacturing industries. A further significant factor was that population growth remained low in Japan at less than 1%, while it accelerated in most other Asian countries to over 2% per year, thus limiting the growth of per capita GDP there. A host of other factors specific to each country (for Southeast Asia see *e.g.* Myint 1967, 1971) help to understand the growing dichotomy in terms of GDP per capita with Japan in the 1950s and particularly the 1960s, when the GDP per capita gap between Japan and the rest opened up at a rate faster than before, as Figures 1 and 2 show.

5. Comparison of single and multiple benchmark approaches

The last step in this paper is to compare estimates of GDP per capita on the basis of its historical PPP estimates, with those from retropolations of the 1990 benchmark year on the basis of constant price series. The results in Table 7 reveal significant discrepancies between panel A and the panels B and C for several countries, but not al. In broad terms, the historical PPP estimates in panel B yield higher levels of GDP per capita relative to Japan. This is partly a result of this paper's use of re-estimated GDP in current prices in the cases of Malaya, Korea, Taiwan and Vietnam. As mentioned above, in the cases of Burma, Ceylon, the Philippines and Thailand, the estimates are based on the possibly underestimated levels of GDP per capita that were made in the 1940s-1960s, without application of the retrospective benefits of accumulated

national accounting experiences. Nevertheless, the deviations are more likely to be the result of the deviations of the historical PPPs from the 1990 PPPs that underlie Panel A.

Table 7: Comparison of GDP per Capita according to New Maddison Project Database and Direct Estimates, 1913-1969 (1990 international GK$)

	1913	1922	1938	1952	1958	1969
A. New Maddison Project Database						
Japan	1,387	1,831	2,449	2,336	3,289	8,874
Burma	685	-	740	449	488	626
Sri Lanka	1,234	1,086	1,225	1,313	1,301	1,461
China	552	-	562	538	690	713
India	673	701	668	629	716	845
Indonesia	869	905	1,057	901	947	1,105
South Korea	485	594	904	835	1,234	2,040
Malaysia	900	1,152	1,361	1,471	1,413	2,005
Philippines	988	1,357	1,440	1,186	1,448	1,750
Taiwan	807	1,084	1,440	1,028	1,290	2,334
Thailand	841	-	826	869	914	1,636
Vietnam	727	-	-	694	785	739
B. This study's direct estimates, linked to GDP per capita of Japan in panel A						
Burma	1,212	1,024	1,500	790	1,113	510
Ceylon	-	954	1,791	1,295	1,381	1,927
China	860	-	416	-	-	-
India	1,642	1,449	1,365	788	1,537	1,565
Indonesia	1,302	953	859	885	885	1,198
Korea - South Korea	1,103	699	980	1,398	1,429	2,258
Malaya - West Malaysia	3,319	3,549	4,049	2,190	3,025	4,441
Philippines	2,335	1,981	1,699	1,461	2,769	3,345
Taiwan	1,314	1,506	1,824	1,669	2,271	3,714
Siam - Thailand	-	-	985	1,391	1,557	2,453
Vietnam	1,049	1,126	1,030	803	1,099	426
C. This study's extrapolated direct estimates, linked to GDP per capita of Japan in panel A						
Burma	1,212	1,024	1,259	906	1,113	810
Ceylon	963	954	1,474	1,274	1,381	1,867
India	1,380	1,449	1,360	1,149	1,537	1,554
Indonesia	1,099	953	947	878	885	1,057
Korea - South Korea	836	699	971	1,238	1,429	2,151
Malaya - West Malaysia	3,170	3,549	4,164	2,501	3,025	4,864
Philippines	1,974	1,981	1,910	1,929	2,769	3,163
Taiwan	1,314	1,506	1,876	1,766	2,271	3,587
Siam - Thailand	1,011	1,099	985	1,454	1,557	2,399
Vietnam	1,049	1,126	1,065	803	1,099	720

Note: - = not available.
Sources: Panel A New Maddison Project Database, http://www.ggdc.net/maddison/maddison-project/data.htm; Panel B, see Table 6; Panel C, see Figure 1 and main text.

These deviations of historical PPPs from the 1990 PPPs are not necessarily the result of the 'basic' nature of the historical PPPs, as Table 5 showed. Further research to compile more elaborate historical expenditure or output-based PPPs is possible, although this paper suggests that the unavailability of comparable relevant price data may frustrate this work for most countries. Depending on the outcomes of future research, it is therefore more likely that the dissimilarities in GDP per capita levels between panel A and the panels B and C in Table 7 are consequences of differences between the domestic price structures in each of the benchmark years used in this paper and the international price structure of 1990.

6. Conclusion

This paper estimated PPPs, which it used to convert GDP per capita in current prices into a common currency, the Japanese yen, in order to facilitate a comparison of the growth and development experiences of countries in Southeast and East Asia with Japan during 1910-1970. These estimates established that GDP per capita, and possibly living standards more generally, were in several Asian countries at levels comparable to Japan around 1913. The estimates therefore substantiated that a significant 'little divergence' between Japan and other Asian countries took place since 1913.

It is not impossible that a 'little divergence' between Japan and China and India also took place since the late-18th century. But in that case, economic development in India, and to a lesser extent China, must have allowed GDP per capita to catch up again with Japan between 1800 and 1913. Alternatively, Japan experienced an economic setback that reversed the little divergence in Asia in the course of the long 19th century until 1913. Reconstructions of national income for these three countries during this period suggest that neither happened (Bassino *et al*. 2015; Ma and De Jong 2014; Broadberry and Gupta 2010; Broadberry *et al.* 2015). Secondly, there is the possibility that GDP per capita levels in China and India for the 18th century have been underestimated relative to Japan, possibly as a consequence of GDP per capita retropolation of the single 1990 PPPs benchmark year. If so, further research needs to establish whether the respective domestic price structures of China and India in the late 18th century deviated from those in Japan, and possibly from the 1990 international price structure.

Either way, this paper demonstrates at least two things. Firstly, the choice of a benchmark year for PPPs is crucial, certainly if there are reasons to assume that national domestic price structures deviate from those internationally or in the comparator country. Secondly, the paper explored the significant degrees to which trade, monetary and industry policies are likely to have exacerbated discrepancies between foreign exchange rates and the relative purchasing powers of the currencies of the Asian countries in the study, and therefore their respective domestic price structures. The exact reasons for a discrepancy between exchange rates and PPPs varied from year to year, and country to country and are not easy to generalise, which demonstrates that further debate on the 'Great Divergence' and its consequences should take greater account of the heterogeneity in long-term economic development across Asia in terms of processes and outcomes.

During the 1920s, most countries in Asia, except Japan, depended significantly on exports of primary commodities. While Japan's growth experience was essentially generated by the fine-tuning of commercial institutions, the provision of conducive public infrastructure and the development of entrepreneurial gest, the growth experience of Southeast and possibly other Asian countries seems to have been largely characterised by market integration in national economies and by the mobilisation of hitherto underutilised resources (labour and land) for export production. Particularly in the land-abundant parts of the region, the opening up of land for agricultural production led to advances in GDP per capita. Malaya is an exponent of this process. However, such advances in per capita GDP were eroded by adverse movements in the terms of trade and later by sustained high population growth, enhanced by significant inward migration, particularly in the case of Malaya.

Commodity price changes may have been particularly debilitating when their volatility increased after 1913, first as a consequence of disruptions caused by World War I, then the post-war boom years that caused oversupply and in turn contributed to the global crisis of the 1930s, followed by the first episodes of import-substituting industrialisation as governments sought to diversify economic activity away from dependence of income and employment on primary production towards manufacturing. Despite the disruption of World War I, this remained the tenet of development policy in most countries. Hence, while Japan rapidly developed its export-oriented manufacturing industries since World War I, other Asian countries increasingly had inward-looking economies, particularly since the 1930s. This lasted until the 1970s, when some Asian countries started to follow Japan in embarking on a process of export-oriented industrialisation and economic growth. For some countries this was a staggered process that took well into the 1990s, when the World Bank (1993) labelled this development the 'East Asian economic miracle'. Whether a miracle or not, it allowed Asian countries to catch up with Japan and reverse Asia's 'little divergence' in the 20th century.

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Appendix: Data sources for the calculation of PPPs

Japan: 1913, 1922, 1938 Ohkawa, Shinohara and Umemura (1967) and JSA (1987); 1952, 1958 and 1969 *Japan Statistical Yearbook*.

Burma: 1913, 1922, 1938 *Season and Crop Report of Burma*, 1913 and 1922 also Andrew (1933) 225; 1952 and 1958 *Burma Quarterly Bulletin of Statistics*; 1969 *Burma Statistical Yearbook.*

Ceylon: 1910 (proxy for 1913) and 1938 *The Ceylon Blue Book* and *Annual General Report for [year] on the Economic, Social and General Conditions on the Island*, Ceylon; 1952, 1958 and 1969 *Statistical Abstract of Ceylon* and *ILO Yearbook of Labour Statistics*.

India: 1913, 1922 and 1938 *Prices and Wages in India* and *Statistical Abstract for British India*; 1952, 1958 and 1969 *Statistical Abstract, India* and *ILO Yearbook of Labour Statistics*.

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Thailand: 1922, 1938, 1952 *Statistical Yearbook of Siam / Thailand*; 1952, 1958 and 1969 *Thailand Bulletin of Statistics* and *ILO Yearbook of Labour Statistics*.

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Vietnam: 1913, 1922, 1938 and 1952 Giacometti (2000: 189), *Annuaire Statistique de l'Indochine* and *Bulletin Économique de l'Indochine*, *Annuaire Statistique du Vietnam*; North Vietnam 1958 Fall (1960: 253), South Vietnam 1958 and 1969 *Niên Giám Thống-kê Việt Nam* and *Bulletin Économique de la Banque Nationale du Vietnam*.

Where available, national average retail prices were used, in a few instances retail prices were approximated with farm gate prices or wholesale prices. Table A.1 shows the numbers of

product and price matches that could be established for each country and year. Weights for calculation of the PPPs were for Japan calculated from Shinohara (1967) and JSA (1987, vol.5: 118-119), and for other countries from agricultural production and trade statistics of the individual countries and from FAO data for 1961 and 1969 (http://faostat3.fao.org) to approximate implicit consumption, and from various household expenditure surveys, some of which from *ILO Bulletin of Labour Statistics*.

Table A.1: Numbers of product/price matches for each country with Japan, 1913-1969.

	1913	1922	1938	1952	1958	1969
Burma	10	9	5	15	15	21
Ceylon	7	-	17	16	15	18
India	14	14	16	15	16	15
Indonesia	12	17	20	18	14	13
Korea - South Korea	13	16	15	18	22	16
Malaya - West Malaysia	10	12	12	13	16	13
Philippines	11	12	11	15	14	11
Siam - Thailand	6	9	9	19	20	15
Taiwan	12	14	20	15	15	18
Cochinchina - South Vietnam	11	9	7	13	18	18
Tonkin - North Vietnam	13	9	9	8	3	-

Table A.2: Data and calculations to estimate binary PPPs of Japan with Asian countries

A.2.1.1-6: Burma, 1913, 1922, 1938, 1952, 1958 and 1969
A.2.2.1-5: Ceylon, 1913, 1938, 1952, 1958 and 1969
A.2.3.1-6: India, 1913, 1922, 1938, 1952, 1958 and 1969
A.2.4.1-6: Indonesia, 1913, 1922, 1938, 1952, 1958 and 1969
A.2.5.1-6: Korea - South Korea, 1913, 1922, 1938, 1952, 1958 and 1969
A.2.6.1-6: Malaya - West Malaysia, 1913, 1922, 1938, 1952, 1958 and 1969
A.2.7.1-6: Philippines, 1913, 1922, 1938, 1952, 1958 and 1969
A.2.8.1-6: Siam - Thailand, 1913, 1922, 1938, 1952, 1958 and 1969
A.2.9.1-6: Taiwan, 1913, 1922, 1938, 1952, 1958 and 1969
A.2.10.1-6: Cochinchina - South Vietnam, 1913, 1922, 1938, 1952, 1958 and 1969
A.2.11.1-5: Tonkin - North Vietnam, 1913, 1922, 1938, 1952 and 1958

In red are estimates of per capita consumption or supply.

Appendix A.2.1.1: Binary PPP calculation Japan-Burma, 1913

	Consumer items	Unit	Price Japan Yen	Price Burma Rupee	Ratio	Consumption Japan Quantity	Consumption Burma Quantity	Consumption Japan Value Yen	Consumption Burma Value Rupee	Consumption Japan Value Rupee	Consumption Burma Value Yen
1	Rice	1 kg	0.19	0.14	1.4	130.2	137.0	25.10	18.85	17.91	26.41
2	Barley/maize	1 kg	0.14	0.10	1.4	38.6	20.0	5.32	2.01	3.88	2.76
3	White/soybeans	1 kg	0.11	0.10	1.1	0.8	2.0	0.09	0.19	0.08	0.22
4	Red beans	1 kg	0.12	0.05	2.2	2.0	2.0	0.24	0.11	0.11	0.24
5	Wheat flour	1 kg	0.13	0.09	1.3	0.9	5.0	0.12	0.47	0.09	0.63
6	Onions	1 kg	0.71	0.11	6.2	2.0	2.0	1.41	0.23	0.23	1.41
7	Sugar	1 kg	0.29	0.25	1.2	1.8	5.0	0.52	1.24	0.45	1.44
8	Vegetable oil	1 liter	0.43	0.54	0.8	0.4	1.0	0.18	0.54	0.23	0.43
9	Kerosene	1 liter	0.14	0.11	1.3	5.0	5.0	0.72	0.55	0.55	0.72
10	Charcoal	1 kg	0.04	0.04	1.0	21.2	20.0	0.83	0.75	0.80	0.79

Weighted cost of basket		
Burma in	Rupee	24.94
Burma in	yen	35.05
Japan in	yen	34.54
Japan in	Rupee	24.31

PPP1	100 yen =	71.14	Rupee
PPP2	100 yen =	70.38	Rupee
Average PPP	100 yen =	**70.76**	Rupee
Exchange rate	100 yen =	151.75	Rupee
Exchange rate	100 Rupee =	66	yen
Number of matches		10	

Appendix Table A.2.1.2: Binary PPP calculation Japan-Burma, 1922

	Consumer items	Unit	Price Japan Yen	Price Burma Rupee	Ratio	Consumption Japan Quantity	Consumption Burma Quantity	Consumption Japan Value Yen	Consumption Burma Value Rupee	Consumption Japan Value Rupee	Consumption Burma Value Yen
1	Rice	1 kg	0.32	0.21	1.5	130.7	138.8	41.70	28.64	26.98	44.26
2	Barley/maize	1 kg	0.20	0.12	1.7	28.8	20.0	5.73	2.33	3.36	3.98
3	White/soybeans	1 kg	0.28	0.11	2.7	1.1	5.0	0.30	0.53	0.11	1.40
4	Red beans	1 kg	0.18	0.06	3.1	2.0	5.0	0.36	0.29	0.12	0.90
5	Wheat flour	1 kg	0.17	0.13	1.4	0.8	5.0	0.14	0.63	0.10	0.86
6	Onions	1 kg	1.31	0.18	7.2	2.0	2.0	2.61	0.36	0.36	2.61
7	Sugar	1 kg	0.44	0.46	1.0	3.1	5.0	1.35	2.30	1.42	2.18
8	Vegetable oil	1 liter	0.72	0.77	0.9	0.7	1.0	0.50	0.77	0.53	0.72
9	Kerosene	1 liter	0.27	0.19	1.4	5.0	5.0	1.35	0.96	0.96	1.35

Weighted cost of basket		
Burma in	Rupee	36.80
Burma in	yen	58.26
Japan in	yen	54.05
Japan in	Rupee	33.94

PPP1	100 yen =	63.16	Rupee
PPP2	100 yen =	62.80	Rupee
Average PPP	100 yen =	**62.98**	Rupee
Exchange rate	100 yen =	165.50	Rupee
Exchange rate	100 Rupee =	60	yen
Number of matches		9	

Appendix Table A.2.1.3: Binary PPP calculation Japan-Burma, 1938

	Consumer items	Unit	Price Japan Yen	Price Burma Rupee	Ratio	Consumption Japan Quantity	Consumption Burma Quantity	Consumption Japan Value Yen	Consumption Burma Value Rupee	Consumption Japan Value Rupee	Consumption Burma Value Yen
1	Rice	1 kg	0.30	0.12	2.5	142.4	101.1	43.01	12.33	17.38	30.53
2	Barley/maize	1 kg	0.18	0.05	3.7	16.9	20.0	2.99	0.95	0.80	3.54
3	White/soybeans	1 kg	0.27	0.05	5.9	1.0	5.0	0.27	0.23	0.05	1.36
4	Red beans	1 kg	0.17	0.05	3.6	2.0	5.0	0.33	0.23	0.09	0.83
5	Sugar	1 kg	0.45	0.19	2.4	4.2	5.0	1.91	0.95	0.81	2.25

Weighted cost of basket		
Burma in	Rupee	14.70
Burma in	yen	38.51
Japan in	yen	48.52
Japan in	Rupee	19.13

PPP1	100 yen =	38.17	Rupee
PPP2	100 yen =	39.42	Rupee
Average PPP	100 yen =	**38.79**	Rupee
Exchange rate	100 yen =	77.74	Rupee
Exchange rate	100 Rupee =	129	yen
Number of matches		5	

Appendix Table A.2.1.4: Binary PPP calculation Japan-Burma, 1952

	Consumer items	Unit	Price Japan Yen	Price Burma Kyat	Ratio	Consumption Japan Quantity	Consumption Burma Quantity	Consumption Japan Value Yen	Consumption Burma Value Kyat	Consumption Japan Value Kyat	Consumption Burma Value Yen
1	Rice	1 kg	62.00	0.34	185.0	117.2	127.2	7,265	42.62	39.26	7,886
2	Potatoes	1 kg	23.92	0.48	50.2	22.7	1.0	544	0.48	10.84	24
3	Onions	1 kg	27.45	0.93	29.4	2.0	2.0	55	1.87	1.87	55
4	Sugar	1 kg	153.08	1.76	87.1	5.3	5.0	810	8.78	9.30	765
5	Pork	1 kg	391.33	2.53	154.9	3.9	1.0	1,514	2.53	9.77	391
6	Dried fish	1 kg	227.48	5.39	42.2	2.0	2.0	455	10.78	10.78	455
7	Eggs	10	141.27	1.98	71.2	6.1	1.0	859	1.98	12.07	141
8	Milk	1 liter	77.89	0.80	97.1	3.9	5.0	301	4.01	3.10	389
9	Salt	500 gr	10.71	0.28	37.9	4.0	4.0	43	1.13	1.13	43
10	Vegetable oil	1 kg	216.00	2.27	95.2	1.4	2.0	307	4.54	3.23	432
11	Fish/soy sauce	1 liter	81.00	1.43	56.8	15.0	2.0	1,215	2.85	21.39	162
12	Tea	500 gr	268.00	8.15	32.9	6.0	1.0	1,608	8.15	48.92	268
13	Soap	piece	35.59	1.58	22.5	3.0	3.0	107	4.74	4.74	107
14	Kerosene	1 liter	7.34	0.05	149.8	2.0	2.0	15	0.10	0.10	15
15	Firew ood	10 kg	25.73	0.21	121.6	2.0	2.0	51	0.42	0.42	51

Weighted cost of basket		
Burma in	Kyat	94.98
Burma in	yen	11,185
Japan in	yen	15,150
Japan in	Kyat	176.93

PPP1	100 yen =	0.85	Kyat
PPP2	100 yen =	1.17	Kyat
Average PPP	100 yen =	**1.00**	Kyat
Exchange rate	100 yen =	1.32	Kyat
Exchange rate	100 Kyat =	7,569	yen
Number of matches		15	

Appendix Table A.2.1.5: Binary PPP calculation Japan-Burma, 1958

	Consumer items	Unit	Price Japan Yen	Price Burma Kyat	Ratio	Consumption Japan Quantity	Consumption Burma Quantity	Consumption Japan Value Yen	Consumption Burma Value Kyat	Consumption Japan Value Kyat	Consumption Burma Value Yen
1	Rice	1 kg	101.70	0.35	294.6	125.3	101.7	12,741	35.09	43.24	10,339
2	Potatoes	1 kg	86.78	0.52	168.3	17.9	1.0	1,558	0.52	9.25	87
3	Onions	1 kg	20.71	0.57	36.3	6.0	3.0	124	1.71	3.43	62
4	Sugar	1 kg	138.85	1.56	88.8	4.5	5.0	623	7.82	7.02	694
5	Pork	1 kg	507.75	2.69	188.5	6.4	0.5	3,262	1.35	17.30	254
6	Dried fish	1 kg	266.66	6.48	41.1	2.0	2.0	533	12.96	12.96	533
7	Eggs,chicken	10	135.31	2.15	63.1	9.0	1.0	1,218	2.15	19.32	135
8	Milk	1 liter	78.11	0.89	88.0	9.0	8.0	701	7.10	7.97	625
9	Salt	500 gr	10.00	0.27	37.7	4.0	4.0	40	1.06	1.06	40
10	Vegetable oil	1 liter	194.72	4.15	46.9	2.1	5.0	405	20.77	8.64	974
11	Fish/soy sauce	1 liter	86.00	1.52	56.7	15.0	5.0	1,290	7.58	22.74	430
12	Tea	500 gr	303.00	4.83	62.7	2.0	1.0	606	4.83	9.66	303
13	Soap	piece	118.48	1.12	105.6	4.0	3.0	474	3.37	4.49	355
14	Charcoal	10 kg	374.67	2.56	146.4	5.0	5.0	1,873	12.80	12.80	1,873
15	Kerosene	1 liter	31.16	0.58	53.6	2.0	2.0	62	1.16	1.16	62

Weighted cost of basket		
Burma in	Kyat	120.27
Burma in	yen	16,767
Japan in	yen	25,511
Japan in	Kyat	181.07

PPP1	100 yen =	0.72	Kyat
PPP2	100 yen =	0.71	Kyat
Average PPP	100 yen =	**0.71**	Kyat
Exchange rate	100 yen =	1.33	Kyat
Exchange rate	100 Kyat =	7,544	yen
Number of matches		15	

Appendix Table A.2.1.6: Binary PPP calculation Japan-Burma, 1969

	Consumer items	Unit	Price Japan Yen	Price Burma Kyat	Ratio	Consumption Japan Quantity	Consumption Burma Quantity	Consumption Japan Value Yen	Consumption Burma Value Kyat	Consumption Japan Value Kyat	Consumption Burma Value Yen
1	Rice	1 kg	181.00	0.52	350.5	121.6	132.7	22,012	68.53	62.81	24,019
2	Potatoes	1 kg	221.25	0.86	258.1	12.0	1.3	2,655	1.11	10.29	288
3	Onions	1 kg	45.70	1.19	38.5	10.3	2.0	471	2.38	12.24	91
4	Bread	1 kg	107.00	30.18	3.5	1.0	1.0	107	30.18	30.18	107
5	Sugar	1 kg	130.00	2.93	44.4	7.6	5.2	982	15.22	22.12	676
6	Beef	1 kg	1,295.00	5.05	256.6	4.9	2.7	6,318	13.62	24.62	3,497
7	Pork	1 kg	844.50	4.75	177.9	4.9	1.1	4,120	5.22	23.15	929
8	Poultry	1 kg	1,406.25	5.77	243.5	4.9	0.9	6,861	5.20	28.17	1,266
9	Dried fish	1 kg	503.50	14.42	34.9	5.0	5.0	2,518	72.11	72.11	2,518
10	Eggs, chicken	10	132.00	3.04	43.4	25.1	1.0	3,316	3.04	76.42	132
11	Milk	1 liter	144.44	1.79	80.5	21.8	10.1	3,149	18.12	39.11	1,459
12	Wheat flour	1 kg	74.40	3.64	20.4	31.3	1.9	2,329	6.92	114.04	141
13	Salt	500 gr	16.13	0.96	16.8	4.0	4.0	65	3.85	3.85	65
14	Vegetable oil	1 kg.	60.32	7.63	7.9	5.5	5.3	335	40.44	42.33	320
15	Fish/soy sauce	1 liter	138.89	4.04	34.4	15.0	10.0	2,083	40.36	60.53	1,389
16	Tea	500 gr	465.00	8.52	54.6	2.0	0.4	911	3.41	16.71	186
17	Beer	1 liter	206.35	4.04	51.1	10.0	5.0	2,063	20.21	40.42	1,032
18	Cigarettes	20	40.00	1.76	22.7	10.0	10.0	400	17.60	17.60	400
19	Soap	piece	120.00	2.64	45.4	4.0	3.0	480	7.93	10.57	360
20	Charcoal	10 kg	638.67	3.85	165.8	2.0	2.0	1,277	7.70	7.70	1,277
21	Kerosene	1 liter	19.61	0.37	53.4	2.0	2.0	39	0.73	0.73	39

Weighted cost of basket		
Burma in	Kyat	383.88
Burma in	yen	40,189
Japan in	yen	62,492
Japan in	Kyat	715.70

PPP1	100 yen =	0.96	Kyat
PPP2	100 yen =	1.15	Kyat
Average PPP	100 yen =	**1.05**	Kyat
Exchange rate	100 yen =	1.34	Kyat
Exchange rate	100 Kyat =	7,451	yen
Number of matches		21	

Appendix Table A.2.2.1: Binary PPP calculation Japan-Ceylon, 1913 (1910 price data for Ceylon)

	Consumer items	Unit	Price Japan Yen	Price Ceylon Rupee	Ratio	Consumption Japan Quantity	Consumption Ceylon Quantity	Consumption Japan Value Yen	Consumption Ceylon Value Rupee	Consumption Japan Value Rupee	Consumption Ceylon Value Yen
1	Rice	1 kg	0.19	0.16	1.2	130.2	114.7	25.10	18.20	20.65	22.12
2	Pulses, beans/peas	1 kg	0.11	0.12	0.9	0.8	5.0	0.09	0.60	0.09	0.54
3	Sugar	1 kg	0.29	0.36	0.8	1.8	10.0	0.52	3.63	0.65	2.88
4	Wheat flour	1 kg	0.13	0.33	0.4	0.9	20.0	0.12	6.61	0.30	2.53
5	Bread	500 gr	0.12	0.50	0.2	1.8	2.0	0.23	0.99	0.91	0.25
6	Salt	500 gr	0.03	0.09	0.3	4.0	4.0	0.11	0.35	0.35	0.11
7	Tea	500 gr	0.27	0.99	0.3	4.3	2.0	1.14	1.98	4.23	0.53

Weighted cost of basket		
Ceylon in	rupee	32.37
Ceylon in	yen	28.97
Japan in	yen	27.29
Japan in	rupee	27.20

PPP1	100 yen =	111.74	rupee
PPP2	100 yen =	99.64	rupee
Average PPP	100 yen =	**105.51**	rupee
Exchange rate	100 yen =	151.75	rupee
Exchange rate	100 rupee =	65.90	yen
Number of matches		7	

Appendix Table A.2.2.2: Binary PPP calculation Japan-Ceylon, 1938

	Consumer items	Unit	Price Japan Yen	Price Ceylon Rupee	Ratio	Consumption Japan Quantity	Consumption Ceylon Quantity	Consumption Japan Value Yen	Consumption Ceylon Value Rupee	Consumption Japan Value Rupee	Consumption Ceylon Value Yen
1	Rice	1 kg	0.30	0.13	2.3	142.4	121.7	43.01	16.08	18.82	36.76
2	Potatoes	1 kg	0.55	0.15	3.6	3.6	5.0	2.00	0.77	0.56	2.75
3	Onions	1 kg	0.95	0.11	8.6	2.0	5.0	1.90	0.55	0.22	4.75
4	Sugar	1 kg	0.45	0.22	2.0	4.2	15.0	1.91	3.30	0.94	6.75
5	Beef	1 kg	4.44	0.49	9.1	1.0	1.4	4.27	0.69	0.47	6.25
6	Pork	1 kg	1.99	0.54	3.7	1.0	1.4	1.91	0.76	0.52	2.80
7	Eggs, chicken	10	0.62	0.43	1.4	3.6	1.0	2.21	0.43	1.53	0.62
8	Vegetable oil	1 kg	0.84	0.31	2.7	1.9	2.0	1.56	0.62	0.57	1.68
9	Milk	1 liter	0.44	0.28	1.6	2.0	10.0	0.88	2.85	0.56	4.44
10	Wheat flour	1 kg	0.22	0.29	0.8	0.7	20.0	0.15	5.73	0.20	4.38
11	Bread	500 gram	0.18	0.22	0.8	1.4	2.0	0.26	0.43	0.30	0.37
12	Salt	0.5 kg	0.06	0.06	1.0	4.0	4.0	0.23	0.23	0.23	0.23
13	Tea	500 gram	0.64	0.56	1.2	5.2	2.0	3.34	1.12	2.90	1.28
14	Cigarettes	package/20	0.18	0.56	0.3	10.0	10.0	1.80	5.60	5.60	1.80
15	Beer	1 liter	0.60	0.54	1.1	2.3	2.0	1.41	1.09	1.27	1.21
16	Kerosene	1 liter	0.21	0.25	0.8	5.0	5.0	1.03	1.23	1.23	1.03
17	Soap	piece	0.17	0.22	0.8	2.0	2.0	0.35	0.43	0.43	0.35

Weighted cost of basket		
Ceylon in	rupee	41.89
Ceylon in	yen	77.45
Japan in	yen	68.22
Japan in	rupee	36.35

PPP1	100 yen =	54.10	rupee
PPP2	100 yen =	53.29	rupee
Average PPP	100 yen =	**53.69**	rupee
Exchange rate	100 yen =	77.74	rupee
Exchange rate	100 rupee =	128.63	yen
Number of matches		17	

Appendix Table A.2.2.3: Binary PPP calculation Japan-Ceylon, 1952

	Consumer items	Unit	Price Japan Yen	Price Ceylon Rupee	Ratio	Consumption Japan Quantity	Consumption Ceylon Quantity	Consumption Japan Value Yen	Consumption Ceylon Value Rupee	Consumption Japan Value Rupee	Consumption Ceylon Value Yen
1	Rice	1 kg	62.00	0.96	64.7	117.2	101.0	7,265	96.80	112.27	6,264
2	Sweet potatoes	1 kg	24.58	0.26	93.0	8.0	5.0	197	1.32	2.11	123
3	Potatoes	1 kg	23.92	0.66	36.2	22.7	5.0	544	3.30	15.02	120
4	Onions	1 kg	27.45	0.93	29.7	2.0	2.0	55	1.85	1.85	55
5	Sugar	1 kg	153.08	1.48	103.4	5.3	15.0	810	22.20	7.83	2,296
6	Beef	1 kg	431.08	1.94	222.4	1.9	2.3	834	4.50	3.75	1,000
7	Pork	1 kg	391.33	8.33	47.0	1.9	0.1	757	0.83	16.11	39
8	Eggs	10	141.27	2.00	70.6	6.1	1.5	859	3.00	12.17	212
9	Dried fish	1 kg	227.48	2.51	90.6	1.0	1.0	227	2.51	2.51	227
10	Vegetable oil	1 kg	216.00	1.34	161.4	1.4	3.0	307	4.02	1.91	648
11	Milk	1 liter	77.89	1.23	63.3	3.9	17.5	301	21.49	4.76	1,360
12	Bread	500 gr	29.57	0.28	107.4	2.0	2.0	59	0.55	0.55	59
13	Salt	500 gr	21.41	0.14	149.6	4.0	4.0	86	0.57	0.57	86
14	Tea	500 gr	268.00	4.98	53.8	6.0	2.0	1,608	9.96	29.87	536
15	Kerosene	10 liter	7.34	0.28	26.5	2.0	1.0	15	0.28	0.55	7
16	Soap	piece	35.59	1.01	35.3	5.0	2.0	178	2.02	5.04	71

Weighted cost of basket		
Ceylon in	rupee	175.20
Ceylon in	yen	13,104
Japan in	yen	14,102
Japan in	rupee	216.88

PPP1	100 yen =	1.34	rupee
PPP2	100 yen =	1.54	rupee
Average PPP	100 yen =	**1.43**	rupee
Exchange rate	100 yen =	1.32	rupee
Exchange rate	100 rupee =	7,582	yen
Number of matches		16	

Appendix Table A.2.2.4: Binary PPP calculation Japan-Ceylon, 1958

	Consumer items	Unit	Price Japan Yen	Price Ceylon Rupee	Ratio	Consumption Japan Quantity	Consumption Ceylon Quantity	Consumption Japan Value Yen	Consumption Ceylon Value Rupee	Consumption Japan Value Rupee	Consumption Ceylon Value Yen
1	Rice	1 kg	62.00	0.99	62.6	125.3	106.7	7767.36	105.73	124.18	6613.48
2	Potatoes	1 kg	23.92	0.68	35.0	17.9	5.5	429.36	3.76	12.26	131.56
3	Onions	1 kg	27.45	0.55	49.9	6.0	8.5	164.72	4.68	3.30	233.35
4	Sugar	1 kg	86.78	1.21	71.6	4.5	17.5	389.61	21.20	5.44	1518.71
5	Beef	1 kg	685.60	2.05	334.7	3.2	2.7	2202.15	5.49	6.58	1838.46
6	Pork	1 kg	507.75	9.80	51.8	3.2	0.1	1630.88	0.98	31.48	50.77
7	Dried fish	1 kg	266.66	2.82	94.6	2.0	1.0	533.33	2.82	5.64	266.66
8	Vegetable oil	1 kg	194.72	1.52	127.8	2.1	3.0	405.12	4.57	3.17	584.17
9	Milk	1 liter	77.89	1.32	58.9	9.0	11.9	699.36	15.78	11.88	929.22
10	Wheat flour	1 kg	50.52	0.51	99.7	25.0	23.5	1263.03	11.91	12.67	1187.25
11	Bread	500 gr	35.33	0.28	128.3	2.0	2.0	70.67	0.55	0.55	70.67
12	Salt	500 gr	10.71	0.14	74.8	4.0	4.0	42.83	0.57	0.57	42.83
13	Tea	500 gr	268.00	2.65	101.0	2.0	2.0	536.00	5.31	5.31	536.00
14	Kerosene	1 liter	7.34	0.29	25.1	2.0	2.0	14.69	0.58	0.58	14.69
15	Soap	piece	35.59	0.55	64.7	2.0	2.0	71.18	1.10	1.10	71.18

Weighted cost of basket		
Ceylon in	rupee	185.03
Ceylon in	yen	14,089
Japan in	yen	16,220
Japan in	rupee	224.71

PPP1	100 yen =	1.31	rupee
PPP2	100 yen =	1.39	rupee
Average PPP	100 yen =	**1.35**	rupee
Exchange rate	100 yen =	1.32	rupee
Exchange rate	100 rupee =	7,560	yen
Number of matches		15	

Appendix Table A.2.2.5: Binary PPP calculation Japan-Ceylon, 1969

	Consumer items	Unit	Price Japan Yen	Price Ceylon Rupee	Ratio	Consumption Japan Quantity	Consumption Ceylon Quantity	Consumption Japan Value Yen	Consumption Ceylon Value Rupee	Consumption Japan Value Rupee	Consumption Ceylon Value Yen
1	Rice	1 kg	181.00	1.36	133.5	121.6	101.6	22,012	137.72	164.89	18,386
2	Sweet potatoes	1 kg	128.00	0.66	193.7	4.1	3.8	524	2.51	2.71	486
3	Potatoes	1 kg	221.25	1.85	119.6	5.5	1.6	1,217	2.96	10.18	354
4	Onions	1 kg	45.70	0.77	59.3	10.3	6.2	471	4.78	7.94	283
5	Bread	1 kg	107.00	0.77	138.8	2.0	2.0	214	1.54	1.54	214
6	Sugar	1 kg	130.00	1.59	82.0	7.6	25.2	982	39.96	11.98	3,276
7	Beef	1 kg	1,295.00	3.22	402.7	7.3	3.1	9,477	9.97	23.53	4,015
8	Pork	1 kg	844.50	15.13	55.8	7.3	0.1	6,180	1.51	110.74	84
9	Dried fish	1 kg	503.50	3.55	142.0	5.0	1.5	2,518	5.32	17.73	755
10	Milk	1 liter	144.44	1.31	110.5	21.8	13.8	3,149	18.04	28.51	1,992
11	Wheat flour	1 kg	74.40	0.73	102.4	31.3	48.9	2,329	35.54	22.75	3,638
12	Salt	500 gr	10.00	0.22	45.4	4.0	4.0	40	0.88	0.88	40
13	Vegetable oil	1 liter	60.32	1.86	32.4	5.5	3.8	335	7.07	10.33	229
14	Tea	500 gr	465.00	2.74	169.6	2.0	1.8	911	4.94	5.37	837
15	Beer	1 liter	206.35	0.54	379.7	10.0	5.0	2,063	2.72	5.43	1,032
16	Cigarettes	20	40.00	3.28	12.2	10.0	10.0	400	32.80	32.80	400
17	Soap	1 piece	120.00	0.88	136.4	4.0	3.0	480	2.64	3.52	360
18	Kerosene	1 liter	19.61	0.23	85.0	2.0	2.0	39	0.46	0.46	39

Weighted cost of basket		
Ceylon in in	Rupee	311.37
Ceylon in in	yen	36,421
Japan in	yen	53,342
Japan in	Rupee	461.30

PPP1	100 yen =	0.85	Rupee
PPP2	100 yen =	0.86	Rupee
Average PPP	100 yen =	**0.86**	Rupee
Exchange rate	100 yen =	1.66	Rupee
Exchange rate	100 Rupee =	6,021	yen
Number of matches		18	

Appendix A.2.3.1: Binary PPP calculation Japan-India, 1913

	Consumer items	Unit	Price Japan Yen	Price India Rupee	Ratio	Consumption Japan Quantity	Consumption India Quantity	Consumption Japan Value Yen	Consumption India Value Rupee	Consumption Japan Value Rupee	Consumption India Value Yen
1	Rice	1 kg	0.19	0.15	1.3	130.2	75.0	25.10	10.90	18.91	14.46
2	Maize/barley/millet	1 kg	0.14	0.07	1.9	38.6	45.0	5.32	3.29	2.82	6.21
3	Soybeans/pulses	1 kg	0.11	0.08	1.4	0.8	20.0	0.09	1.55	0.06	2.17
4	Potatoes	1 kg	0.27	0.12	2.2	7.6	2.0	2.02	0.24	0.92	0.53
5	Wheat flour	1 kg	0.13	0.13	1.0	0.9	20.0	0.12	2.52	0.12	2.53
6	Onions	1 kg	0.71	0.04	16.9	2.0	2.0	1.41	0.08	0.08	1.41
7	Beef/mutton	1 kg	1.56	0.45	3.5	1.1	2.0	1.74	0.90	0.50	3.13
8	Milk	1 liter	0.20	0.25	0.8	0.6	20.0	0.13	4.97	0.16	4.03
9	Sugar	1 kg	0.29	0.11	2.7	1.8	5.0	0.52	0.53	0.19	1.44
10	Tea	500 gr	0.27	0.48	0.6	4.3	1.0	1.14	0.48	2.05	0.27
11	Vegetable oil	1 liter	0.43	0.69	0.6	0.4	2.0	0.18	1.37	0.29	0.86
12	Salt	500 gr	0.03	0.03	1.0	4.0	4.0	0.11	0.11	0.11	0.11
13	Kerosene	1 liter	0.14	0.18	0.8	5.0	5.0	0.72	0.91	0.91	0.72
14	Firewood	10 kg	0.45	0.21	2.1	3.0	3.0	1.36	0.64	0.64	1.36

Weighted cost of basket		
India in	Rupee	28.50
India in	yen	39.24
Japan in	yen	39.96
Japan in	Rupee	27.77

PPP1	100 yen =	72.64	Rupee
PPP2	100 yen =	69.49	Rupee
Average PPP	100 yen =	**71.05**	Rupee
Exchange rate	100 yen =	151.75	Rupee
Exchange rate	100 Rupee =	66	yen
Number of matches		14	

Appendix Table A.2.3.2: Binary PPP calculation Japan-India, 1922

	Consumer items	Unit	Price Japan Yen	Price India Rupee	Ratio	Consumption Japan Quantity	Consumption India Quantity	Consumption Japan Value Yen	Consumption India Value Rupee	Consumption Japan Value Rupee	Consumption India Value Yen
1	Rice	1 kg	0.32	0.20	1.6	130.7	75.0	41.70	14.72	25.66	23.92
2	Maize/barley/millet	1 kg	0.20	0.11	1.8	28.8	45.0	5.73	4.92	3.15	8.96
3	Soybeans/pulses	1 kg	0.28	0.15	1.9	1.1	20.0	0.30	2.98	0.16	5.58
4	Potatoes	1 kg	0.72	0.20	3.6	8.0	2.0	5.76	0.40	1.60	1.44
5	Wheat flour	1 kg	0.17	0.22	0.8	0.8	20.0	0.14	4.42	0.18	3.43
6	Onions	1 kg	1.31	0.09	13.9	2.0	2.0	2.61	0.19	0.19	2.61
7	Beef/mutton	1 kg	3.42	1.03	3.3	1.5	2.0	5.30	2.06	1.60	6.84
8	Milk	1 liter	0.56	0.48	1.2	1.1	20.0	0.60	9.50	0.52	11.11
9	Sugar	1 kg	0.44	0.26	1.7	3.1	5.0	1.35	1.32	0.82	2.18
10	Tea	500 gr	0.82	0.72	1.1	4.2	1.0	3.47	0.72	3.05	0.82
11	Vegetable oil	1 liter	0.72	0.68	1.1	0.7	3.0	0.50	2.03	0.47	2.16
12	Salt	500 gr	0.04	0.09	0.5	4.0	4.0	0.17	0.35	0.35	0.17
13	Kerosene	1 liter	0.27	0.32	0.8	5.0	5.0	1.35	1.61	1.61	1.35
14	Firew ood	10 kg	1.32	0.35	3.8	2.7	3.0	3.58	1.04	0.94	3.95

Weighted cost of basket			
India in		Rupee	46.26
India in		yen	74.53
Japan in		yen	72.58
Japan in		Rupee	40.29
PPP1	100 yen =	62.07	Rupee
PPP2	100 yen =	55.51	Rupee
Average PPP	100 yen =	**58.70**	Rupee
Exchange rate	100 yen =	165.50	Rupee
Exchange rate	100 Rupee =	60	yen
Number of matches		14	

Appendix Table A.2.3.3: Binary PPP calculation Japan-India, 1938

	Consumer items	Unit	Price Japan Yen	Price India Rupee	Ratio	Consumption Japan Quantity	Consumption India Quantity	Consumption Japan Value Yen	Consumption India Value Rupee	Consumption Japan Value Rupee	Consumption India Value Yen
1	Rice	1 kg	0.30	0.11	2.8	142.4	75.0	43.01	8.18	15.53	22.66
2	Maize/barley/millet	1 kg	0.18	0.06	3.1	16.9	45.0	2.99	2.59	0.97	7.97
3	Soybeans/pulses	1 kg	0.27	0.08	3.5	1.0	20.0	0.27	1.56	0.08	5.43
4	Potatoes	1 kg	0.55	0.15	3.7	3.6	3.0	2.00	0.44	0.53	1.65
5	Wheat flour	1 kg	0.22	0.11	2.1	0.7	20.0	0.15	2.11	0.07	4.38
6	Onions	1 kg	0.95	0.08	11.7	2.0	2.0	1.90	0.16	0.16	1.90
7	Beef/mutton	1 kg	4.44	0.69	6.4	1.9	2.0	8.54	1.39	1.34	8.88
8	Milk	1 liter	0.44	0.29	1.5	2.0	20.0	0.88	5.90	0.58	8.89
9	Sugar	1 kg	0.45	0.12	3.8	4.2	5.0	1.91	0.59	0.50	2.25
10	Tea	500 gr	0.64	0.71	0.9	5.2	1.0	3.34	0.71	3.69	0.64
11	Vegetable oil	1 liter	0.84	0.36	2.3	1.9	3.0	1.56	1.07	0.66	2.52
12	Salt	500 gr	0.06	0.08	0.7	4.0	4.0	0.23	0.31	0.31	0.23
13	Soap	piece	0.17	0.22	0.8	2.0	2.0	0.35	0.44	0.44	0.35
14	Kerosene	1 liter	0.21	0.14	1.4	5.0	5.0	1.03	0.72	0.72	1.03
15	Charcoal	1 kg	0.12	0.02	7.2	24.2	20.0	2.82	0.32	0.39	2.33
16	Firew ood	10 kg	0.23	0.08	2.8	8.6	3.0	2.00	0.25	0.73	0.70

Weighted cost of basket			
India in		Rupee	26.75
India in		yen	71.79
Japan in		yen	72.99
Japan in		Rupee	26.72
PPP1	100 yen =	37.27	Rupee
PPP2	100 yen =	36.60	Rupee
Average PPP	100 yen =	**36.93**	Rupee
Exchange rate	100 yen =	77.74	Rupee
Exchange rate	100 Rupee =	129	yen
Number of matches		16	

Appendix Table A.2.3.4: Binary PPP calculation Japan-India, 1952

	Consumer items	Unit	Price Japan Yen	Price India Rupee	Ratio	Consumption Japan Quantity	Consumption India Quantity	Consumption Japan Value Yen	Consumption India Value Rupee	Consumption Japan Value Rupee	Consumption India Value Yen
1	Rice	1 kg	62.00	0.63	97.9	117.2	60.0	7,264.85	37.98	74.17	3,720.00
2	Maize/barley/millet	1 kg	47.32	0.55	86.8	58.5	45.0	2,766.47	24.53	31.87	2,129.40
3	Potatoes	1 kg	23.92	0.72	33.0	22.7	2.0	543.77	1.45	16.46	47.84
4	Wheat flour	1 kg	50.52	0.52	97.0	20.0	20.0	1,010.43	10.42	10.42	1,010.43
5	Onions	1 kg	27.45	0.26	106.1	2.0	2.0	54.91	0.52	0.52	54.91
6	Beef/mutton	1 kg	431.08	2.48	173.6	3.9	3.0	1,667.85	7.45	9.61	1,293.24
7	Milk	1 liter	77.89	0.97	80.7	3.9	30.0	301.35	28.96	3.73	2,336.67
8	Sugar	1 kg	153.08	0.94	163.3	5.3	10.0	810.18	9.38	4.96	1,530.80
9	Tea	500 gr	268.00	2.99	89.6	6.0	1.0	1,608.00	2.99	17.94	268.00
10	Vegetable oil	1 liter	216.00	1.35	160.1	1.4	4.0	307.48	5.40	1.92	864.00
11	Salt	500 gr	10.71	0.10	112.1	4.0	4.0	42.83	0.38	0.38	42.83
12	Soap	piece	35.59	0.38	94.9	2.0	2.0	71.18	0.75	0.75	71.18
13	Kerosene	1 liter	7.34	0.37	20.1	5.0	5.0	36.72	1.83	1.83	36.72
14	Coal	10 kg	109.80	1.41	77.6	2.0	2.0	219.60	2.83	2.83	219.60
15	Firew ood	10 kg	51.46	0.76	67.3	2.0	3.0	102.91	2.29	1.53	154.37

Weighted cost of basket			
India in	Rupee	137.15	
India in	yen	13,780	
Japan in	yen	16,809	
Japan in	Rupee	178.92	
PPP1	100 yen =	1.00	Rupee
PPP2	100 yen =	1.06	Rupee
Average PPP	100 yen =	**1.03**	Rupee
Exchange rate	100 yen =	1.32	Rupee
Exchange rate	100 Rupee =	7,572	yen
Number of matches		15	

Appendix Table A.2.3.5: Binary PPP calculation Japan-India, 1958

	Consumer items	Unit	Price Japan Yen	Price India Rupee	Ratio	Consumption Japan Quantity	Consumption India Quantity	Consumption Japan Value Yen	Consumption India Value Rupee	Consumption Japan Value Rupee	Consumption India Value Yen
1	Rice	1 kg	101.70	0.64	159.7	125.3	72.0	12,740.75	45.86	79.80	7,322.27
2	Maize/barley/millet	1 kg	60.00	0.59	101.2	43.0	45.0	2,579.10	26.69	25.49	2,700.00
3	Soybeans/pulses	1 kg	26.17	0.54	48.6	6.2	20.0	162.07	10.78	3.34	523.34
4	Potatoes	1 kg	23.14	0.64	36.2	17.9	3.5	415.38	2.24	11.49	80.99
5	Wheat flour	1 kg	53.84	0.47	115.8	25.0	25.0	1,346.00	11.63	11.63	1,346.00
6	Onions	1 kg	20.71	0.30	69.8	6.0	2.0	124.28	0.59	1.78	41.43
7	Beef/mutton	1 kg	685.60	2.48	276.2	6.4	3.5	4,404.29	8.69	15.94	2,399.60
8	Milk	1 liter	78.11	0.79	98.6	9.0	35.0	701.36	27.72	7.11	2,733.89
9	Sugar	1 kg	138.85	1.11	124.9	4.5	14.0	623.38	15.57	4.99	1,943.95
10	Tea	500 gr	303.00	3.22	94.1	2.0	1.0	606.00	3.22	6.44	303.00
11	Vegetable oil	1 liter	194.72	2.63	74.0	2.1	4.0	405.12	10.53	5.48	778.89
12	Salt	500 gr	10.00	0.08	119.0	4.0	4.0	40.00	0.34	0.34	40.00
13	Soap	piece	29.62	0.40	74.1	2.0	2.0	59.24	0.80	0.80	59.24
14	Kerosene	1 liter	31.16	0.39	79.9	5.0	5.0	155.81	1.95	1.95	155.81
15	Coal	10 kg	119.40	1.60	74.7	2.0	2.0	238.80	3.20	3.20	238.80
16	Firew ood	10 kg	70.14	0.71	99.5	2.0	3.0	140.28	2.12	1.41	210.42

Weighted cost of basket			
India in	Rupee	171.91	
India in	yen	20,878	
Japan in	yen	24,742	
Japan in	Rupee	181.18	
PPP1	100 yen =	0.82	Rupee
PPP2	100 yen =	0.73	Rupee
Average PPP	100 yen =	**0.78**	Rupee
Exchange rate	100 yen =	1.32	Rupee
Exchange rate	100 Rupee =	7,551	yen
Number of matches		16	

Appendix Table A.2.3.6: Binary PPP calculation Japan-India, 1969

	Consumer items	Unit	Price Japan Yen	Price India Rupee	Ratio	Consumption Japan Quantity	Consumption India Quantity	Consumption Japan Value Yen	Consumption India Value Rupee	Consumption Japan Value Rupee	Consumption India Value Yen
1	Rice	1 kg	181.00	1.24	145.5	121.6	75.0	22,012	93.30	151.29	13,575
2	Maize/barley/millet	1 kg	106.79	0.50	215.1	16.1	44.1	1,715	21.91	7.98	4,712
3	Soybeans/pulses	1 kg	128.00	1.69	75.8	5.5	16.2	704	27.38	9.29	2,075
4	Potatoes	1 kg	59.00	0.84	70.7	12.0	5.8	708	4.83	10.02	341
5	Wheat flour	1 kg	74.40	0.88	84.5	31.3	35.6	2,329	31.34	27.54	2,649
6	Onions	1 kg	45.70	0.70	65.3	10.4	2.8	473	1.98	7.25	129
7	Beef/mutton	1 kg	1,295.00	5.42	239.0	14.6	3.6	18,954	19.67	79.30	4,701
8	Milk	1 liter	144.44	1.37	105.4	21.8	34.5	3,149	47.22	29.87	4,979
9	Sugar	1 kg	130.00	1.81	71.7	7.6	12.9	982	23.31	13.71	1,671
10	Tea	500 gr	465.00	4.94	94.1	2.0	0.8	911	4.05	9.68	381
11	Vegetable oil	1 liter	211.11	4.56	46.3	5.5	4.0	1,171	18.44	25.32	853
12	Salt	500 gr	16.13	0.18	89.6	4.0	4.0	65	0.72	0.72	65
13	Soap	piece	30.00	0.50	60.0	2.0	2.0	60	1.00	1.00	60
14	Kerosene	1 liter	19.61	0.55	35.8	5.0	5.0	98	2.74	2.74	98
15	Coal	10 kg	183.50	3.06	59.9	2.0	2.0	367	6.12	6.12	367

Weighted cost of basket		
India in	Rupee	304.00
India in	yen	36,656
Japan in	yen	53,699
Japan in	Rupee	381.82

PPP1	100 yen =	0.83	Rupee
PPP2	100 yen =	0.71	Rupee
Average PPP	100 yen =	**0.77**	Rupee
Exchange rate	100 yen =	2.12	Rupee
Exchange rate	100 Rupee =	4,725	yen
Number of matches		15	

Appendix Table A.2.4.1: Binary PPP calculation Japan-Indonesia, 1913

	Consumer items	Unit	Price Japan Yen	Price Indonesia Guilder	Ratio	Consumption Japan Quantity	Consumption Indonesia Quantity	Consumption Japan Value Yen	Consumption Indonesia Value Guilder	Consumption Japan Value Guilder	Consumption Indonesia Value Yen
1	Rice	1 kg	0.19	0.13	1.5	130.2	94.8	25.10	12.36	16.97	18.28
2	Barley/maize	1 kg	0.14	0.04	3.6	38.6	34.8	5.32	1.34	1.49	4.81
3	Potatoes	1 kg	0.31	0.09	3.5	7.6	2.0	2.37	0.18	0.68	0.62
4	Sugar	1 kg	0.29	0.16	1.8	1.8	10.0	0.52	1.60	0.29	2.88
5	Beef	1 kg	1.56	0.70	2.2	1.1	2.0	1.74	1.39	0.78	3.11
6	Eggs, chicken	10	0.32	0.30	1.1	1.3	1.0	0.42	0.30	0.39	0.32
7	Milk	1 liter	0.20	0.21	0.9	0.6	1.0	0.13	0.21	0.14	0.20
8	Vegetable oil	1 kg	0.43	0.54	0.8	0.4	1.0	0.18	0.54	0.23	0.43
9	Salt	500 gr	0.03	0.08	0.3	4.0	4.0	0.11	0.33	0.33	0.11
10	Tea	500 gr	0.27	0.75	0.4	4.3	4.0	1.14	3.00	3.20	1.07
11	Beer	1 liter	0.35	0.62	0.6	0.5	1.0	0.18	0.62	0.31	0.35
12	Kerosene	1 liter	0.14	0.11	1.3	5.0	5.0	0.72	0.57	0.57	0.72

Weighted cost of basket		
Indonesia in	guilder	22.44
Indonesia in	yen	32.90
Japan in	yen	37.92
Japan in	guilder	25.38

PPP1	100 yen =	68.22	guilder
PPP2	100 yen =	66.92	guilder
Average PPP	100 yen =	**67.57**	guilder
Exchange rate	100 yen =	124.13	guilder
Exchange rate	100 guilder =	80.56	guilder
Number of matches		12	

Appendix Table A.2.4.2: Binary PPP calculation Japan-Indonesia, 1922

	Consumer items	Unit	Price Japan Yen	Price Indonesia Guilder	Ratio	Consumption Japan Quantity	Consumption Indonesia Quantity	Consumption Japan Value Yen	Consumption Indonesia Value Guilder	Consumption Japan Value Guilder	Consumption Indonesia Value Yen
1	Rice	1 kg	0.32	0.22	1.4	130.7	89.3	41.70	19.67	28.79	28.49
2	Barley/maize	1 kg	0.20	0.09	2.3	28.8	36.0	5.73	3.16	2.53	7.16
3	Sweet potatoes	1 kg	0.09	0.03	3.3	47.1	23.4	4.07	0.61	1.23	2.02
4	Potatoes	1 kg	0.72	0.22	3.3	8.0	2.0	5.76	0.44	1.76	1.44
5	Soybeans	1 kg	0.28	0.20	1.4	1.1	5.0	0.30	1.02	0.22	1.40
6	Sugar	1 kg	0.44	0.40	1.1	3.1	10.0	1.35	4.00	1.24	4.37
7	Beef	1 kg	3.42	2.00	1.7	0.8	2.7	2.65	5.32	1.55	9.10
8	Pork	1 kg	2.44	3.33	0.7	0.8	0.1	1.89	0.33	2.58	0.24
9	Eggs, chicken	10	0.53	0.81	0.7	2.7	1.0	1.41	0.81	2.17	0.53
10	Milk	1 liter	0.56	0.50	1.1	1.1	1.0	0.60	0.50	0.54	0.56
11	Bread	500 gr	0.17	0.22	0.8	2.0	1.0	0.33	0.22	0.44	0.17
12	Wheat flour	1 kg	0.17	0.23	0.8	0.8	1.0	0.14	0.23	0.18	0.17
13	Vegetable oil	1 kg	0.72	0.87	0.8	0.7	1.0	0.50	0.87	0.60	0.72
14	Beer	1 liter	0.63	1.18	0.5	1.7	2.0	1.07	2.37	1.99	1.27
15	Salt	500 gr	0.04	0.10	0.4	4.0	4.0	0.17	0.40	0.40	0.17
16	Tea	500 gr	0.82	1.01	0.8	4.2	4.0	3.47	4.04	4.29	3.27
17	Kerosene	1 liter	0.14	0.11	1.3	5.0	5.0	0.72	0.57	0.57	0.72

Weighted cost of basket		
Indonesia in	guilder	44.57
Indonesia in	yen	61.80
Japan in	yen	71.88
Japan in	guilder	51.09

PPP1	100 yen =	72.12	guilder
PPP2	100 yen =	71.08	guilder
Average PPP	100 yen =	**71.59**	guilder
Exchange rate	100 yen =	129.75	guilder
Exchange rate	100 guilder =	77.07	yen
Number of matches		17	

Appendix Table A.2.4.3: Binary PPP calculation Japan-Indonesia, 1938

	Consumer items	Unit	Price Japan Yen	Price Indonesia Guilder	Ratio	Consumption Japan Quantity	Consumption Indonesia Quantity	Consumption Japan Value Yen	Consumption Indonesia Value Guilder	Consumption Japan Value Guilder	Consumption Indonesia Value Yen
1	Rice	1 kg	0.30	0.08	3.7	142.4	82.2	43.01	6.68	11.57	24.84
2	Barley/maize	1 kg	0.18	0.04	4.8	16.9	35.5	2.99	1.31	0.62	6.29
3	Sweet potatoes	1 kg	0.03	0.01	2.4	27.0	20.9	0.71	0.23	0.30	0.55
4	Potatoes	1 kg	0.55	0.10	5.5	3.6	2.0	2.00	0.20	0.36	1.10
5	Soybeans	1 kg	0.11	0.07	1.5	1.0	5.4	0.11	0.37	0.07	0.57
6	Onions	1 kg	0.95	0.12	7.9	2.0	2.0	1.90	0.24	0.24	1.90
7	Wheat flour	1 kg	0.22	0.15	1.5	0.7	1.0	0.15	0.15	0.11	0.22
8	Sugar	1 kg	0.45	0.14	3.2	4.2	10.0	1.91	1.40	0.59	4.50
9	Beef	1 kg	4.44	0.62	7.2	1.0	1.6	4.27	0.97	0.60	6.95
10	Pork	1 kg	1.99	1.60	1.2	1.0	0.0	1.91	0.00	1.54	0.00
11	Eggs, chicken	10	0.50	0.29	1.7	3.6	1.0	1.76	0.29	1.03	0.50
12	Vegetable oil	1 kg	0.84	0.19	4.5	1.9	1.0	1.56	0.19	0.35	0.84
13	Milk	1 liter	0.44	0.25	1.8	2.0	2.0	0.88	0.50	0.49	0.89
14	Bread	500 gr	0.18	0.16	1.2	1.0	2.0	0.18	0.31	0.16	0.37
15	Salt	500 gr	0.06	0.08	0.7	4.0	4.0	0.23	0.33	0.33	0.23
16	Tea	500 gr	0.64	0.62	1.0	5.2	4.0	3.34	2.46	3.20	2.57
17	Cigarettes	package/20	0.18	0.08	2.3	10.0	10.0	1.80	0.80	0.80	1.80
18	Beer	1 liter	0.60	0.77	0.8	2.3	2.0	1.41	1.54	1.80	1.21
19	Soap	piece	0.69	0.12	5.8	2.0	2.0	1.38	0.24	0.24	1.38
20	Kerosene	1 liter	0.21	0.11	1.8	5.0	5.0	1.03	0.57	0.57	1.03

Weighted cost of basket		
Indonesia in	guilder	18.79
Indonesia in	yen	57.72
Japan in	yen	72.55
Japan in	guilder	24.98

PPP1	100 yen =	32.56	guilder
PPP2	100 yen =	34.43	guilder
Average PPP	100 yen =	**33.48**	guilder
Exchange rate	100 yen =	51.19	guilder
Exchange rate	100 guilder =	195.36	yen
Number of matches		20	

Appendix Table A.2.4.4: Binary PPP calculation Japan-Indonesia, 1952

	Consumer items	Unit	Price Japan Yen	Price Indonesia Rupiah	Ratio	Consumption Japan Quantity	Consumption Indonesia Quantity	Consumption Japan Value Yen	Consumption Indonesia Value Rupiah	Consumption Japan Value Rupiah	Consumption Indonesia Value Yen
1	Rice	1 kg	62.00	2.38	26.1	117.2	80.4	7,265	191.40	278.88	4,986
2	Barley/maize	1 kg	47.32	1.42	33.3	58.5	18.3	2,766	25.96	83.02	865
3	Sweet potatoes	1 kg	7.44	0.49	15.2	8.0	20.6	60	10.08	3.92	153
4	Potatoes	1 kg	23.92	2.68	8.9	22.7	2.0	544	5.36	60.92	48
5	Soybeans	1 kg	40.28	2.35	17.1	6.5	3.2	261	7.60	15.24	130
6	Onions	1 kg	27.45	3.71	7.4	2.0	2.0	55	7.42	7.42	55
7	Wheat flour	1 kg	50.52	3.18	15.9	20.0	2.5	1,010	7.86	63.50	125
8	Sugar	1 kg	153.08	3.21	47.7	5.3	7.5	810	24.18	16.98	1,154
9	Beef	1 kg	431.08	8.45	51.0	3.9	2.2	1,668	18.37	32.69	937
10	Dried fish	1 kg	227.48	7.26	31.3	2.0	2.0	455	14.52	14.52	455
11	Eggs, chicken	10	141.27	4.40	32.1	6.1	1.0	859	4.40	26.77	141
12	Milk	1 liter	77.89	2.68	29.1	3.9	1.0	301	2.68	10.37	78
13	Salt	0.5 kg	10.71	0.63	17.0	4.0	4.0	43	2.52	2.52	43
14	Tea	500 gr	268.00	5.15	52.0	6.0	1.0	1,608	5.15	30.90	268
15	Cigarettes	20	15.00	2.17	6.9	1.0	1.0	15	2.17	2.17	15
16	Vegetable oil	1 liter	211.11	3.48	60.7	1.4	2.0	301	6.95	4.95	422
17	Soap	400 gr	142.36	1.80	79.1	2.0	2.0	285	3.60	3.60	285
18	Kerosine	20 liter	146.88	11.55	12.7	2.0	2.0	294	23.10	23.10	294

Weighted cost of basket		
Indonesia in	rupiah	363.34
Indonesia in	yen	10,454
Japan in	yen	18,600
Japan in	rupiah	681.47

PPP1	100 yen =	3.48	rupiah
PPP2	100 yen =	3.66	rupiah
Average PPP	100 yen =	**3.57**	rupiah
Exchange rate	100 yen =	3.16	rupiah
Exchange rate	100 rupiah =	31.67	yen
Number of matches		18	

Appendix Table A.2.4.5: Binary PPP calculation Japan-Indonesia, 1958

	Consumer items	Unit	Price Japan Yen	Price Indonesia Rupiah	Ratio	Consumption Japan Quantity	Consumption Indonesia Quantity	Consumption Japan Value Yen	Consumption Indonesia Value Rupiah	Consumption Japan Value Rupiah	Consumption Indonesia Value Yen
1	Rice	1 kg	101.70	7.42	13.7	125.3	82.6	12,741	612.43	929.11	8,398
2	Barley/maize	1 kg	60.00	2.60	23.1	43.0	25.2	2,579	65.59	111.76	1,514
3	Sweet potatoes	1 kg	7.92	0.79	10.0	8.7	27.1	69	21.43	6.87	215
4	Potatoes	1 kg	231.41	4.98	46.5	17.9	2.0	4,154	9.96	89.39	463
5	Soybeans	1 kg	41.33	5.06	8.2	6.2	4.0	256	20.30	31.34	166
6	Onions	1 kg	2.07	5.90	0.4	6.0	2.0	12	11.80	35.40	4
7	Sugar	1 kg	138.85	4.92	28.2	4.5	9.0	623	44.05	22.09	1,243
8	Beef	1 kg	68.56	24.93	2.8	6.4	1.2	440	29.71	160.15	82
9	Eggs, chicken	10	169.14	13.95	12.1	25.1	0.7	4,250	9.30	350.48	113
10	Milk	1 liter	78.11	6.22	12.6	9.0	3.0	701	18.66	55.85	234
11	Salt	0.5 kg	10.00	0.91	11.0	4.0	4.0	40	3.64	3.64	40
12	Tea	500 gram	303.00	13.85	21.9	2.0	1.0	606	13.85	27.70	303
13	Soap	400 gr.	118.48	4.55	26.0	2.0	2.0	237	9.10	9.10	237
14	Kerosene	20 liter	623.25	13.40	46.5	2.0	2.0	1,247	26.80	26.80	1,247

Weighted cost of basket		
Indonesia in	rupiah	897
Indonesia in	yen	14,258
Japan in	yen	27,955
Japan in	rupiah	1,860

PPP1	100 yen =	6.29	rupiah
PPP2	100 yen =	6.65	rupiah
Average PPP	100 yen =	**6.47**	rupiah
Exchange rate	100 yen =	10.00	rupiah
Exchange rate	100 rupiah =	999.56	yen
Number of matches		14	

Appendix Table A.2.4.6: Binary PPP calculation Japan-Indonesia, 1969

	Consumer items	Unit	Price Japan Yen	Price Indonesia Rupiah	Ratio	Consumption Japan Quantity	Consumption Indonesia Quantity	Consumption Japan Value Yen	Consumption Indonesia Value Rupiah	Consumption Japan Value Rupiah	Consumption Indonesia Value Yen
1	Rice	1 kg	181.00	54.08	3.3	121.6	88.9	22,012	4,808	6,577	16,090
2	Barley/maize	1 kg	60.00	2.60	23.1	16.1	16.4	964	43	42	981
3	Sweet potatoes	1 kg	128.00	6.84	18.7	4.1	15.9	524	109	28	2,041
4	Potatoes	1 kg	590.00	48.25	12.2	12.0	1.0	7,080	48	579	590
5	Onions	1 kg	121.87	178.17	0.7	10.3	1.5	1,255	267	1,835	183
6	Sugar	1 kg	130.00	63.81	2.0	7.6	8.0	982	513	482	1,046
7	Beef	1 kg	1,295.00	251.38	5.2	14.6	1.0	18,954	263	3,679	1,357
8	Eggs, chicken	10	165.00	138.73	1.2	25.1	0.8	4,145	116	3,485	138
9	Milk	1 liter	144.44	65.37	2.2	21.8	3.2	3,149	209	1,425	462
10	Salt	500 gr	10.00	0.91	11.0	4.0	4.0	40	4	4	40
11	Tea	500 gr	465.00	110.71	4.2	2.0	0.6	911	66	217	279
12	Soap	piece	120.00	48.44	2.5	4.0	2.0	480	97	194	240
13	Kerosene	20 liter	392.22	129.07	3.0	2.0	2.0	784	258	258	784

Weighted cost of basket		
Indonesia in	rupiah	6,802
Indonesia in	yen	24,232
Japan in	yen	61,282
Japan in	rupiah	18,806

PPP1	100 yen =	28.07	rupiah
PPP2	100 yen =	30.69	rupiah
Average PPP	100 yen =	**29.35**	rupiah
Exchange rate	100 yen =	91.25	rupiah
Exchange rate	100 rupiah =	109.59	yen
Number of matches		13	

Appendix Table A.2.5.1: Binary PPP calculation Japan - Korea, 1913

	Consumer items	Unit	Price Japan JYen	Price Korean KYen	Ratio	Consumption Japan Quantity	Consumption Korea Quantity	Consumption Japan Value JYen	Consumption Korea Value KYen	Consumption Japan Value KYen	Consumption Korea Value JYen
1	Rice	1 kg	0.19	0.09	2.1	130.2	107.7	25.10	9.69	11.72	20.77
2	Maize/barley	1 kg	0.14	0.12	1.2	38.6	61.1	5.32	7.26	4.59	8.43
3	Soybeans	1 kg	0.11	0.10	1.1	0.8	21.3	0.09	2.09	0.08	2.31
4	Red beans	1 kg	0.12	0.18	0.6	1.0	13.3	0.12	2.45	0.18	1.57
5	Potatoes	1 kg	0.31	0.04	7.6	7.6	3.6	2.37	0.15	0.31	1.11
6	Wheat flour	1 kg	0.13	0.06	2.0	0.9	14.1	0.12	0.87	0.06	1.78
7	Sugar	1 kg	0.29	0.15	1.9	1.8	1.5	0.52	0.23	0.27	0.43
8	Beef	1 kg	1.56	0.42	3.7	1.1	2.0	1.74	0.84	0.47	3.13
9	Eggs, chicken	10	0.40	0.28	1.4	1.3	3.0	0.52	0.84	0.36	1.20
10	Salt	500 gr	0.03	0.03	1.0	4.0	4.0	0.11	0.11	0.11	0.11
11	Tea	500 gr	0.27	0.13	2.1	4.3	4.0	1.14	0.50	0.53	1.07
12	Beer	1 liter	0.34	0.33	1.0	0.5	1.0	0.17	0.33	0.17	0.34
13	Kerosene	1 liter	0.14	0.12	1.2	5.0	5.0	0.72	0.62	0.62	0.72

Weighted cost of basket		
Korea in	KYen	25.97
Korea in	JYen	42.97
Japan in	JYen	38.03
Japan in	KYen	19.46

PPP1	100 JYen =	60.44	KYen
PPP2	100 JYen =	51.17	KYen
Average PPP	100 JYen =	**55.62**	KYen
Exchange rate	100 JYen =	100.00	KYen
Exchange rate	100 KYen =	100.00	JYen
Number of matches		13	

Appendix Table A.2.5.2: Binary PPP calculation Japan-Korea, 1922

	Consumer items	Unit	Price Japan JYen	Price Korean KYen	Ratio	Consumption Japan Quantity	Consumption Korea Quantity	Consumption Japan Value JYen	Consumption Korea Value KYen	Consumption Japan Value KYen	Consumption Korea Value JYen
1	Rice	1 kg	0.32	0.24	1.3	130.7	102.4	41.70	24.79	31.64	32.67
2	Maize/barley	1 kg	0.20	0.21	1.0	28.8	53.2	5.73	10.90	5.90	10.58
3	Soybeans	1 kg	0.28	0.18	1.6	1.1	15.9	0.30	2.79	0.19	4.45
4	Red beans	1 kg	0.18	0.25	0.7	1.0	10.3	0.18	2.52	0.25	1.85
5	Potatoes	1 kg	0.72	0.06	12.7	8.0	6.0	5.76	0.34	0.45	4.34
6	Wheat flour	1 kg	0.17	0.11	1.6	0.8	11.1	0.14	1.19	0.09	1.90
7	Sugar	1 kg	0.44	0.48	0.9	3.1	2.0	1.35	0.96	1.49	0.87
8	Beef	1 kg	3.42	1.73	2.0	0.8	1.0	2.65	1.73	1.34	3.42
9	Poultry	1 kg	4.06	7.70	0.5	0.8	1.0	3.14	7.70	5.97	4.06
10	Eggs, chicken	10	0.66	0.41	1.6	2.7	3.0	1.77	1.23	1.10	1.98
11	Milk	1 liter	0.56	0.67	0.8	1.1	1.0	0.60	0.67	0.73	0.56
12	Soy sauce	1 liter	0.40	1.34	0.3	14.8	5.0	5.91	6.71	19.84	2.00
13	Tea	500 gr	0.82	0.46	1.8	4.2	4.0	3.47	1.84	1.95	3.27
14	Beer	1 liter	0.62	0.46	1.3	4.0	4.0	2.46	1.84	1.84	2.46
15	Kerosene	1 liter	0.27	0.37	0.7	5.0	5.0	1.35	1.86	1.86	1.35
16	Charcoal	10 kg	1.14	0.99	1.2	2.2	2.0	2.53	1.98	2.20	2.28

Weighted cost of basket		
Korea in	KYen	69.04
Korea in	JYen	78.04
Japan in	JYen	79.06
Japan in	KYen	76.82

PPP1	100 JYen =	88.46	KYen
PPP2	100 JYen =	97.17	KYen
Average PPP	100 JYen =	**92.71**	KYen
Exchange rate	100 JYen =	100.00	KYen
Exchange rate	100 KYen =	100.00	JYen
Number of matches		16	

Appendix Table A.2.5.3: Binary PPP calculation Japan-Korea, 1938

	Consumer items	Unit	Price Japan Yen	Price Korean Yen	Ratio	Consumption Japan Quantity	Consumption Korea Quantity	Consumption Japan Value JYen	Consumption Korea Value KYen	Consumption Japan Value KYen	Consumption Korea Value JYen
1	Rice	1 kg	0.30	0.24	1.3	142.4	103.9	43.01	24.94	34.17	31.39
2	Barley/maize	1 kg	0.18	0.20	0.9	16.9	64.9	2.99	12.97	3.38	11.48
3	Soybeans	1 kg	0.27	0.19	1.4	1.0	15.6	0.27	2.97	0.19	4.23
4	Red Beans	1 kg	0.24	0.19	1.3	2.0	6.4	0.48	1.21	0.38	1.52
5	Potatoes	1 kg	0.31	0.04	8.6	3.6	12.1	1.13	0.43	0.13	3.75
6	Wheat flour	1 kg	0.15	0.14	1.1	0.7	7.9	0.10	1.07	0.09	1.18
7	Sugar	1 kg	0.45	0.43	1.0	4.2	1.5	1.91	0.65	1.84	0.68
8	Beef	1 kg	4.44	3.81	1.2	0.6	1.0	2.85	3.81	2.45	4.44
9	Pork	1 kg	1.99	1.38	1.4	0.6	1.0	1.28	1.38	0.88	1.99
10	Poultry	1 kg	3.41	2.56	1.3	0.6	1.0	2.19	2.56	1.64	3.41
11	Eggs, chicken	10	0.62	0.48	1.3	3.6	3.0	2.21	1.44	1.71	1.86
12	Milk	1 liter	0.44	0.50	0.9	2.0	2.0	0.88	1.00	0.99	0.89
13	Tea	500 gr	0.64	1.29	0.5	5.2	2.0	3.34	2.59	6.74	1.28
14	Soy sauce	1 liter	0.34	1.04	0.3	12.9	5.0	4.46	5.20	13.47	1.72
15	Salt	500 gr	0.06	0.04	1.4	4.0	4.0	0.23	0.17	0.17	0.23

Weighted cost of basket		
Korea in	KYen	62.38
Korea in	JYen	70.05
Japan in	JYen	67.32
Japan in	KYen	68.22

PPP1	100 JYen =	89.05	KYen
PPP2	100 JYen =	101.33	KYen
Average PPP	100 JYen =	**94.99**	KYen
Exchange rate	100 JYen =	100.00	KYen
Exchange rate	100 KYen =	100.00	Jyen
Number of matches		15	

Appendix Table A.2.5.4: Binary PPP calculation Japan-South Korea, 1952

	Consumer items	Unit	Price Japan yen	Price Korean hwan	Ratio	Consumption Japan Quantity	Consumption Korea Quantity	Consumption Japan Value yen	Consumption Korea Value hwan	Consumption Japan Value hwan	Consumption Korea Value yen
1	Rice	1 kg	62.00	5,692	0.011	125.3	113.1	7,767	643,853	713,078	7,013
2	Barley/maize	1 kg	47.32	3,806	0.012	43.0	36.2	2,034	137,619	163,612	1,711
3	Soybeans	1 kg	113.00	3,090	0.037	6.5	15.0	733	46,348	20,034	1,695
4	Red beans	1 kg	138.00	3,854	0.036	1.0	10.0	138	38,537	3,854	1,380
5	Potatoes	1 kg	23.92	22,347	0.001	22.7	10.0	544	223,467	507,999	239
6	Sugar	1 kg	153.08	56,438	0.003	4.5	1.5	687	84,656	253,376	230
7	Beef	1 kg	431.08	14,083	0.031	3.2	1.0	1,385	14,083	45,236	431
8	Pork	1 kg	391.33	13,283	0.029	3.2	2.5	1,257	33,208	42,666	978
9	Dried fish	1 kg	227.48	28,486	0.008	2.0	1.0	455	28,486	56,973	227
10	Eggs, chicken	10	176.59	7,940	0.022	9.0	2.5	1,590	19,850	71,486	441
11	Wheat flour	1 kg	50.52	5,355	0.009	20.0	10.0	1,010	53,555	107,109	505
12	Vegetable oil	1 kg	216.00	9,549	0.023	2.1	0.5	449	4,775	19,867	108
13	Bread	1 kg	59.13	10,809	0.005	1.0	1.0	59	10,809	10,809	59
14	Salt	500 gr	10.71	2,178	0.005	4.0	4.0	43	8,711	8,711	43
15	Soy sauce	1 liter	81.00	1,617	0.050	15.0	5.0	1,215	8,083	24,250	405
16	Soap	piece	142.36	1,960	0.073	4.0	1.0	569	1,960	7,840	142
17	Charcoal	1 kg	27.80	670	0.042	20.0	20.0	556	13,396	13,396	556
18	Kerosene	1 liter	7.34	1,012	0.007	2.0	2.0	15	2,024	2,024	15

Weighted cost of basket		
Korea in	hwan	1,373,420
Korea in	yen	16,180
Japan in	yen	20,506
Japan in	hwan	2,072,320

PPP1	100 yen =	8,489	hwan
PPP2	100 yen =	10,106	hwan
Average PPP	100 yen =	**9,262**	hwan
Exchange rate	100 yen =	1,662	hwan
Exchange rate	100 hwan =	6.02	yen
Number of matches		18	

Appendix Table A.2.5.5: Binary PPP calculation Japan-South Korea, 1958

	Consumer items	Unit	Price Japan Yen	Price Korean Won	Ratio	Consumption Japan Quantity	Consumption Korea Quantity	Consumption Japan Value Yen	Consumption Korea Value Won	Consumption Japan Value Won	Consumption Korea Value Yen
1	Rice	1 kg	101.70	132.34	0.8	125.3	133.7	12,741	17,689	16,580	13,593
2	Barley/maize	1 kg	60.00	113.76	0.5	43.0	43.0	2,579	4,887	4,890	2,577
3	Soybeans	1 kg	137.10	88.24	1.6	6.2	8.4	849	739	547	1,149
4	Red beans	1 kg	154.32	115.57	1.3	1.0	0.6	154	74	116	99
5	Potatoes	1 kg	23.14	53.00	0.4	8.7	13.5	201	718	461	313
6	Onions	1 kg	20.71	167.00	0.1	6.0	1.0	124	167	1,002	21
7	Sugar	1 kg	138.85	316.67	0.4	4.5	1.5	623	475	1,422	208
8	Beef	1 kg	685.60	932.97	0.7	3.2	1.0	2,202	933	2,997	686
9	Pork	1 kg	507.75	640.00	0.8	3.2	2.5	1,631	1,600	2,056	1,269
10	Dried fish	1 kg	266.66	307.60	0.9	2.0	1.0	533	308	615	267
11	Eggs, chicken	10	169.14	373.00	0.5	9.0	2.5	1,523	933	3,358	423
12	Wheat flour	1 kg	53.84	123.86	0.4	25.0	8.0	1,346	985	3,097	428
13	Vegetable oil	1 kg	216.00	600.00	0.4	2.1	0.5	449	300	1,248	108
14	Bread	1 kg	70.67	250.00	0.3	1.0	1.0	71	250	250	71
15	Milk	1 liter	78.11	417.00	0.2	9.0	1.0	701	417	3,744	78
16	Tea	500 gr	303.00	846.60	0.4	2.0	2.0	606	1,693	1,693	606
17	Salt	500 gr	10.00	27.50	0.4	4.0	4.0	40	110	110	40
18	Beer	1 liter	198.41	625.00	0.3	5.0	1.0	992	625	3,125	198
19	Soy sauce	1 liter	86.00	217.33	0.4	5.0	2.0	430	435	1,087	172
20	Soap	piece	118.48	108.00	1.1	4.0	1.0	474	108	432	118
21	Charcoal	1 kg	37.47	33.22	1.1	20.0	20.0	749	664	664	749
22	Kerosene	1 liter	31.16	27.79	1.1	2.0	3.0	62	83	56	93

Weighted cost of basket		
Korea in	Won	34,192
Korea in	yen	23,268
Japan in	yen	29,082
Japan in	Won	49,548

PPP1	100 yen =	146.95	Won
PPP2	100 yen =	170.37	Won
Average PPP	100 yen =	**158.23**	Won
Exchange rate	100 yen =	138.95	Won
Exchange rate	100 Won =	71.97	yen
Number of matches		22	

Appendix Table A.2.5.6: Binary PPP calculation Japan-S.Korea, 1969

	Consumer items	Unit	Price Japan Yen	Price Korean Won	Ratio	Consumption Japan Quantity	Consumption Korea Quantity	Consumption Japan Value Yen	Consumption Korea Value Won	Consumption Japan Value Won	Consumption Korea Value Yen
1	Rice	1 kg	181.00	74.67	2.4	121.6	127.0	22,012	9,484	9,081	22,987
2	Potatoes	1 kg	221.25	24.33	9.1	12.0	14.6	2,655	355	292	3,230
3	Onions	1 kg	45.70	126.67	0.4	10.3	0.5	471	63	1,305	23
4	Sugar	1 kg	130.00	113.66	1.1	7.6	1.8	982	205	859	235
5	Beef	1 kg	1,295.00	638.07	2.0	7.3	1.9	9,477	1,200	4,670	2,435
6	Pork	1 kg	844.50	336.67	2.5	7.3	1.6	6,180	552	2,464	1,385
7	Dried fish	1 kg	503.50	157.81	3.2	2.0	1.1	1,007	166	316	529
8	Eggs, chicken	10	165.00	103.07	1.6	25.1	6.0	4,145	622	2,590	995
9	Wheat flour	1 kg	74.40	34.84	2.1	31.3	5.2	2,329	181	1,090	387
10	Salt	500 gr	16.13	21.83	0.7	4.0	4.6	65	100	87	74
11	Soy sauce	1 liter	138.89	41.94	3.3	15.0	2.2	2,083	92	629	303
12	Beer	1 liter	206.35	257.14	0.8	5.0	0.2	1,032	63	1,286	51
13	Soap	piece	120.00	35.57	3.4	4.0	1.0	480	37	142	124
14	Charcoal	1 kg	63.87	32.04	2.0	20.0	12.5	1,277	400	641	797
15	Kerosene	1 liter	19.61	17.91	1.1	2.0	3.9	39	70	36	76
16	Coal	1 kg	18.35	16.17	1.1	2.0	12.5	37	202	32	229

Weighted cost of basket		
Korea in	Won	13,791
Korea in	yen	33,861
Japan in	yen	54,272
Japan in	Won	25,519

PPP1	100 yen =	40.73	Won
PPP2	100 yen =	47.02	Won
Average PPP	100 yen =	**43.76**	Won
Exchange rate	100 yen =	85.94	Won
Exchange rate	100 Won =	116.35	yen
Number of matches		16	

Appendix Table A.2.6.1: Binary PPP calculation Japan-Malaya, 1913

	Consumer items	Unit	Price Japan Yen	Price Malaya S$	Ratio	Consumption Japan Quantity	Consumption Malaya Quantity	Consumption Japan Value Yen	Consumption Malaya Value S$	Consumption Japan Value S$	Consumption Malaya Value Yen
1	Rice	1 kg	0.19	0.10	2.0	130.2	226.6	25.10	22.04	12.66	43.70
2	Barley/maize	1 kg	0.14	0.07	2.0	38.6	10.0	5.32	0.70	2.70	1.38
3	Sweet potatoes	1 kg	0.07	0.06	1.3	56.8	10.0	3.91	0.55	3.13	0.69
4	Onions	1 kg	0.71	0.13	5.4	2.0	2.0	1.41	0.26	0.26	1.41
5	Sugar	1 kg	0.29	0.13	2.2	1.8	10.0	0.52	1.30	0.23	2.88
6	Beef	1 kg	1.56	0.68	2.3	1.1	2.0	1.74	1.37	0.76	3.13
7	Eggs, chicken	10	0.32	0.30	1.1	1.3	2.0	0.42	0.60	0.39	0.64
8	Salt	500 gr	0.03	0.02	1.6	4.0	4.0	0.11	0.06	0.06	0.11
9	Tea	500 gr	0.27	0.44	0.6	4.3	4.0	1.14	1.76	1.88	1.07
10	Vegetable oil	1 kg	0.43	0.39	1.1	0.4	1.0	0.18	0.39	0.17	0.43

Weighted cost of basket		
Malaya in	S$	29.02
Malaya in	yen	55.43
Japan in	yen	39.85
Japan in	S$	22.24

PPP1	100 yen =	52.36	M$
PPP2	100 yen =	55.80	M$
Average PPP	100 yen =	**54.05**	M$
Exchange rate	100 yen =	86.68	M$
Exchange rate	100 S$ =	115.37	yen
Number of matches		10	

Appendix Table A.2.6.2: Binary PPP calculation Japan-Malaya, 1922

	Consumer items	Unit	Price Japan Yen	Price Malaya S$	Ratio	Consumption Japan Quantity	Consumption Malaya Quantity	Consumption Japan Value Yen	Consumption Malaya Value S$	Consumption Japan Value S$	Consumption Malaya Value Yen
1	Rice	1 kg	0.32	0.15	2.2	130.7	173.3	41.70	25.28	19.07	55.27
2	Potatoes	1 kg	0.72	0.15	4.9	8.0	2.0	5.76	0.29	1.17	1.44
3	Beans	1 kg	0.18	0.13	1.4	1.1	1.0	0.20	0.13	0.14	0.18
4	Onions	1 kg	1.31	0.13	10.1	2.0	2.0	2.61	0.26	0.26	2.61
5	Sugar	1 kg	0.44	0.23	1.9	3.1	9.0	1.35	2.03	0.70	3.91
6	Beef	1 kg	3.42	1.17	2.9	0.8	1.2	2.65	1.39	0.90	4.08
7	Pork	1 kg	2.44	0.72	3.4	0.8	1.5	1.89	1.07	0.55	3.67
8	Eggs, chicken	10	0.53	0.40	1.3	2.7	2.0	1.41	0.80	1.07	1.06
9	Salt	500 gr	0.04	0.02	2.6	4.0	4.0	0.17	0.06	0.06	0.17
10	Tea	500 gr	0.82	0.44	1.9	4.2	4.0	3.47	1.76	1.87	3.27
11	Kerosene	1 liter	0.27	0.19	1.4	5.0	5.0	1.35	0.94	0.94	1.35
12	Vegetable oil	1 kg	0.43	0.39	1.1	0.7	2.0	0.30	0.78	0.27	0.86

Weighted cost of basket		
Malaya in	S$	34.80
Malaya in	yen	77.86
Japan in	yen	62.87
Japan in	S$	27.01

PPP1	100 yen =	44.69	S$
PPP2	100 yen =	42.97	S$
Average PPP	100 yen =	**43.82**	S$
Exchange rate	100 yen =	94.26	S$
Exchange rate	100 S$ =	106.09	yen
Number of matches		12	

Appendix Table A.2.6.3: Binary PPP calculation Japan-Malaya, 1938

	Consumer items	Unit	Price Japan Yen	Price Malaya S$	Ratio	Consumption Japan Quantity	Consumption Malaya Quantity	Consumption Japan Value Yen	Consumption Malaya Value S$	Consumption Japan Value S$	Consumption Malaya Value Yen
1	Rice	1 kg	0.30	0.07	4.1	142.4	185.7	43.01	13.54	10.38	56.09
2	Potatoes	1 kg	0.55	0.15	3.8	3.6	2.0	2.00	0.29	0.53	1.10
3	Onions	1 kg	0.95	0.13	7.3	2.0	2.0	1.90	0.26	0.26	1.90
4	Sugar	1 kg	0.45	0.13	3.5	4.2	20.0	1.91	2.59	0.55	9.00
5	Beef	1 kg	4.44	0.86	5.2	1.0	1.5	4.27	1.29	0.83	6.66
6	Poultry	1 kg	12.80	0.98	13.1	1.0	1.5	12.32	1.47	0.94	19.20
7	Eggs, chicken	10	0.50	0.30	1.7	3.6	2.0	1.76	0.60	1.07	0.99
8	Bread	500 gr	0.18	0.15	1.2	1.4	2.0	0.26	0.31	0.22	0.37
9	Salt	500 gr	0.06	0.01	4.9	4.0	4.0	0.23	0.05	0.05	0.23
10	Tea	500 gr	0.64	0.43	1.5	5.2	2.0	3.34	0.86	2.24	1.28
11	Kerosene	1 liter	0.21	0.10	2.1	5.0	5.0	1.03	0.50	0.50	1.03
12	Vegetable oil	1 kg	0.84	0.19	4.3	1.9	2.0	1.56	0.39	0.36	1.68

Weighted cost of basket		
Malaya in	S$	22.14
Malaya in	yen	99.52
Japan in	yen	73.59
Japan in	S$	17.92

PPP1	100 yen =	22.25	S$
PPP2	100 yen =	24.35	S$
Average PPP	100 yen =	**23.27**	S$
Exchange rate	100 yen =	48.31	S$
Exchange rate	100 S$ =	206.98	yen
Number of matches		12	

Appendix Table A.2.6.4: Binary PPP calculation Japan-Malaya, 1952

	Consumer items	Unit	Price Japan Yen	Price Malaya M$	Ratio	Consumption Japan Quantity	Consumption Malaya Quantity	Consumption Japan Value Yen	Consumption Malaya Value M$	Consumption Japan Value M$	Consumption Malaya Value Yen
1	Rice	1 kg	27.45	0.47	58.8	117.2	121.6	3,217	56.75	54.68	3,339
2	Sweet potatoes	1 kg	24.58	0.28	89.2	8.0	5.0	197	1.38	2.20	123
3	Potatoes	1 kg	23.92	0.42	56.8	22.7	2.5	544	1.05	9.58	60
4	Soybeans	1 kg	113.00	0.65	174.3	6.5	1.0	733	0.65	4.20	113
5	Onions	1 kg	27.45	0.52	52.9	2.0	2.0	55	1.04	1.04	55
6	Sugar	1 kg	138.85	0.78	178.9	5.3	25.0	735	19.40	4.11	3,471
7	Beef	1 kg	431.08	5.67	76.0	1.9	2.5	834	14.18	10.97	1,078
8	Pork	1 kg	391.33	5.89	66.4	1.9	6.5	757	38.30	11.40	2,544
9	Eggs, chicken	10	141.27	1.85	76.3	6.1	3.0	859	5.56	11.26	424
10	Bread	1 kg	59.13	0.62	95.9	1.0	1.0	59	0.62	0.62	59
11	Salt	500 gr	10.71	0.08	132.1	4.0	4.0	43	0.32	0.32	43
12	Tea	500 gr	268.00	3.25	82.5	6.0	4.0	1,608	13.00	19.49	1,072
13	Vegetable oil	1 liter	216.00	0.89	242.7	1.4	5.0	307	4.45	1.27	1,080

Weighted cost of basket		
Malaya in	M$	156.68
Malaya in	yen	13,460
Japan in	yen	9,948
Japan in	M$	131.14

PPP1	100 yen =	1.16	M$
PPP2	100 yen =	1.32	M$
Average PPP	100 yen =	**1.24**	M$
Exchange rate	100 yen =	0.84	M$
Exchange rate	100 M$ =	11,838	yen
Number of matches		13	

Appendix Table A.2.6.5: Binary PPP calculation Japan-Malaya, 1958

	Consumer items	Unit	Price Japan Yen	Price Malaya M$	Ratio	Consumption Japan Quantity	Consumption Malaya Quantity	Consumption Japan Value Yen	Consumption Malaya Value M$	Consumption Japan Value M$	Consumption Malaya Value Yen
1	Rice	1 kg	101.70	0.49	209.2	125.3	123.7	12,741	60	61	12,582
2	Barley/Maize	1 kg	60.00	0.31	194.8	43.0	1.2	2,579	0	13	72
3	Sweet potatoes	1 kg	7.92	0.24	32.6	8.7	5.0	69	1	2	40
4	Potatoes	1 kg	231.41	0.44	528.8	17.9	2.5	4,154	1	8	579
5	Soybeans	1 kg	41.33	0.52	79.7	6.2	1.0	256	1	3	41
6	Onions	1 kg	20.71	0.47	44.1	6.0	3.0	124	1	3	62
7	Sugar	1 kg	138.85	0.60	231.5	4.5	30.0	623	18	3	4,166
8	Beef	1 kg	685.60	6.34	108.1	3.2	2.5	2,202	16	20	1,714
9	Pork	1 kg	507.75	5.41	93.9	3.2	6.5	1,631	35	17	3,300
10	Dried fish	1 kg	266.66	2.71	98.4	2.0	2.0	533	5	5	533
11	Eggs, chicken	10	169.14	1.40	120.8	9.0	3.5	1,523	5	13	592
12	Milk	1 liter	78.11	0.67	116.8	9.0	25.0	701	17	6	1,953
13	Bread	500 gr	35.33	0.34	103.5	2.0	4.0	71	1	1	141
14	Vegetable oil	1 kg	194.72	1.04	187.7	2.1	7.0	405	7	2	1,363
15	Tea	500 gr	303.00	4.52	67.1	2.0	4.0	606	18	9	1,212
16	Salt	500 gr	10.00	0.14	72.6	4.0	4.0	40	1	1	40

Weighted cost of basket		
Malaya in	M$	188.03
Malaya in	yen	28,390
Japan in	yen	28,258
Japan in	M$	167.04

PPP1	100 yen =	0.66	M$
PPP2	100 yen =	0.59	M$
Average PPP	100 yen =	**0.63**	M$
Exchange rate	100 yen =	0.85	M$
Exchange rate	100 M$ =	11,759	yen
Number of matches		16	

Appendix Table A.2.6.6: Binary PPP calculation Japan-West Malaysia, 1969

	Consumer items	Unit	Price Japan Yen	Price Malaya M$	Ratio	Consumption Japan Quantity	Consumption Malaya Quantity	Consumption Japan Value Yen	Consumption Malaya Value M$	Consumption Japan Value M$	Consumption Malaya Value Yen
1	Rice	1 kg	181.00	0.68	265.9	121.6	120.7	22,012	82.17	82.78	21,850
2	Sweet potatoes	1 kg	128.00	0.23	564.1	4.1	2.9	524	0.66	0.93	371
3	Potatoes	1 kg	221.25	0.50	440.4	12.0	2.1	2,655	1.06	6.03	465
4	Bread	1 kg	107.00	0.57	186.8	2.0	2.0	214	1.15	1.15	214
5	Sugar	1 kg	130.00	0.55	235.9	7.6	35.0	982	19.29	4.16	4,550
6	Beef	1 kg	1,295.00	3.35	386.0	4.9	1.7	6,318	5.70	16.37	2,202
7	Pork	1 kg	844.50	2.37	356.9	4.9	6.4	4,120	15.14	11.54	5,405
8	Poultry	1 kg	1,406.25	2.46	570.8	4.9	6.5	6,861	16.01	12.02	9,141
9	Eggs, chicken	10	165.00	1.10	150.0	25.1	9.7	4,145	10.63	27.64	1,595
10	Milk	1 liter	144.44	0.55	264.8	21.8	28.4	3,149	15.49	11.89	4,102
11	Salt	500 gr	10.00	0.06	154.3	4.0	4.0	40	0.26	0.26	40
12	Vegetable oil	1 kg	60.32	1.25	48.3	5.5	8.1	335	10.11	6.92	489
13	Tea	500 gr	465.00	3.09	150.3	2.0	6.0	911	18.57	6.07	2,790

Weighted cost of basket		
Malaya in	M$	196.24
Malaya in	yen	53,212
Japan in	yen	52,267
Japan in	M$	187.76

PPP1	100 yen =	0.37	M$
PPP2	100 yen =	0.36	M$
Average PPP	100 yen =	**0.36**	M$
Exchange rate	100 yen =	0.85	M$
Exchange rate	100 M$ =	11,711	yen
Number of matches		13	

Appendix Table A.2.7.1: Binary PPP calculation Japan-Philippines, 1913

	Consumer items	Unit	Price Japan Yen	Price Philippines Peso	Ratio	Consumption Japan Quantity	Consumption Philippines Quantity	Consumption Japan Value Yen	Consumption Philippines Value Peso	Consumption Japan Value Peso	Consumption Philippines Value Yen
1	Rice	1 kg	0.19	0.11	1.7	130.2	112.8	25.10	12.58	14.53	21.74
2	Barley/maize	1 kg	0.14	0.06	2.4	38.6	28.9	5.32	1.68	2.24	3.99
3	Potatoes	1 kg	0.31	0.12	2.6	7.6	10.0	2.37	1.20	0.91	3.11
4	Sweet potatoes	1 kg	0.07	0.12	0.6	56.8	20.0	3.91	2.40	6.82	1.38
5	Onions	1 kg	0.71	0.15	4.7	2.0	2.0	1.41	0.30	0.30	1.41
6	Sugar	1 kg	0.29	0.17	1.7	1.8	10.0	0.52	1.70	0.31	2.88
7	Beef	1 kg	1.56	0.87	1.8	1.1	1.0	1.74	0.87	0.97	1.56
8	Wheat flour	1 kg	0.13	0.08	1.7	0.9	1.0	0.12	0.08	0.07	0.13
9	Eggs, chicken	10	0.32	0.40	0.8	1.3	1.0	0.42	0.40	0.52	0.32
10	Salt	500 gr	0.03	0.01	2.1	4.0	4.0	0.11	0.05	0.05	0.11
11	Vegetable oil	1 kg	0.43	0.62	0.7	0.4	1.0	0.18	0.62	0.26	0.43

Weighted cost of basket		
Philippines in	peso	21.87
Philippines in	yen	37.06
Japan in	yen	41.20
Japan in	peso	26.98

PPP1	100 yen =	59.01	peso
PPP2	100 yen =	65.48	peso
Average PPP	100 yen =	**62.16**	peso
Exchange rate	100 yen =	98.99	peso
Exchange rate	100 peso =	101.02	yen
Number of matches		11	

Appendix Table A.2.7.2: Binary PPP calculation Japan-Philippines, 1922

	Consumer items	Unit	Price Japan Yen	Price Philippines Peso	Ratio	Consumption Japan Quantity	Consumption Philippines Quantity	Consumption Japan Value Yen	Consumption Philippines Value Peso	Consumption Japan Value Peso	Consumption Philippines Value Yen
1	Rice	1 kg	0.32	0.17	1.9	130.7	116.8	41.70	19.30	21.59	37.26
2	Barley/maize	1 kg	0.20	0.08	2.7	28.8	34.4	5.73	2.58	2.16	6.85
3	Potatoes	1 kg	0.72	0.19	3.8	8.0	20.0	5.76	3.80	1.52	14.40
4	Sweet potatoes	1 kg	0.09	0.13	0.7	47.1	20.0	4.07	2.60	6.12	1.73
5	Onions	1 kg	1.31	0.28	4.7	2.0	2.0	2.61	0.56	0.56	2.61
6	Sugar	1 kg	0.44	0.36	1.2	3.1	11.1	1.35	4.00	1.11	4.85
7	Beef	1 kg	3.42	1.12	3.1	0.8	1.0	2.65	1.12	0.87	3.42
8	Pork	1 kg	2.44	0.95	2.6	0.8	1.0	1.89	0.95	0.74	2.44
9	Wheat flour	1 kg	0.17	0.10	1.7	0.8	1.0	0.14	0.10	0.08	0.17
10	Eggs, chicken	10	0.53	0.44	1.2	2.7	1.0	1.41	0.44	1.17	0.53
11	Salt	500 gr	0.04	0.01	3.1	4.0	4.0	0.17	0.06	0.06	0.17
12	Vegetable oil	1 kg	0.72	0.36	2.0	0.7	1.0	0.50	0.36	0.25	0.72

Weighted cost of basket			
Philippines in	peso	35.86	
Philippines in	yen	75.15	
Japan in	yen	67.99	
Japan in	peso	36.23	
PPP1	100 yen =	47.72	peso
PPP2	100 yen =	53.29	peso
Average PPP	100 yen =	**50.43**	peso
Exchange rate	100 yen =	98.09	peso
Exchange rate	100 peso =	101.95	yen
Number of matches		12	

Appendix Table A.2.7.3: Binary PPP calculation Japan-Philippines, 1938

	Consumer items	Unit	Price Japan Yen	Price Philippine Peso	Ratio	Consumption Japan Quantity	Consumption Philippines Quantity	Consumption Japan Value Yen	Consumption Philippines Value Peso	Consumption Japan Value Peso	Consumption Philippines Value Yen
1	Rice	1 kg	0.30	0.14	2.1	142.4	98.7	43.01	13.89	20.02	29.83
2	Barley/maize	1 kg	0.18	0.07	2.7	16.9	31.7	2.99	2.06	1.10	5.60
3	Sweet potatoes	1 kg	0.03	0.11	0.2	27.0	12.8	0.71	1.35	2.87	0.34
4	Potatoes	1 kg	0.55	0.12	4.5	3.6	21.2	2.00	2.56	0.44	11.63
5	Onions	1 kg	0.95	0.21	4.5	2.0	2.0	1.90	0.43	0.43	1.90
6	Sugar	1 kg	0.45	0.12	3.8	4.2	10.0	1.91	1.17	0.50	4.50
7	Beef	1 kg	4.44	0.58	7.6	1.0	1.0	4.27	0.58	0.56	4.44
8	Pork	1 kg	1.99	0.55	3.6	1.0	1.0	1.91	0.55	0.53	1.99
9	Eggs, chicken	10	0.50	0.34	1.5	3.6	2.0	1.76	0.67	1.19	0.99
10	Vegetable oil	1 kg	0.84	0.16	5.1	1.9	2.0	1.56	0.33	0.31	1.68
11	Salt	0.5 kg	0.06	0.02	3.0	4.0	4.0	0.23	0.08	0.08	0.23

Weighted cost of basket			
Philippines in	peso	23.67	
Philippines in	yen	63.13	
Japan in	yen	62.27	
Japan in	peso	28.01	
PPP1	100 yen =	37.49	peso
PPP2	100 yen =	44.99	peso
Average PPP	100 yen =	**41.07**	peso
Exchange rate	100 yen =	56.25	peso
Exchange rate	100 peso =	177.78	yen
Number of matches		11	

Appendix Table A.2.7.4: Binary PPP calculation Japan-Philippines, 1952

	Consumer items	Unit	Price Japan Yen	Price Philippine Peso	Ratio	Consumption Japan Quantity	Consumption Philippines Quantity	Consumption Japan Value Yen	Consumption Philippines Value Peso	Consumption Japan Value Peso	Consumption Philippines Value Yen
1	Rice	1 kg	62.00	0.60	104	117.2	102.1	7,265	60.75	69.73	6,329
2	Barley/maize	1 kg	47.32	0.27	173	58.5	35.4	2,766	9.65	15.95	1,674
3	Sweet potatoes	1 kg	24.58	0.16	158	8.0	20.0	197	3.12	1.25	492
4	Potatoes	1 kg	23.92	0.73	33	22.7	37.9	544	27.81	16.69	906
5	Onions	1 kg	27.45	0.58	48	2.0	2.0	55	1.16	1.16	55
6	Sugar	1 kg	153.08	0.32	483	5.3	10.0	810	3.17	1.68	1,531
7	Beef	1 kg	431.08	3.45	125	1.9	2.0	834	6.90	6.67	862
8	Pork	1 kg	391.33	2.69	145	1.9	5.0	757	13.46	5.21	1,957
9	Eggs, chicken	10	141.27	1.33	107	6.1	4.0	859	5.30	8.06	565
10	Bread	500 gr	29.57	0.20	151	1.0	1.0	30	0.20	0.20	30
11	Wheat flour	1 kg	50.52	0.47	108	20.0	10.0	1,010	4.70	9.40	505
12	Salt	500 gr	20.00	0.05	395	4.0	4.0	80	0.20	0.20	80
13	Firewood	1 bundle	51.46	0.45	115	1.0	5.0	51	2.24	0.45	257
14	Charcoal	10 kg	278.00	0.89	313	1.0	1.0	278	0.89	0.89	278
15	Kerosene	20 liter	146.88	3.06	48	2.0	2.0	294	6.13	6.13	294

Weighted cost of basket		
Philippines in	peso	145.67
Philippines in	yen	15,815
Japan in	yen	15,830
Japan in	peso	143.65

PPP1	100 yen =	0.92	peso
PPP2	100 yen =	0.91	peso
Average PPP	100 yen =	**0.91**	peso
Exchange rate	100 yen =	0.56	peso
Exchange rate	100 peso =	17,874	yen
Number of matches		15	

Appendix Table A.2.7.5: Binary PPP calculation Japan-Philippines, 1958

	Consumer items	Unit	Price Japan Yen	Price Philippine Peso	Ratio	Consumption Japan Quantity	Consumption Philippines Quantity	Consumption Japan Value Yen	Consumption Philippines Value Peso	Consumption Japan Value Peso	Consumption Philippines Value Yen
1	Rice	1 kg	101.70	0.55	184	125.3	106.1	12,741	58.72	69.35	10,788
2	Barley/maize	1 kg	60.00	0.27	224	43.0	33.0	2,579	8.85	11.51	1,982
3	Sweet potatoes	1 kg	12.67	0.23	55	8.7	25.0	110	5.75	2.00	317
4	Potatoes	1 kg	231.41	0.69	335	17.9	51.6	4,154	35.58	12.39	11,932
5	Onions	1 kg	20.71	1.14	18	6.0	1.0	124	1.14	6.84	21
6	Sugar	1 kg	138.85	0.34	408	4.5	14.0	623	4.76	1.53	1,944
7	Beef	1 kg	685.60	3.25	211	3.2	2.5	2,202	8.13	10.44	1,714
8	Pork	1 kg	507.75	2.85	178	3.2	7.0	1,631	19.95	9.15	3,554
9	Eggs, chicken	10	169.14	1.38	122	5.4	4.2	914	5.76	7.47	705
10	Bread	500 gr	35.33	0.21	170	1.0	1.0	35	0.21	0.21	35
11	Salt	500 gr	10.00	0.04	224	4.0	4.0	40	0.18	0.18	40
12	Firewood	1 bundle	70.14	0.53	132	1.0	5.0	70	2.65	0.53	351
13	Charcoal	10 kg	374.67	0.89	420	1.0	1.0	375	0.89	0.89	375
14	Kerosene	20 liter	623.25	4.62	135	0.1	0.1	62	0.46	0.46	62

Weighted cost of basket		
Philippines in	peso	153.03
Philippines in	yen	33,819
Japan in	yen	25,661
Japan in	peso	132.95

PPP1	100 yen =	0.45	peso
PPP2	100 yen =	0.52	peso
Average PPP	100 yen =	**0.48**	peso
Exchange rate	100 yen =	0.56	peso
Exchange rate	100 peso =	17,814	yen
Number of matches		14	

Appendix Table A.2.7.6: Binary PPP calculation Japan-Philippines, 1969

	Consumer items	Unit	Price Japan Yen	Price Philippine Peso	Ratio	Consumption Japan Quantity	Consumption Philippines Quantity	Consumption Japan Value Yen	Consumption Philippines Value Peso	Consumption Japan Value Peso	Consumption Philippines Value Yen
1	Rice	1 kg	181.00	1.07	169	121.6	99.8	22,012	106.90	130.30	18,059
2	Onions	1 kg	121.87	1.14	107	10.3	0.4	1,255	0.46	11.74	49
3	Sugar	1 kg	130.00	0.34	382	7.6	19.5	982	6.63	2.57	2,535
4	Beef	1 kg	1295.00	3.25	398	4.9	2.5	6,318	8.13	15.86	3,238
5	Pork	1 kg	844.50	2.85	296	4.9	10.8	4,120	30.78	13.90	9,121
6	Chicken	1 kg	1406.25	2.65	532	4.9	3.1	6,861	8.20	12.90	4,359
7	Dried fish	1 kg	503.50	11.78	43	1.0	1.2	504	14.04	11.78	600
8	Eggs, chicken	10	165.00	1.99	83	25.1	6.0	4,145	11.95	50.04	990
9	Vegetable oil	1 liter	211.11	1.43	147	5.5	4.2	1,171	6.02	7.95	887
10	Soap	1 piece	30.00	0.90	33	2.0	2.0	60	1.80	1.80	60
11	Kerosene	20 liter	392.22	1.13	347	2.0	2.0	784	2.26	2.26	784

Weighted cost of basket		
Philippines in	peso	197.16
Philippines in	yen	40,681
Japan in	yen	48,214
Japan in	peso	261.11

PPP1	00 yen =	0.48	peso
PPP2	00 yen =	0.54	peso
Average PPP	00 yen =	**0.51**	peso
Exchange rate	00 yen =	1.10	peso
Exchange rate	0 peso =	9,119	yen
Number of matches		11	

Appendix Table A.2.8.1: Binary PPP calculation Japan-Siam, 1913

	Consumer items	Unit	Price Japan yen	Price Thailand baht	Ratio	Consumption Japan Quantity	Consumption Thailand Quantity	Consumption Japan Value yen	Consumption Thailand Value baht	Consumption Japan Value baht	Consumption Thailand Value yen
1	Rice	1 kg	0.19	0.21	0.9	130.2	136.9	25.10	28.87	27.45	26.40
2	Onions	1 kg	0.71	0.12	5.8	2.0	2.0	1.41	0.24	0.24	1.41
3	Sugar	1 kg	0.29	0.38	0.8	1.8	10.0	0.52	3.84	0.69	2.88
4	Eggs, duck	10	0.20	0.35	0.6	1.3	2.0	0.26	0.70	0.45	0.40
5	Beef	1 kg	1.56	0.53	2.9	0.6	1.0	0.87	0.53	0.30	1.56
6	Pork	1 kg	0.00	1.15	0.0	0.6	1.0	0.00	1.15	0.64	0.00

Weighted cost of basket		
Thailand in	baht	35.34
Thailand in	yen	32.66
Japan in	yen	28.17
Japan in	baht	29.78

PPP1	100 yen =	108.21	baht
PPP2	100 yen =	105.74	baht
Average PPP	100 yen =	**106.97**	baht
Exchange rate	100 yen =	131.50	baht
Exchange rate	100 baht =	76.05	yen
Number of matches		6	

Appendix Table A.2.8.2: Binary PPP calculation Japan-Siam, 1922

	Consumer items	Unit	Price Japan yen	Price Thailand baht	Ratio	Consumption Japan Quantity	Consumption Thailand Quantity	Consumption Japan Value yen	Consumption Thailand Value baht	Consumption Japan Value baht	Consumption Thailand Value yen
1	Rice	1 kg	0.32	0.23	1.4	130.7	183.1	41.70	42.12	30.08	58.39
2	Potatoes	1 kg	0.72	0.12	5.8	8.0	2.0	5.76	0.25	0.99	1.44
3	Onions	1 kg	1.31	0.11	11.7	2.0	2.0	2.61	0.22	0.22	2.61
4	Sugar	1 kg	0.44	0.45	1.0	3.1	10.0	1.35	4.48	1.39	4.37
5	Beef	1 kg	3.42	0.53	6.4	0.8	1.0	2.65	0.53	0.41	3.42
6	Pork	1 kg	2.44	1.06	2.3	0.8	1.0	1.89	1.06	0.82	2.44
7	Eggs, duck	10	0.53	0.60	0.9	2.7	10.0	1.41	6.00	1.61	5.28
8	Wheat flour	1 kg	0.17	0.47	0.4	0.8	1.0	0.14	0.47	0.37	0.17
9	Kerosene	1 liter	0.27	0.79	0.3	5.0	5.0	1.35	3.97	3.97	1.35

Weighted cost of basket			
Thailand in	baht	59.10	
Thailand in	yen	79.48	
Japan in	yen	58.87	
Japan in	baht	39.86	
PPP1	100 yen =	74.35	baht
PPP2	100 yen =	67.70	baht
Average PPP	100 yen =	**70.95**	baht
Exchange rate	100 yen =	118.66	baht
Exchange rate	100 baht =	84.27	yen
Number of matches		9	

Appendix Table A.2.8.3: Binary PPP calculation Japan-Thailand, 1938

	Consumer items	Unit	Price Japan Yen	Price Thailand baht	Ratio	Consumption Japan Quantity	Consumption Thailand Quantity	Consumption Japan Value Yen	Consumption Thailand Value baht	Consumption Japan Value baht	Consumption Thailand Value Yen
1	Rice	1 kg	0.30	0.13	2.4	142.4	122.7	43.01	15.35	17.81	37.07
2	Potatoes	1 kg	0.55	0.12	4.4	3.6	2.0	2.00	0.25	0.45	1.10
3	Onions	1 kg	0.95	0.10	9.9	2.0	2.0	1.90	0.19	0.19	1.90
4	Sugar	1 kg	0.45	0.32	1.4	4.2	10.0	1.91	3.20	1.36	4.50
5	Beef	1 kg	4.44	0.49	9.1	1.0	1.0	4.27	0.49	0.47	4.44
6	Pork	1 kg	1.99	0.58	3.4	1.0	1.0	1.91	0.58	0.56	1.99
7	Eggs, duck	10	0.50	0.50	1.0	3.6	2.0	1.76	1.00	1.78	0.99
8	Wheat flour	1 kg	0.22	0.18	1.2	0.7	1.0	0.15	0.18	0.13	0.22
9	Kerosene	1 liter	0.21	0.28	0.7	5.0	5.0	1.03	1.42	1.42	1.03

Weighted cost of basket			
Thailand in	baht	22.66	
Thailand in	yen	53.24	
Japan in	yen	57.96	
Japan in	baht	24.17	
PPP1	100 yen =	42.57	baht
PPP2	100 yen =	41.70	baht
Average PPP	100 yen =	**42.13**	baht
Exchange rate	100 yen =	63.76	baht
Exchange rate	100 baht =	156.83	yen

Appendix Table A.2.8.4: Binary PPP calculation Japan-Thailand, 1952

	Consumer items	Unit	Price Japan Yen	Price Thailand Baht	Ratio	Consumption Japan Quantity	Consumption Thailand Quantity	Consumption Japan Value Yen	Consumption Thailand Value Baht	Consumption Japan Value Baht	Consumption Thailand Value Yen
1	Rice	1 kg	62.00	1.87	33.2	117.2	112.9	7,265	211.13	219.12	7,000
2	Sweet potatoes	1 kg	24.58	0.98	25.1	8.0	5.0	197	4.90	7.84	123
3	Potatoes	1 kg	23.92	3.62	6.6	22.7	1.0	544	3.62	82.29	24
4	Soybeans	1 kg	113.00	2.31	48.9	6.5	1.0	733	2.31	14.97	113
5	Onions	1 kg	27.45	3.31	8.3	2.0	2.0	55	6.62	6.62	55
6	Sugar	1 kg	153.08	5.75	26.6	5.3	4.0	810	23.00	30.43	612
7	Beef	1 kg	431.08	8.98	48.0	1.9	5.0	834	44.90	17.37	2,155
8	Pork	1 kg	391.33	14.65	26.7	1.9	5.0	757	73.25	28.34	1,957
9	Eggs, chicken	10	141.27	4.90	28.8	6.1	10.0	859	49.00	29.81	1,413
10	Bread	1 kg	59.13	5.33	11.1	2.0	2.0	118	10.66	10.66	118
11	Wheat flour	1 kg	50.52	4.40	11.5	20.0	2.0	1,010	8.80	88.00	101
12	Dried fish	1 kg	227.48	2.25	101.1	2.0	2.0	455	4.50	4.50	455
13	Salt	500 gr	10.71	0.14	76.5	4.0	4.0	43	0.56	0.56	43
14	Vegetable oil	1 kg	216.00	6.79	31.8	1.4	1.0	307	6.79	9.67	216
15	Fish/soy sauce	1 liter	81.00	1.00	81.0	15.0	10.0	1,215	10.00	15.00	810
16	Tea	500 gr	268.00	7.00	38.3	6.0	2.0	1,608	14.00	42.00	536
17	Soap	1 piece	35.59	0.44	80.9	5.0	5.0	178	2.20	2.20	178
18	Cigarettes	20	15.00	2.00	7.5	1.0	1.0	15	2.00	2.00	15
19	Charcoal	10 kg	278.00	8.87	31.3	1.0	1.0	278	8.87	8.87	278

Weighted cost of basket		
Thailand in	Baht	487.11
Thailand in	yen	16,202
Japan in	yen	17,281
Japan in	Baht	620.25

PPP1	100 yen =	3.01	Baht
PPP2	100 yen =	3.59	Baht
Average PPP	100 yen =	**3.28**	Baht
Exchange rate	100 yen =	5.23	Baht
Exchange rate	100 Baht =	1,913	yen
Number of matches		19	

Appendix Table A.2.8.5: Binary PPP calculation Japan-Thailand, 1958

	Consumer items	Unit	Price Japan Yen	Price Thailand Baht	Ratio	Consumption Japan Quantity	Consumption Thailand Quantity	Consumption Japan Value Yen	Consumption Thailand Value Baht	Consumption Japan Value Baht	Consumption Thailand Value Yen
1	Rice	1 kg	101.70	1.56	65.2	125.3	128.6	12,741	200.61	195.44	13,078
2	Sweet potatoes	1 kg	26.17	1.36	19.2	8.7	5.0	228	6.80	11.83	131
3	Potatoes	1 kg	23.14	7.25	3.2	17.9	1.0	415	7.25	130.14	23
4	Soybeans	1 kg	137.10	2.50	54.8	6.2	1.0	849	2.50	15.50	137
5	Onions	1 kg	20.71	5.52	3.8	6.0	2.0	124	11.04	33.12	41
6	Sugar	1 kg	138.85	6.10	22.8	4.5	4.0	623	24.40	27.39	555
7	Beef	1 kg	685.60	12.85	53.4	3.2	7.0	2,202	89.92	41.26	4,799
8	Pork	1 kg	507.75	15.36	33.1	3.2	5.0	1,631	76.80	49.34	2,539
9	Dried fish	1 kg	266.66	4.75	56.1	2.0	2.0	533	9.50	9.50	533
10	Eggs, chicken	10	135.31	5.80	23.3	9.0	15.3	1,218	88.93	52.22	2,075
11	Bread	1 kg	70.67	10.00	7.1	2.0	1.0	141	10.00	20.00	71
12	Wheat flour	1 kg	53.84	3.70	14.6	25.0	2.0	1,346	7.40	92.50	108
13	Salt	500 gr	10.00	0.18	55.6	4.0	4.0	40	0.72	0.72	40
14	Vegetable oil	1 kg	194.72	6.80	28.6	2.1	1.5	405	10.20	14.15	292
15	Fish/soy sauce	1 liter	86.00	1.00	86.0	15.0	10.0	1,290	10.00	15.00	860
16	Tea	500 gr	303.00	28.80	10.5	2.0	2.0	606	57.60	57.60	606
17	Beer	1 liter	198.41	16.92	11.7	2.0	1.0	397	16.92	33.84	198
18	Cigarettes	20	15.00	2.50	6.0	1.0	1.0	15	2.50	2.50	15
19	Soap	piece	29.62	0.50	59.2	4.0	4.0	118	2.00	2.00	118
20	Charcoal	10 kg	374.67	48.40	7.7	1.0	1.0	375	48.40	48.40	375

Weighted cost of basket		
Thailand in	Baht	683.49
Thailand in	yen	26,595
Japan in	yen	25,298
Japan in	Baht	852.42

PPP1	100 yen =	2.57	Baht
PPP2	100 yen =	3.37	Baht
Average PPP	100 yen =	**2.94**	Baht
Exchange rate	100 yen =	5.83	Baht
Exchange rate	100 Baht =	1,716	yen
Number of matches		20	

Appendix Table A.2.8.5: Binary PPP calculation Japan-Thailand, 1969

	Consumer items	Unit	Price Japan Yen	Price Thailand Baht	Ratio	Consumption Japan Quantity	Consumption Thailand Quantity	Consumption Japan Value Yen	Consumption Thailand Value Baht	Consumption Japan Value Baht	Consumption Thailand Value Yen
1	Rice	1 kg	181.00	2.75	65.8	121.6	147.5	22,012	405.63	334.44	26,698
2	Potatoes	1 kg	221.25	1.98	111.7	12.0	0.3	2,655	0.59	23.76	66
3	Onions	1 kg	45.70	10.57	4.3	10.3	2.1	471	22.20	108.87	96
4	Sugar	1 kg	130.00	3.30	39.4	7.6	7.7	982	25.41	24.93	1,001
5	Beef	1 kg	1,295.00	22.24	58.2	4.9	6.8	6,318	151.20	108.48	8,806
6	Pork	1 kg	844.50	22.92	36.8	4.9	5.5	4,120	126.06	111.82	4,645
7	Poultry	1 kg	1,406.25	18.71	75.2	4.9	5.4	6,861	101.03	91.28	7,594
8	Dried fish	1 kg	503.50	31.54	16.0	5.0	5.0	2,518	157.70	157.70	2,518
9	Eggs, chicken	10	165.00	6.70	24.6	25.1	14.0	4,145	93.80	168.33	2,310
10	Salt	500 gr	16.13	0.50	32.3	4.0	4.0	65	2.00	2.00	65
11	Vegetable oil	1 kg.	60.32	9.81	6.1	5.5	1.3	335	12.75	54.43	78
12	Fish/soy sauce	1 liter	138.89	2.67	52.0	15.0	5.0	2,083	13.35	40.05	694
13	Soap	1 piece	30.00	1.58	19.0	5.0	2.0	150	3.15	7.88	60
14	Cigarettes	20	40.00	3.50	11.4	10.0	10.0	400	35.00	35.00	400
15	Charcoal	10 kg	638.67	7.90	80.8	2.0	2.0	1,277	15.80	15.80	1,277

Weighted cost of basket		
Thailand in	Baht	1165.67
Thailand in	yen	56,308
Japan in	yen	54,392
Japan in	Baht	1284.78

PPP1	100 yen =	2.07	Baht
PPP2	100 yen =	2.36	Baht
Average PPP	100 yen =	**2.21**	Baht
Exchange rate	100 yen =	5.83	Baht
Exchange rate	100 Baht =	1,715	yen
Number of matches		15	

Appendix Table A.2.9.1: Binary PPP calculation Japan-Taiwan, 1913

	Consumer items	Unit	Price Japan JYen	Price Taiwan TYen	Ratio	Consumption Japan Quantity	Consumption Taiwan Quantity	Consumption Japan Value JYen	Consumption Taiwan Value TYen	Consumption Japan Value TYen	Consumption Taiwan Value JYen
1	Rice	1 kg	0.19	0.12	1.6	130.2	187.3	25.10	21.92	15.23	36.13
2	Soybeans	1 kg	0.11	0.09	1.2	0.8	1.0	0.09	0.09	0.07	0.11
3	Sugar	1 kg	0.29	0.09	3.2	1.8	1.5	0.52	0.13	0.16	0.43
4	Beef	1 kg	1.56	0.67	2.3	1.1	2.0	1.74	1.34	0.75	3.13
5	Eggs, chicken	10	0.40	0.27	1.5	1.3	3.0	0.52	0.80	0.35	1.20
6	Vegetable oil	1 liter	0.43	0.36	1.2	0.4	1.0	0.18	0.36	0.15	0.43
7	Salt	500 gr	0.03	0.01	5.3	4.0	4.0	0.11	0.02	0.02	0.11
8	Tea	500 gr	0.27	0.69	0.4	4.3	4.0	1.14	2.77	2.95	1.07
9	Beer	1 liter	0.34	0.45	0.8	0.5	1.0	0.17	0.45	0.22	0.34
#	Charcoal	10 kg	0.39	0.26	1.5	2.1	2.0	0.83	0.52	0.55	0.79
#	Firewood	10 kg	0.45	0.12	3.9	3.0	3.0	1.34	0.35	0.35	1.36
#	Kerosene	1 liter	0.14	0.22	0.6	5.0	5.0	0.72	1.12	1.12	0.72

Weighted cost of basket		
Korea in	TYen	29.86
Korea in	JYen	45.81
Japan in	JYen	32.46
Japan in	TYen	21.92

PPP1	100 JYen =	65.19	TYen
PPP2	100 JYen =	67.51	TYen
Average PPP	100 JYen =	**66.34**	TYen
Exchange rate	100 JYen =	100.00	TYen
Exchange rate	100 TYen =	100.00	JYen
Number of matches		12	

Appendix Table A.2.9.2: Binary PPP calculation Japan-Taiwan, 1922

	Consumer items	Unit	Price Japan JYen	Price Taiwan TYen	Ratio	Consumption Japan Quantity	Consumption Taiwan Quantity	Consumption Japan Value JYen	Consumption Taiwan Value TYen	Consumption Japan Value TYen	Consumption Taiwan Value JYen
1	Rice	1 kg	0.32	0.16	2.0	130.7	178.7	41.70	28.94	21.18	56.99
2	Soybeans	1 kg	0.28	0.20	1.4	1.1	1.0	0.30	0.20	0.22	0.28
3	Red beans	1 kg	0.18	0.26	0.7	1.0	1.0	0.18	0.26	0.26	0.18
4	Wheat flour	1 kg	0.17	0.27	0.6	0.8	1.0	0.14	0.27	0.21	0.17
5	Sugar	1 kg	0.44	0.12	3.8	3.1	5.0	1.35	0.58	0.36	2.18
6	Beef	1 kg	3.42	1.51	2.3	0.5	1.0	1.77	1.51	0.78	3.42
7	Pork	1 kg	2.44	1.05	2.3	0.5	1.0	1.26	1.05	0.54	2.44
8	Chicken	1 kg	4.06	2.48	1.6	0.5	1.0	2.09	2.48	1.28	4.06
9	Eggs, chicken	10	0.66	0.48	1.4	2.7	3.0	1.77	1.43	1.27	1.98
#	Vegetable oil	1 liter	0.72	0.50	1.4	0.7	1.0	0.50	0.50	0.35	0.72
#	Tea	500 gr	0.27	1.29	0.2	4.3	4.0	1.14	5.16	5.50	1.07
#	Kerosene	1 liter	0.27	0.39	0.7	5.0	5.0	1.35	1.93	1.93	1.35
#	Firewood	10 kg	1.32	0.12	11.3	2.7	2.5	3.58	0.29	0.32	3.29
#	Charcoal	10 kg	1.14	0.68	1.7	2.2	2.0	2.53	1.36	1.52	2.28

Weighted cost of basket		
Korea in	TYen	45.97
Korea in	JYen	80.41
Japan in	JYen	59.67
Japan in	TYen	35.72

PPP1	100 JYen =	57.16	TYen
PPP2	100 JYen =	59.86	TYen
Average PPP	100 JYen =	**58.49**	TYen
Exchange rate	100 JYen =	100.00	TYen
Exchange rate	100 TYen =	100.00	JYen
Number of matches		14	

Appendix Table A.2.9.3: Binary PPP calculation Japan-Taiwan, 1938

	Consumer items	Unit	Price Japan yen	Price Taiwan yen	Ratio	Consumption Japan Quantity	Consumption Taiwan Quantity	Consumption Japan Value JYen	Consumption Taiwan Value TYen	Consumption Japan Value TYen	Consumption Taiwan Value JYen
1	Rice	1 kg	0.30	0.21	1.4	142.4	233.7	43.01	49.56	30.20	70.59
2	Maize/barley	1 kg	0.18	0.15	1.2	16.9	15.0	2.99	2.20	2.47	2.66
3	Soybeans	1 kg	0.27	0.24	1.1	1.0	1.0	0.27	0.24	0.24	0.27
4	Red beans	1 kg	0.17	0.29	0.6	1.0	1.0	0.17	0.29	0.29	0.17
5	Potatoes	1 kg	0.55	0.11	4.8	3.6	2.5	2.00	0.29	0.42	1.37
6	Sweet potatoes	1 kg	0.09	0.09	1.0	27.0	20.0	2.36	1.77	2.39	1.75
7	Wheat flour	1 kg	0.27	0.29	0.9	0.7	1.0	0.19	0.29	0.20	0.27
8	Sugar	1 kg	0.45	0.19	2.4	4.2	5.0	1.91	0.94	0.80	2.25
9	Beef	1 kg	4.44	1.33	3.3	0.6	1.0	2.85	1.33	0.86	4.44
10	Pork	1 kg	1.99	1.02	1.9	0.6	1.0	1.28	1.02	0.66	1.99
11	Chicken	1 kg	3.41	2.77	1.2	0.6	1.0	2.19	2.77	1.78	3.41
12	Eggs, chicken	10	0.62	0.54	1.1	3.6	3.0	2.21	1.62	1.92	1.86
13	Vegetable oil	1 liter	0.84	0.50	1.7	1.9	2.0	1.56	1.00	0.93	1.68
14	Tea	500 gr	0.64	1.10	0.6	5.2	2.0	3.34	2.20	5.72	1.28
15	Milk	1 liter	0.44	0.44	1.0	2.0	2.0	0.88	0.89	0.88	0.89
16	Charcoal	1 kg	0.12	0.05	2.2	24.2	20.0	2.82	1.07	1.29	2.33
17	Firewood	1 kg	0.08	0.02	4.2	8.6	8.0	0.67	0.15	0.16	0.62
18	Kerosene	1 liter	0.21	0.47	0.4	5.0	5.0	1.03	2.34	2.34	1.03
19	Coal	1 kg	0.10	0.02	4.4	5.0	5.0	0.52	0.12	0.12	0.52
20	Soap	piece	0.17	0.10	1.7	2.0	2.0	0.35	0.20	0.20	0.35

Weighted cost of basket		
Taiwan in	TYen	70.27
Taiwan in	JYen	99.73
Japan in	JYen	72.59
Japan in	TYen	53.85

PPP1	100 JYen =	70.46	TYen
PPP2	100 JYen =	74.18	TYen
Average PPP	100 JYen =	**72.30**	TYen
Exchange rate	100 JYen =	100.00	TYen
Exchange rate	100 TYen =	100.00	JYen
Number of matches		20	

Appendix Table A.2.9.4: Binary PPP calculation Japan-Taiwan, 1952

	Consumer items	Unit	Price Japan Yen	Price Taiwan NT$	Ratio	Consumption Japan Quantity	Consumption Taiwan Quantity	Consumption Japan Value Yen	Consumption Taiwan Value NT$	Consumption Japan Value NT$	Consumption Taiwan Value Yen
1	Rice	1 kg	62.00	2.30	27.0	117.2	193.0	7,265	443.90	269.50	11,966
2	Potatoes	1 kg	23.92	0.57	42.0	22.7	2.0	544	1.14	12.96	48
3	Onions	1 kg	27.45	3.33	8.2	2.0	2.0	55	6.66	6.66	55
4	Bread	1 kg	59.13	4.45	13.3	2.0	2.0	118	8.90	8.90	118
5	Sugar	1 kg	153.08	3.67	41.7	5.3	8.0	810	29.53	19.42	1,232
6	Beef	1 kg	431.08	12.58	34.3	1.9	5.0	834	62.91	24.34	2,155
7	Pork	1 kg	462.93	18.67	24.8	1.9	5.0	896	93.35	36.12	2,315
8	Milk	1 liter	77.89	6.66	11.7	3.9	10.0	301	66.60	25.77	779
9	Bread	1 kg	59.13	4.45	13.3	2.0	2.0	118	8.90	8.90	118
10	Dried fish	1 kg	227.48	12.00	19.0	2.0	2.0	455	24.00	24.00	455
11	Eggs	10	141.27	10.00	14.1	6.1	5.0	859	50.00	60.83	706
12	Salt	500 gr	10.71	0.59	18.3	2.0	2.0	21	1.17	1.17	21
13	Beer	1 liter	180.56	16.67	10.8	2.0	2.0	361	33.34	33.34	361
14	Cigarettes	20	15.00	2.60	5.8	2.0	2.0	30	5.20	5.20	30
15	Tea	500 gr	268.00	9.72	27.6	6.0	2.0	1,608	19.44	58.32	536

Weighted cost of basket		
Taiwan in	NT$	855
Taiwan in	yen	20,896
Japan in	yen	14,276
Japan in	NT$	595

PPP1	100 yen =	4.09	NT$
PPP2	100 yen =	4.17	NT$
Average PPP	100 yen =	**4.13**	NT$
Exchange rate	100 yen =	4.71	NT$
Exchange rate	100 NT$ =	2123.82	yen
Number of matches		15	

Appendix Table A.2.9.5: Binary PPP calculation Japan-Taiwan, 1958

	Consumer items	Unit	Price Japan Yen	Price Taiwan NT$	Ratio	Consumption Japan Quantity	Consumption Taiwan Quantity	Consumption Japan Value Yen	Consumption Taiwan Value NT$	Consumption Japan Value NT$	Consumption Taiwan Value Yen
1	Rice	1 kg	101.70	3.86	26.3	125.3	189.0	12,741	730	484	19,221
2	Potatoes	1 kg	23.14	1.00	23.1	8.7	20.0	201	20	9	463
3	Onions	1 kg	20.71	8.00	2.6	6.0	2.0	124	16	48	41
4	Bread	1 kg	70.67	13.33	5.3	2.0	2.0	141	27	27	141
5	Sugar	1 kg	138.85	5.05	27.5	4.5	8.0	623	41	23	1,117
6	Beef	1 kg	685.60	26.53	25.8	3.2	5.0	2,202	133	85	3,428
7	Pork	1 kg	600.65	27.90	21.5	3.2	5.0	1,929	140	90	3,003
8	Dried fish	1 kg	266.66	26.67	10.0	2.0	2.0	533	53	53	533
9	Eggs	10	135.31	19.00	7.1	9.0	5.0	1,218	95	171	677
10	Milk	1 liter	78.11	13.89	5.6	9.0	10.0	701	139	125	781
11	Salt	500 gr	10.00	1.17	8.6	4.0	4.0	40	5	5	40
12	Beer	1 liter	198.41	23.33	8.5	2.0	2.0	397	47	47	397
13	Cigarettes	20	15.00	3.00	5.0	2.0	2.0	30	6	6	30
14	Soap	1 piece	29.62	0.93	32.0	4.0	4.0	118	4	4	118
15	Tea	500 gr	303.00	15.79	19.2	2.0	2.0	606	32	32	606

Weighted cost of basket		
Taiwan in	NT$	1,485
Taiwan in	yen	30,597
Japan in	yen	21,607
Japan in	NT$	1,206

PPP1	100 yen =	4.85	NT$
PPP2	100 yen =	5.58	NT$
Average PPP	100 yen =	**5.20**	NT$
Exchange rate	100 yen =	9.73	NT$
Exchange rate	100 NT$ =	1,028	yen
Number of matches		15	

Appendix Table A.2.9.6: Binary PPP calculation Japan-Taiwan, 1969

	Consumer items	Unit	Price Japan Yen	Price Taiwan NT$	Ratio	Consumption Japan Quantity	Consumption Taiwan Quantity	Consumption Japan Value Yen	Consumption Taiwan Value NT$	Consumption Japan Value NT$	Consumption Taiwan Value Yen
1	Rice	1 kg	181.00	7.15	25.3	121.6	162.0	22,012	1,158	870	29,322
2	Sweet potatoes	1 kg	128.00	2.63	48.7	4.1	20.0	524	53	11	2,560
3	Potatoes	1 kg	221.25	6.53	33.9	12.0	2.0	2,655	13	78	443
4	Red beans	1 kg	320.00	9.17	34.9	5.0	2.0	1,600	18	46	640
5	Bread	1 kg	107.00	11.74	9.1	2.0	2.0	214	23	23	214
6	Sugar	1 kg	130.00	11.60	11.2	7.6	8.0	982	93	88	1,046
7	Beef	1 kg	1,295.00	59.73	21.7	4.9	5.0	6,318	299	291	6,475
8	Pork	1 kg	999.01	46.82	21.3	4.9	5.0	4,874	234	228	4,995
9	Poultry	1 kg	1,406.25	77.30	18.2	4.9	5.0	6,861	387	377	7,031
10	Eggs, chicken	10	165.00	21.24	7.8	25.1	2.0	4,145	42	534	330
11	Milk	1 liter	144.44	16.67	8.7	21.8	10.0	3,149	167	363	1,444
12	Salt	500 gr	10.00	1.71	5.9	4.0	4.0	40	7	7	40
13	Soy sauce	1 liter	138.89	15.00	9.3	15.0	5.0	2,083	75	225	694
14	Vegetable oil	1 kg	60.32	21.97	2.7	5.5	10.0	335	220	122	603
15	Tea	500 gr	465.00	34.45	13.5	2.0	2.0	911	69	68	930
16	Soap	piece	120.00	10.00	12.0	4.0	3.0	480	30	40	360
17	Charcoal	1 kg	63.87	2.99	21.4	20.0	20.0	1,277	60	60	1,277
18	Coal	1 kg	18.35	0.66	27.9	2.0	2.0	37	1	1	37

Weighted cost of basket		
Taiwan in	NT$	2,949
Taiwan in	yen	58,442
Japan in	yen	58,499
Japan in	NT$	3,432

PPP1	100 yen =	5.05	NT$
PPP2	100 yen =	5.87	NT$
Average PPP	100 yen =	**5.44**	NT$
Exchange rate	100 yen =	11.16	NT$
Exchange rate	100 NT$ =	896	yen
Number of matches		18	

Appendix Table A.2.10.1: Binary PPP calculation Japan-Cochinchina, 1913

	Consumer items	Unit	Price Japan yen	Price Cochinchina piastre	Ratio	Consumption Japan Quantity	Consumption Cochinchina Quantity	Consumption Japan Value yen	Consumption Cochinchina Value piastre	Consumption Japan Value piastre	Consumption Cochinchina Value yen
1	Rice	1 kg	0.19	0.07	2.9	130.2	176.5	25.10	11.65	8.59	34.04
2	Sugar	1 kg	0.29	0.31	0.9	1.8	1.0	0.52	0.31	0.56	0.29
3	Beef	1 kg	1.56	0.35	4.5	0.6	7.0	0.87	2.45	0.19	10.95
4	Eggs, chicken	10	0.20	0.26	0.8	1.3	7.5	0.26	1.95	0.34	1.50
5	Vegetable oil	1 kg	0.43	0.31	1.4	0.4	1.0	0.18	0.31	0.13	0.43
6	Beer	1 liter	0.35	0.41	0.8	2.0	1.0	0.70	0.41	0.83	0.35
7	Salt	500 gr	0.03	0.02	1.3	4.0	2.0	0.11	0.04	0.08	0.05
8	Tea	500 gr	0.27	0.10	2.7	4.3	4.7	1.14	0.47	0.43	1.25
9	Soap	500 gr	0.32	0.20	1.6	2.0	2.0	0.64	0.40	0.40	0.64
10	Charcoal	10 kg	0.39	0.19	2.1	2.2	2.0	0.87	0.38	0.42	0.79
11	Kerosene	1 liter	0.14	0.15	1.0	5.0	6.6	0.72	0.99	0.75	0.95

Weighted cost of basket		
Cochinchina in	piastre	19.36
Cochinchina in	yen	51.25
Japan in	yen	31.12
Japan in	piastre	12.71

PPP1	100 yen =	37.77	piastre
PPP2	100 yen =	40.85	piastre
Average PPP	100 yen =	**39.28**	piastre
Exchange rate	100 yen =	99.52	piastre
Exchange rate	100 piastre =	100.48	yen
Number of matches		11	

Appendix Table A.2.10.2: Binary PPP calculation Japan-Cochinchina, 1922

	Consumer items	Unit	Price Japan yen	Price Cochinchina piastre	Ratio	Consumption Japan Quantity	Consumption Cochinchina Quantity	Consumption Japan Value yen	Consumption Cochinchina Value piastre	Consumption Japan Value piastre	Consumption Cochinchina Value yen
1	Rice	1 kg	0.32	0.08	4.2	130.7	148.9	41.70	11.37	9.99	47.48
2	Potatoes	1 kg	0.72	0.15	4.8	8.0	1.0	5.76	0.15	1.20	0.72
3	Sugar	1 kg	0.44	0.43	1.0	3.1	1.0	1.35	0.43	1.33	0.44
4	Beef	1 kg	3.42	0.45	7.6	0.8	7.0	2.65	3.15	0.35	23.95
5	Eggs, chicken	10	0.53	0.37	1.4	2.7	7.5	1.41	2.78	0.99	3.96
6	Beer	1 liter	0.63	0.48	1.3	2.0	1.0	1.27	0.48	0.95	0.63
7	Salt	500 gr	0.04	0.03	1.7	4.0	4.0	0.17	0.10	0.10	0.17
8	Tea	500 gr	0.82	0.15	5.4	4.2	4.7	3.47	0.71	0.64	3.84
9	Kerosene	1 liter	0.14	0.15	1.0	5.0	6.6	0.72	0.99	0.75	0.95

Weighted cost of basket			
Cochinchina in	piastre	20.15	
Cochinchina in	yen	82.15	
Japan in	yen	58.51	
Japan in	piastre	16.30	
PPP1	100 yen =	24.53	piastre
PPP2	100 yen =	27.86	piastre
Average PPP	100 yen =	**26.14**	piastre
Exchange rate	100 yen =	91.13	piastre
Exchange rate	100 piastre =	109.73	yen
Number of matches		9	

Appendix Table A.2.10.3: Binary PPP calculation Japan-Cochinchina, 1938

	Consumer items	Unit	Price Japan yen	Price Cochinchina piastre	Ratio	Consumption Japan Quantity	Consumption Cochinchina Quantity	Consumption Japan Value yen	Consumption Cochinchina Value piastre	Consumption Japan Value piastre	Consumption Cochinchina Value yen
1	Rice	1 kg	0.30	0.11	2.8	142.4	179.0	43.01	19.03	15.13	54.08
2	Sugar	1 kg	0.45	0.54	0.8	4.2	1.0	1.91	0.54	2.29	0.45
3	Beef	1 kg	4.44	0.50	8.9	1.9	7.0	8.54	3.50	0.96	31.07
4	Eggs, chicken	10	0.50	0.43	1.2	3.6	7.5	1.76	3.23	1.53	3.72
5	Beer	1 liter	0.60	0.62	1.0	2.0	1.0	1.21	0.62	1.24	0.60
6	Salt	500 gr	0.06	0.03	1.9	4.0	4.0	0.23	0.12	0.12	0.23
7	Tea	500 gr	0.64	0.15	4.3	5.2	4.7	3.34	0.71	0.78	3.02

Weighted cost of basket			
Cochinchina in	piastre	27.74	
Cochinchina in	yen	93.17	
Japan in	yen	60.00	
Japan in	piastre	22.06	
PPP1	100 yen =	29.77	piastre
PPP2	100 yen =	36.76	piastre
Average PPP	100 yen =	**33.08**	piastre
Exchange rate	100 yen =	71.91	piastre
Exchange rate	100 piastre =	139.06	yen
Number of matches		7	

Appendix Table A.2.10.4: Binary PPP calculation Japan-Cochinchina, 1952

	Consumer items	Unit	Price Japan Yen	Price S.Vietnam Piastre	Ratio	Consumption Japan Quantity	Consumption S.Vietnam Quantity	Consumption Japan Value Yen	Consumption S.Vietnam Value Piastre	Consumption Japan Value Piastre	Consumption S.Vietnam Value Yen
1	Rice	1 kg	62.00	4.46	13.9	117.2	178.0	7,265	794.05	522.60	11,038
2	Bread	1 kg	59.13	6.91	8.6	2.0	2.0	118	13.82	13.82	118
3	Sugar	1 kg	153.08	11.00	13.9	5.3	0.4	810	4.13	58.22	58
4	Beef	1 kg	431.08	44.97	9.6	1.9	1.0	834	44.97	86.99	431
5	Pork	1 kg	391.33	35.14	11.1	1.9	1.0	757	35.14	67.98	391
6	Eggs, chicken	10	141.27	14.31	9.9	6.1	2.0	859	28.61	87.03	283
7	Wheat flour	1 kg	50.52	5.68	8.9	20.0	25.0	1,010	142.00	113.60	1,263
8	Fish/soy sauce	1 liter	81.00	10.03	8.1	15.0	10.0	1,215	100.27	150.40	810
9	Vegetable oil	1 kg	216.00	21.25	10.2	1.4	2.0	307	42.50	30.25	432
10	Tea	500 gr	268.00	12.50	21.4	6.0	1.0	1,608	12.50	75.00	268
11	Soap	piece 100 gr	35.59	1.10	32.5	3.0	3.0	107	3.29	3.29	107
12	Charcoal	10 kg	278.00	15.00	18.5	2.0	2.0	556	30.00	30.00	556
13	Kerosene	1 liter	7.34	4.50	1.6	2.0	2.0	15	9.00	9.00	15

Weighted cost of basket			
S.Vietnam in	piastre	1,260	
S.Vietnam in	yen	15,770	
Japan in	yen	15,462	
Japan in	piastre	1,248	
PPP1	100 yen =	7.99	piastre
PPP2	100 yen =	8.07	piastre
Average PPP	100 yen =	**8.03**	piastre
Exchange rate	100 yen =	5.70	piastre
Exchange rate	100 piastre =	1753.52	yen
Number of matches		13	

Appendix Table A.2.10.5: Binary PPP calculation Japan-South Vietnam, 1958

	Consumer items	Unit	Price Japan Yen	Price S.Vietnam Piastre	Ratio	Consumption Japan Quantity	Consumption S.Vietnam Quantity	Consumption Japan Value Yen	Consumption S.Vietnam Value Piastre	Consumption Japan Value Piastre	Consumption S.Vietnam Value Yen
1	Rice	1 kg	101.70	5.66	18.0	125.3	250.1	12,741	1,416	709	25,434
2	Sweet potatoes	1 kg	26.17	3.10	8.4	8.7	10.6	228	33	27	277
3	Potatoes	1 kg	86.78	13.60	6.4	17.9	5.0	1,558	68	244	434
4	Bread	1 kg	70.67	11.00	6.4	2.0	2.0	141	22	22	141
5	Sugar	1 kg	138.85	15.79	8.8	4.5	2.0	623	32	71	279
6	Beef	1 kg	685.60	60.00	11.4	3.2	1.0	2,202	60	193	686
7	Pork	1 kg	507.75	71.44	7.1	3.2	1.0	1,631	71	229	508
8	Eggs, chicken	10	135.31	21.00	6.4	9.0	2.5	1,218	53	189	338
9	Dried fish	1 kg	227.48	22.50	10.1	1.0	1.0	227	23	23	227
10	Wheat flour	1 kg	53.84	8.04	6.7	25.0	10.0	1,346	80	201	538
11	Salt	500 gr	10.00	3.30	3.0	4.0	4.0	40	13	13	40
12	Fish/soy sauce	1 liter	86.00	20.28	4.2	15.0	5.0	1,290	101	304	430
13	Vegetable oil	1 kg	194.72	27.94	7.0	2.1	1.0	405	28	58	195
14	Tea	500 gr	303.00	50.00	6.1	2.0	2.0	606	100	100	606
15	Beer	1 liter	198.41	10.32	19.2	5.0	5.0	992	52	52	992
16	Soap	piece 100 gr	29.62	1.71	17.4	4.0	3.0	118	5	7	89
17	Charcoal	10 kg	374.67	23.25	16.1	2.0	2.0	749	47	47	749
18	Kerosene	1 liter	31.16	6.00	5.2	2.0	2.0	62	12	12	62

Weighted cost of basket			
S.Vietnam in	piastre	2,215	
S.Vietnam in	yen	32,025	
Japan in	yen	26,179	
Japan in	piastre	2,500	
PPP1	100 yen =	6.92	piastre
PPP2	100 yen =	9.55	piastre
Average PPP	100 yen =	**8.13**	piastre
Exchange rate	100 yen =	9.73	piastre
Exchange rate	100 piastre =	1,028	yen
Number of matches		18	

Appendix Table A.2.10.6: Binary PPP calculation Japan-South Vietnam, 1969

	Consumer items	Unit	Price Japan Yen	Price S.Vietnam Piastre	Ratio	Consumption Japan Quantity	Consumption S.Vietnam Quantity	Consumption Japan Value Yen	Consumption S.Vietnam Value Piastre	Consumption Japan Value Piastre	Consumption S.Vietnam Value Yen
1	Rice	1 kg	181.00	55.20	3.3	121.6	150.3	22,012	8,297	6,713	27,204
2	Sweet potatoes	1 kg	128.00	26.60	4.8	4.1	22.8	524	606	109	2,918
3	Potatoes	1 kg	221.25	76.20	2.9	12.0	1.9	2,655	145	914	420
4	Bread	1 kg	107.00	67.00	1.6	2.0	2.0	214	134	134	214
5	Sugar	1 kg	130.00	44.60	2.9	7.6	9.3	982	415	337	1,209
6	Beef	1 kg	1,295.00	331.00	3.9	4.9	2.0	6,318	662	1,615	2,590
7	Pork	1 kg	844.50	395.00	2.1	4.9	6.8	4,120	2,686	1,927	5,743
8	Poultry	1 kg	1,406.25	364.00	3.9	4.9	1.6	6,861	582	1,776	2,250
9	Eggs, chicken	10	132.00	137.00	1.0	25.1	2.5	3,316	343	3,442	330
10	Wheat flour	1 kg	74.40	35.71	2.1	31.3	12.7	2,329	454	1,118	945
11	Salt	500 gr	10.00	17.50	0.6	4.0	4.0	40	70	70	40
12	Fish/soy sauce	1 liter	138.89	85.33	1.6	15.0	10.0	2,083	853	1,280	1,389
13	Vegetable oil	1 kg	211.11	138.00	1.5	5.5	0.9	1,171	124	766	190
14	Tea	500 gr	465.00	146.50	3.2	2.0	0.6	911	88	287	279
15	Beer	1 liter	206.35	52.86	3.9	10.0	5.0	2,063	264	529	1,032
16	Soap	piece 100 gr	30.00	7.66	3.9	4.0	3.0	120	23	31	90
17	Charcoal	10 kg	638.67	326.67	2.0	2.0	2.0	1,277	653	653	1,277
18	Kerosene	1 liter	19.61	10.40	1.9	2.0	2.0	39	21	21	39

Weighted cost of basket		
S.Vietnam in	piastre	16,420
S.Vietnam in	yen	48,160
Japan in	yen	57,038
Japan in	piastre	21,721

PPP1	100 yen =	34.09	piastre
PPP2	100 yen =	38.08	piastre
Average PPP	100 yen =	**36.03**	piastre
Exchange rate	100 yen =	32.93	piastre
Exchange rate	100 piastre =	303.70	yen
Number of matches		18	

Appendix Table A.2.11.1: Binary PPP calculation Japan-Tonkin, 1913

	Consumer items	Unit	Price Japan yen	Price Tonkin piastre	Ratio	Consumption Japan Quantity	Consumption Tonkin Quantity	Consumption Japan Value yen	Consumption Tonkin Value piastre	Consumption Japan Value piastre	Consumption Tonkin Value yen
1	Rice	1 kg	0.19	0.07	2.8	130.2	173.3	25.10	12.05	9.05	33.42
2	Potatoes	1 kg	0.31	0.09	3.5	7.6	5.0	2.37	0.45	0.68	1.56
3	Beans/soybeans	1 kg	0.11	0.06	1.8	0.8	5.0	0.09	0.30	0.05	0.54
4	Sugar	1 kg	0.29	0.31	0.9	1.8	0.4	0.52	0.12	0.56	0.12
5	Beef	1 kg	1.56	0.25	6.3	0.6	8.0	0.87	2.00	0.14	12.52
6	Eggs, chicken	10	0.20	0.17	1.2	1.3	4.9	0.26	0.83	0.22	0.98
7	Vegetable oil	1 kg	0.43	0.30	1.4	0.4	1.0	0.18	0.30	0.13	0.43
8	Beer	1 liter	0.35	0.40	0.9	0.5	1.0	0.18	0.40	0.20	0.35
9	Salt	500 gr	0.03	0.02	1.3	4.0	4.0	0.11	0.08	0.08	0.11
10	Tea	500 gr	0.27	0.10	2.7	4.3	4.2	1.14	0.42	0.43	1.12
11	Soap	500 gr	0.32	0.20	1.6	2.0	2.0	0.64	0.40	0.40	0.64
12	Charcoal	10 kg	0.39	0.22	1.8	2.2	2.0	0.87	0.44	0.49	0.79
13	Kerosene	1 liter	0.14	0.15	1.0	5.0	6.6	0.72	0.99	0.75	0.95

Weighted cost of basket		
Tonkin in	piastre	18.78
Tonkin in	yen	53.53
Japan in	yen	33.05
Japan in	piastre	13.17

PPP1	100 yen =	35.08	piastre
PPP2	100 yen =	39.85	piastre
Average PPP	100 yen =	**37.39**	piastre
Exchange rate	100 yen =	99.52	piastre
Exchange rate	100 piastre =	100.48	yen
Number of matches		13	

Appendix Table A.2.11.2: Binary PPP calculation Japan-Tonkin, 1922

	Consumer items	Unit	Price Japan yen	Price Tonkin piastre	Ratio	Consumption Japan Quantity	Consumption Tonkin Quantity	Consumption Japan Value yen	Consumption Tonkin Value piastre	Consumption Japan Value piastre	Consumption Tonkin Value yen
1	Rice	1 kg	0.32	0.08	4.2	130.7	136.8	41.70	10.33	9.87	43.63
2	Potatoes	1 kg	0.72	0.13	5.5	8.0	1.0	5.76	0.13	1.04	0.72
3	Sugar	1 kg	0.44	0.43	1.0	3.1	0.4	1.35	0.17	1.33	0.17
4	Beef	1 kg	3.42	0.40	8.6	0.8	8.0	2.65	3.20	0.31	27.38
5	Eggs, chicken	10	0.53	0.23	2.3	2.7	4.9	1.41	1.13	0.62	2.59
6	Beer	1 liter	0.63	0.49	1.3	2.0	1.0	1.27	0.49	0.98	0.63
7	Salt	500 gr	0.04	0.03	1.4	4.0	4.0	0.17	0.12	0.12	0.17
8	Kerosene	1 liter	0.27	0.26	1.0	5.0	6.6	1.35	1.72	1.30	1.79
9	Tea	500 gr	0.82	0.15	5.4	4.2	4.2	3.47	0.63	0.64	3.43

Weighted cost of basket			
Tonkin in	piastre	17.92	
Tonkin in	yen	80.52	
Japan in	yen	59.14	
Japan in	piastre	16.21	
PPP1	100 yen =	22.25	piastre
PPP2	100 yen =	27.41	piastre
Average PPP	100 yen =	**24.70**	piastre
Exchange rate	100 yen =	91.13	piastre
Exchange rate	100 piastre =	109.73	yen
Number of matches		9	

Appendix Table A.2.11.3: Binary PPP calculation Japan-Tonkin, 1938

	Consumer items	Unit	Price Japan yen	Price Tonkin piastre	Ratio	Consumption Japan Quantity	Consumption Tonkin Quantity	Consumption Japan Value yen	Consumption Tonkin Value piastre	Consumption Japan Value piastre	Consumption Tonkin Value yen
1	Rice	1 kg	0.30	0.11	2.8	142.4	115.3	43.01	12.40	15.31	34.84
2	Potatoes	1 kg	0.55	0.12	4.6	3.6	1.0	2.00	0.12	0.44	0.55
3	Sugar	1 kg	0.45	0.54	0.8	4.2	0.4	1.91	0.22	2.29	0.18
4	Beef	1 kg	4.44	1.00	4.4	1.9	8.0	8.54	8.00	1.92	35.51
5	Eggs, chicken	10	0.50	0.24	2.1	3.6	4.9	1.76	1.18	0.85	2.43
6	Beer	1 liter	0.60	0.41	1.5	2.0	1.0	1.21	0.41	0.83	0.60
7	Salt	500 gr	0.06	0.03	2.3	4.0	4.0	0.23	0.10	0.10	0.23
8	Tea	500 gr	0.64	0.15	4.3	5.2	4.2	3.34	0.63	0.78	2.70

Weighted cost of basket			
Tonkin in	piastre	23.05	
Tonkin in	yen	77.03	
Japan in	yen	62.01	
Japan in	piastre	22.52	
PPP1	100 yen =	29.92	piastre
PPP2	100 yen =	36.32	piastre
Average PPP	100 yen =	**32.97**	piastre
Exchange rate	100 yen =	71.91	piastre
Exchange rate	100 piastre =	139.06	yen
Number of matches		8	

Appendix Table A.2.11.4: Binary PPP calculation Japan-Tonkin, 1952

	Consumer items	Unit	Price Japan yen	Price N.Vietnam piastre	Ratio	Consumption Japan Quantity	Consumption N.Vietnam Quantity	Consumption Japan Value yen	Consumption N.Vietnam Value piastre	Consumption Japan Value piastre	Consumption N.Vietnam Value yen
1	Rice	1 kg	62.00	5.90	10.5	117.2	113.7	7,265	670.83	691.33	7,049
2	Sugar	1 kg	153.08	12.63	12.1	5.3	1.0	810	12.63	66.84	153
3	Beef	1 kg	431.08	67.50	6.4	1.9	1.0	834	67.50	130.58	431
4	Pork	1 kg	391.33	63.75	6.1	1.9	1.0	757	63.75	123.32	391
5	Eggs, chicken	10	141.27	21.00	6.7	6.1	4.0	859	84.00	127.75	565
6	Tea	500 gr	268.00	17.50	15.3	6.0	1.0	1,608	17.50	105.00	268
7	Soap	piece 100 gr	35.59	0.64	55.6	3.0	3.0	107	1.92	1.92	107
8	Beer	bottle	113.75	5.75	19.8	2.0	2.0	228	11.50	11.50	228

Weighted cost of basket		
S.Vietnam in	piastre	929.63
S.Vietnam in	yen	9,192
Japan in	yen	12,468
Japan in	piastre	1258.25

PPP1	100 yen =	10.11	piastre
PPP2	100 yen =	10.09	piastre
Average PPP	100 yen =	**10.10**	piastre
Exchange rate	100 yen =	5.70	piastre
Exchange rate	100 piastre =	1,754	yen
Number of matches		8	

Appendix Table A.2.11.5: Binary PPP calculation Japan-North Vietnam, 1958

	Consumer items	Unit	Price Japan yen	Price N.Vietnam dong	Ratio	Consumption Japan Quantity	Consumption N.Vietnam Quantity	Consumption Japan Value yen	Consumption N.Vietnam Value dong	Consumption Japan Value dong	Consumption N.Vietnam Value yen
1	Rice	1 kg	101.70	350.00	0.3	125.3	113.7	12,741	39,795	43,848	11,563
2	Beer	1 liter	198.41	3,069.09	0.1	5.0	3.0	992	9,207	15,345	595
3	Soap	piece 100 gr	29.62	300.00	0.1	4.0	2.0	118	600	1,200	59

Weighted cost of basket		
N.Vietnam in	dong	49,602
N.Vietnam in	yen	12,217
Japan in	yen	13,851
Japan in	dong	60,393

PPP1	100 yen =	405.99	dong
PPP2	100 yen =	436.01	dong
Average PPP	100 yen =	**420.73**	dong
Exchange rate	100 yen =	998.00	dong
Exchange rate	100 dong =	10.02	yen
Number of matches		3	