

Methodological paper Taiwan 1800

Christine Moll-Murata

Population figures, gender and age proportions<sup>1</sup>

After the Manchu Qing dynasty had incorporated Taiwan as part of Fujian province in 1683, the Han Chinese population on the island soared. By that time, the number of the Han Chinese immigrants was about 100,000, and thus equal to that of the indigenous population living in the Taiwan plains and mountains. Within a century, the Han Chinese population reached almost a million, despite central government attempts to curb emigration to Taiwan.<sup>2</sup>

The official population figures of 1777 are believed to be more trustworthy than others, while the next benchmark, 1824, according to Shepherd is less reliable.<sup>3</sup> The figures are 839,803 and 1,786,883 respectively, and if applied, the annual growth rate would have been 1.62 percent<sup>4</sup>. Since this is considered as too high – for 1800, it would result in a population of 1,215,343 – I estimate a number of one million for 1800.<sup>5</sup>

These population figures include the Austronesian people living in the Western plains of Taiwan, the so-called „civilized“ (lit. „cooked“, „mature“) aborigines, but not the „wild“ (lit. „raw“) groups that dwelt in the mountains. The size of the indigenous population is believed to have remained largely the same while Han Chinese immigration steeply increased.<sup>6</sup>

The number of the „wild“ aborigines in the 1905 census is given as 18,535 females and 17,828 males, a total of 36,363 people. The ratio is F/M 103:100. The figures for „civilized“ aborigines in 1905 were 46,432 in total, with 22,708 males and 23,724 females, ratio F/M 104:100. The aboriginal population in the plains, according to Shepherd, did not

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<sup>1</sup> Harriet Zurndorfer's comments und suggestions are gratefully acknowledged.

<sup>2</sup> Shepherd, p. 138.139, 141.

<sup>3</sup> Shepherd, p. 161.

<sup>4</sup> Shepherd, p. 161.

<sup>5</sup> Other historians follow the figures given in the official statistics, and assume a figure of 2 million for 1810. See Wu Tianquan, p. 138-140, and Shepherd's rejection of such figures, which he believes to be outdated and unreliable (Shepherd, p. 156).

<sup>6</sup> Shepherd, p. 394. We may note, however, the high figures cited by Meskill, with reference to the late-nineteenth century Chinese governor Liu Mingchuan, who set out from a quarter of a million of mountain aborigines, and claimed in 1885 that 70,000 mountain aborigines had surrendered to the Qing forces. See Meskill, pp. 185, 187.

experience much population increase or decrease. The highest count during the Dutch period was 40,000, and I shall assume this as the population figure for 1800.<sup>7</sup>

At the beginning of Han Chinese immigration, the sex ratio among the Chinese was extremely skewed. The first Chinese women came to the island in 1646, while male immigration had started some fifty earlier. For 1650, the ratio of 10,000 Chinese men and 5,000 women in children is given,<sup>8</sup> but the 1905 census quotes a ratio of F/M 100:112. Assuming a lesser grade of homogenization of the male and female ratio in 1800 than in 1900, I tentatively set the ratio of the Han Chinese population that migrated here from the mainland at F/M 100:120.

The age group proportions of the entire population in the 1905 census are<sup>9</sup>:

0-5	14%
6-10	11%
11-15	10%
0-10	25%
0-15	35%
6-60	81%
11-60	70%
16-60	59.80%
Above 60	5%

Since we assumed the age group of those between 15 and 60 to be, approximately, the economically active population, for China 1800, we do the same in the case of Taiwan, and apply the same rate of 58% of the population. However, if we take the economically active to be those between 11 and 60, the percentage is 70%; and if we include those from age 6 and older, conforming to the initial assumption of the Collab (see “Definitions of Labour Relations”) the result is 81%.

Due to invalidity or other reasons, not the entire population between age 6 and 60 can have been economically active. On the other hand, those over 60 may also have been economically active. Tentatively, we set out from the highest figure for the economically active (between age 6 and 60) until we have gathered more evidence about typical ages of starting (and stopping) work in different regions and cross-section years.<sup>10</sup>

#### Estimation of population, gender, and age groups in Taiwan 1800

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<sup>7</sup> Shepherd, p. 394.

<sup>8</sup> Shepherd, p. 86.

<sup>9</sup> *Meiji sanjūhachi nen*, p. 41.

<sup>10</sup> Either the China 1800 or the Taiwan 1800 and earlier figures will have to be adjusted accordingly.

June 2011

<b>POPULATION</b>	
Total, Han Chinese and Plains Aborigines	1,000,000
Plains Aborigines	40,000
Mountain Aborigines	36,000
Han Chinese	960,000
Grand Total	1,036,000
<b>GENDER</b>	
Han Chinese: 220	4,363.4
Han Chinese Female 100	436,000
Han Chinese Male 120	524,000
Plains Aborigines: 204	196.07
Plains Aborigines Female 104	20,400
Plains Aborigines Male 100	19,600
Mountain Aborigines: 203	177.33
Mountain Aborigines Female 103	18,300
Mountain Aborigines Male 100	17,700
Grand Total Males	561,300
Grand Total Females	474,700
<b>AGE GROUPS</b>	
Grand Total Age 0-10: 25%	259,000
Grand Total Age 0-15: 35%	362,600
Grand Total Age 16-60: 58%	600,880
Grand Total Age 61 and over: 7%	72,520
Grand Total Economically active, 16-60	600,880
Grand Total Economically active, 11-60	725,200
Grand Total Economically active, 6-60	839,160
Han and Plains Aborigines Economically Active, 16-60	580,000
Han and Plains Aborigines Economically Active, 11-60	700,000
Han and Plains Aborigines Economically Active, 6-60	810,000
Mountain Aborigines, Economically Active, 16-60	20,880
Mountain Aborigines, Economically Active, 11-60	25,200
Mountain Aborigines, Economically Active, 6-60	28,800

### Occupations and Labour Relations

According to John Shepherd's outline of occupational structures, the situation for the settlers from the mainland largely reflected the diversified conditions of the maritime provinces of the mainland.<sup>11</sup> Shepherd maintains that the situation in 1800 had not yet changed much by 1905, and therefore the 1905 census may be taken – tentatively – as a benchmark for earlier periods.<sup>12</sup>

Most of the immigrants were „poor agriculturalists“, but „many“ came from other backgrounds. Thus, wealthy investors directed clearing and irrigation projects, financed mills and granaries, and organized sugar and rice export. Moreover, Shepherd identifies „small shopkeepers, itinerant peddlers, craftsmen“, “civil bureaucrats and the military”, “agricultural population”, “fishermen, salt producers, food stall operators, yamen clerks, prostitutes, lumbermen, market gardeners, seasonal labourers, and medicine hawkers”.<sup>13</sup>

Shepherd also attributes these occupations to specific places of origin or ethnic groups from the mainland. He points out that:

- the people from Quanzhou prefecture of the Chinese mainland province Fujian engaged mainly in trade (LR 12, 13), handicrafts, (LR 13, 14), fishing, aquaculture (12, 14), salt production (LR 12), and agriculture (LR 12).
- People from the more agricultural Zhangzhou prefecture (also Fujian province) were more concentrated on agriculture (LR 12).
- The Hakkas, mainly from the border region of Southern Fujian and Northern Guangdong, supplied male seasonal labourers (LR 14). Those who stayed on worked in agriculture on the hilly terrain of the islands (LR 12).<sup>14</sup>

In the 1905 census, the provincial origins of the Han Chinese immigrants are broken down to the following percentages:

Total Taiwanese (excluding Japanese and other foreigners, esp. from the Chinese Mainland)	2,973,280	100.00%
Han Chinese Taiwanese	2,890,485	97.22%
Han Chinese from Fujian	2,492,784	86.24%
Han Chinese from Guangdong	397,195	13.74%
Other Han Chinese	506	0.02%
Total Plains Aborigines	46,432	1.56%
Total Mountain Aborigines	36,363	1.22%

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<sup>11</sup> Shepherd, p. 312, referring to Meskill, Johanna M., *A Chinese Pioneer Family: The Lins of Wu-feng, Taiwan, 1729-1895*. Princeton: Princeton University Press, p. 45-47.

<sup>12</sup> Shepherd, p. 315.

<sup>13</sup> Shepherd, p. 312.

<sup>14</sup> Shepherd, p. 313.

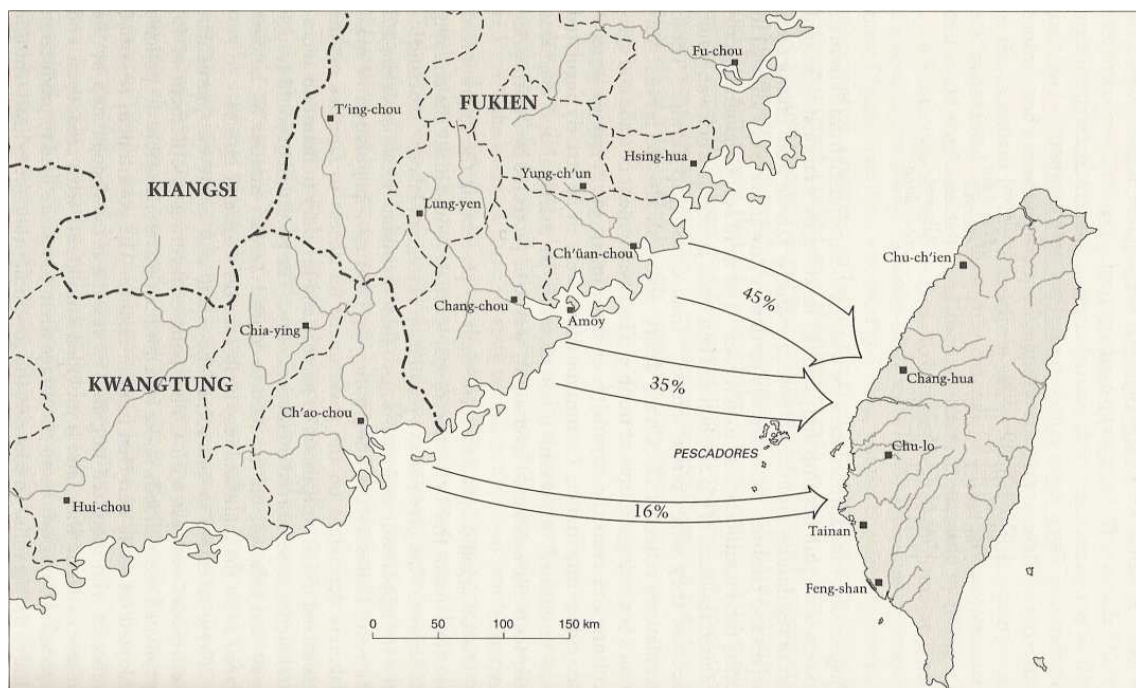
Source: Rinji Taiwan kokō chōsa bu (ed.) 臨時臺灣戶口調查部 (Provisional Taiwan household census department), *Meiji sanjūhachi nen rinji Taiwan kokō chōsa kekkahyō* 明治三十八年臨時臺灣戶口調查結果表 (Provisional household census of Taiwan, 1905, Statistical tables), Taipei 1908, p. 8.

In addition to this, Shepherd cites the following tables that explore the origins of the Chinese settlers in Taiwan for 1926.<sup>15</sup>

#### Mainland Origins of the Taiwanese, 1926

Place of origin	Percentage of population		
Fujian (Fukien) province			83
Quanzhou (Ch'üan-chou) prefecture		45	
San-yi counties	18		
Anqi county	12		
Dong'an counties	15		
Zhangzhou (Chang-chou) prefecture		35	
Other prefectures		3	
Guangdong (Kwangtung) province		16	16
Chaozhou (Ch'ao-chou) prefecture	4		
Huizhou (Hui-chou) prefecture	4		
Jiaying zhou	8		
Other provinces		1	1
Total		100	

Source: Chen Cheng-hsiang 陳正祥, *Taiwan dizhi* 臺灣地志 (A geography of Taiwan) 3 vols. Taiwan: Fuming chanye dili yanjiusuo 1959-61: 1.237; Chen Han-kuang 陳漢光, "Riju shiqi Taiwan Hanzu zuji diaocha" 日據時期臺灣漢族祖籍調查 (The investigation of ancestral place of registration of Han Taiwanese in the Japanese period), *Taiwan wenxian*, 23:1 (1972), 85-104.



Source: Shepherd, p. 144, Map 6.1 "The southeast coast and migration to Taiwan", based on Chen Zhengxiang, *Taiwan dizhi*, vol. 1: 228.

<sup>15</sup> Shepherd, p. 313.

Shepherd remarks that “Hakka” is not completely identical with Guangdong, the Hakka, who are ethnic Han Chinese generally believe to have arrived in South China later than other migrants from the north, might also hail from border regions between Fujian and Guangdong; but largely, the attribution of Hakka as Guangdong people is plausible. Thus for 1926 the percentages are 83 Fujian, 16 Guangdong, and 1 from other provinces, while for 1906 they are 86 percent from Fujian and 14 percent from Guangdong. The average of these two sets is 46.5 percent for Quanzhou, 36.5 percent for Zhangzhou, and 16 percent for the Hakka.

In deciding the occupations and labour relations, then, we deduct first 40,000 plains aborigines population, 12,000 soldiers and mariners (as of 1776)<sup>16</sup> and 1,000 civilian officials (a number that is certainly an upper limit), and arrive at 947,000 as the figure of all Han Chinese from the mainland. Dividing these through the respective percentages of Quanzhou, Zhangzhou and Hakka people yields the following result:

947,000/ 46.5= 440,355 from Quanzhou  
 947,000/ 36.5=345,655 from Zhangzhou  
 947,000/ 16 = 151,520 Hakka

Estimating the male and female total populations from these regions of origin with a F/M ratio of 100:120, and the economically active population as those between ages 6, 11, or 16 and 60, as 81%, 70%, or 58% of the total population, we arrive at the following figures and ranges.

Total Quanzhou immigrants	440,355
Quanzhou: 220	2,002
Quanzhou female 100	200,160
Quanzhou male 120	240,195
Economically active 6 to 60: 81%	357,000
Economically active 11 to 60: 70%	308,000
Economically active 16 to 60: 58%	255,000

Total Zhangzhou immigrants	345,655
Zhangzhou: 220	1,571
Zhangzhou female 100	157,115
Zhangzhou male 120	188,540
Economically active 6 to 60: 81%	280,000
Economically active 11 to 60: 70%	242,000
Economically active 16 to 60: 58%	200,000

Total Hakka immigrants	151,520
Hakka: 220	689
Hakka female 100	68,870
Hakka male 120	82,650

<sup>16</sup> Shepherd, p. 432.

June 2011

Economically active 6 to 60: 81%	123,000
Economically active 11 to 60: 70%	106,000
Economically active 16 to 60: 58%	88,000

The 1905 Census<sup>17</sup> states occupational structures divided by ethnic group, but not by provincial or prefectural provenance. Setting out from the overall figures, and taking into account that by the time of the census, the beginnings of industrialization had already taken root in Taiwan, especially in infrastructure, transport, and mining, I estimate a percentage in the economic sectors that is closer to that of China 1800.

#### Persons engaged in economic sectors, 1905

Branch	Total	Japanese	Islanders (Han Chinese and Aborigines)	Foreigners
Total	1,404,475	32,353	1,363,886	8,236
1) Agriculture, Animal Husbandry, Forestry, Fishing	1,027,120	498	1,026,496	126
2) Industry	90,475	7,611	79,622	3,242
3) Trade and Transport	122,068	10,505	107,313	4,250
4) Civil and Military Service, Free Professionals	31,660	12,209	19,298	153
5) Others	122,153	1,217	120,490	446
6) Rentiers (People living on their income)	10,999	313	10,667	19

#### Percentages of occupations within ethnic groups, 1905

Branch	Total	Japanese	Islanders (Han and indigeous)	Foreigners
Total	100	100	100	100
1) Agriculture, Animal Husbandry, Forestry, Fishing	73.13	1.54	75.26	1.53
2) Industry	6.44	23.52	5.84	39.36
3) Trade and Transport	8.69	32.47	7.87	51.60
4) Civil and Military Service, Free Professionals	2.25	37.74	1.41	1.86
5) Others	8.70	3.76	8.83	5.42
6) Rentiers (People living on their income)	0.78	0.97	0.78	0.23

Estimate for the situation in 1800

#### A) Han and Plains Aborigines

Branch	Estimated percentage	Estimated percentage
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<sup>17</sup> *Meiji sanjūhachi nen rinji Taiwan kokō chōsa kekkahyō*, p. 112/113, table 44, "Occupied persons, according to ethnic group and gender".

	of total (in case of 81%)	of total (in case of 70%)
Agriculture, Animal Husbandry, Forestry, Fishing	90.0	89.5
Industry	1.5	1.5
Trade and Transport	5.5	5.5
Civil and Military Service*)	1.5	2
Others (priests, entertainers)	1.0	1.0
Rentiers (People living on their income)	0.5	0.5

\*) Shepherd, p. 453, cites a figure of 12,000 soldiers shipped over from the Mainland. In addition, he discusses the 1787 proposal of a Manchu general, Fukangan, suggesting the recruitment of 4,000 to 5,000 indigenous people from the plains as military colonists. They were not to be given grain rations like the Chinese from the Mainland, but the state was prepared to offer them uncultivated land, which was not to be taxed, for their peacekeeping services between rivaling factions from the Mainland.<sup>18</sup> It is difficult to capture this assignment in one of the Collaboratory's labour relations, since the people involved were supposed to render military service in times of need, but basically to support themselves from the fields they were to make arable. Thus, it can not be the question of commodified labour, but rather a type of tributary service based on more or less free agreement between the representatives of the Qing state and the indigenous groups.

Moreover, for the earlier period of the 1730s, Shepherd p. 353 notes that Taiwan's troops were in a bad condition and that many soldiers had taken side-jobs in order to support themselves.

If the total of the Han Chinese and Plains Aborigines is estimated at 700,000 and 810,000, this yields the following figures. For Mountain Aborigines, I assume the percentage of 25% of the economically active to provide hunting and military service for their own community up to age 40 (Lab-rel 7, see database Taiwan 1500 to 1650). The estimate of the total number of Mountain Aborigine men is 17,700.

Branch	Total max. (81%)	Rounded off in database	Total min. (70%)	Rounded off	Lab-rel 1	Lab-rel 1%	Lab-rel 2	Lab-rel 2%
Agriculture, Animal Husbandry, Forestry, Fishing	729,000	729,000	563,850	564,000	405	75%	12	25%
Agriculture, Animal Husbandry, Forestry, Fishing (leading producer per household)	163,700	164,000	122,413	123,000	4	75%	12	25%
Agriculture, Animal Husbandry, Forestry, Fishing (assuming 3 working family members per household)	491,150	491,000	367,238	367,000	5	75%	12	25%
Hired labour in agriculture, forestry, fishing (70% of all economically active Hakka,	74,200							

<sup>18</sup> Shepherd, p. 336.



June 2011

age 11 to 60)	74,000	74,200	74,000	14		
Industry	12,150	12,000	9,450	9,000	12014	
Trade and Transport	44,550	45,000	34,650	35,000	12014	
Civil and Military Service for their own villages <sup>19</sup>	12,150	12,000	12,600	12,600	18	
(Military Service for the Chinese authorities)	(4,000-5000)					
Others (priests, entertainers)	8,100	8,000	6,300	6,000	12	
Rentiers (People living on their income)	4,050	4,000	3,150	3,000	3	
Total	810,000	810,000	630,000	630,000		

## B) Mountain Aborigines

Branch	Total max. (81%)	Rounded off in database	Total min. (70%)	Rounded off	Lab-rel 1	Lab-rel 1%	Lab-rel 2	Lab-rel 2%
Agriculture, Animal Husbandry, Forestry, Fishing	21,310	21,000	18,650	19,000	405	90%	12	10%
Agriculture, Animal Husbandry, Forestry, Fishing	16,000	16,000	14,000	14,000	5	90%	12	10%
Agriculture, Animal Husbandry, Forestry, Fishing	5,310	5,000	4,650	5,000	4	90%	12	10%
Trade and craft industries	290	1,000	250	1,000	12			
Hunting and military service, 25% of the economically active males	7,200	7,000	6,300	6,000	7			
Total	28,800	29,000	25,200	26,000				

For disaggregating the figure for subsistence labour, I follow Shepherd's assessment of average household sizes among the Plains Aborigines as having on average 4.1 members.<sup>20</sup> Shepherd also mentions the inconsistencies in early (Dutch) censuses that record widely varying numbers of persons, but stagnant figures for the households. As a first approach, I suggest disaggregation at the ratio of 3:1 for Lab-rel 4 to Lab-rel 5 for the Taiwanese households.

## Sources

*Meiji sanjūhachi nen rinji Taiwan kokō chōsa kekkahyō* 明治三十八年臨時臺灣戶口調查結果表 (Provisional household census of Taiwan, 1905, Statistical tables). Ed. by Rinji Taiwan kokō chōsa bu (ed.) 臨時臺灣戶口調查部 (Provisional Taiwan household census department), Taipei (Taihoku) 1908. <http://jdlib.ntl.gov.tw> (Website of National Taichung University).

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<sup>19</sup> Shepherd

<sup>20</sup> Shepherd, p. 45.

June 2011

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