

## DEMOGRAPHIC DEVELOPMENT IN MANCHURIA, 1924-1941

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#### The Pre-Census Population Data

Population data for Manchuria may be traced to the early Ching dynasty, though the quality of early statistics is generally poor. Following are selected figures for three provinces (in 1,000 persons)<sup>(1)</sup>

|      | Liaoning | Kirin | Heilungkiang |
|------|----------|-------|--------------|
| 1830 | 2,114    | 322   | ---          |
| 1860 | 2,818    | 329   | ---          |
| 1887 | 4,451    | 449   | 253          |
| 1897 | 4,957    | 779   | ---          |
| 1907 | 8,763    | 4,238 | 1,455        |

The 1909-1911 figures published by the Ministry of Interior are believed to be somewhat better in quality because an enumeration did take place at that time for the purpose of providing a basis for the planned general election. However, even in this set of data there are discernible shortcomings. The state of confusion remained as late as 1930 for which year two sets of data released

|              | Ministry of<br>Interior Data | Provincial<br>Data | Difference |
|--------------|------------------------------|--------------------|------------|
| Liaoning     | 15,233                       | 16,366             | -1,133     |
| Kirin        | 7,535                        | 7,340              | 195        |
| Heilungkiang | 3,755                        | 3,656              | 99         |
| Jehol        | 6,594                        | 3,495              | 3,099      |
| Total        | 33,117                       | 30,857             | 2,260      |

(1) Li Wen-Chih, et al, *Chung-kuo chin-tai nung-yeh shih tzu-liao* (Historical Materials on Agriculture in Modern China), Peking, 1957 pp. 9-17.

by, respectively, the Ministry of Interior and the provincial authorities show sizeable discrepancies.<sup>(2)</sup> They are compared above.

Here, Jehol's figures appear to be most problematic. Judging from the census figure of 4,550,000 for 1940 the provincial figure for Jehol for 1930 seems to be closer to the truth.

The research department of the South Manchuria Railway (SMR) estimated a time series of total population for the three provinces of Liaoning, Kirin and Heilungkiang in 1923-1930, as shown below (in 1,000 persons):<sup>(3)</sup>

|      |        |
|------|--------|
| 1923 | 24,294 |
| 1924 | 24,889 |
| 1925 | 25,502 |
| 1926 | 26,133 |
| 1927 | 26,784 |
| 1928 | 28,034 |
| 1929 | 29,198 |
| 1930 | 29,961 |

If the population of Jehol suggested by the provincial government is added to the Japanese estimate for the three provinces, the total population of Manchuria would be 33,456,000 in 1930.

One of the urgent tasks set out by the Manchukuo regime immediately after its establishment in 1932 was to take a population count; hence a "temporary household survey" was conducted on April 15, 1933, to determine retroactively the population existing at the end of 1932 in the territory of the four provinces but excluding the Kwantung Leased Territory (KTLT) and the South Manchuria Railway (SMR) zone. The Police Bureau of the Ministry of Internal Security, which was in charge of this operation, later became the office responsible for conducting similar household surveys annually thereafter. The

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(2) The National Northeastern University, *Tung-pei yao-lau* (Compendia of the Northeast Region), Chungking, 1944, p. 93.

(3) SMR, *Mantetsu chosa geppo* (Monthly of SMR Surveys), Nov. 1932, p. 19; and SMR, *Manshu sangyo tokei* (Manchurian Industrial Statistics) Dairen, 1931, p. 7.

data so compiled are usually referred to as the population returns based on the police registration.

The first survey recorded only numbers of households and population, by locality, sex, and ethnic group. Beginning in 1935 the police annual survey was extended to include vital statistics such as rates of birth, death, and natural growth, and a breakdown of population by occupation. However, there was a minor change in coverage for this continuous series: by virtue of a treaty signed in 1937 by the Manchukuo regime and the Japanese government the SMR zone was integrated into Manchukuo. In other words, the population data published by the Manchurian authorities excluded the SMR zone before 1938 but included it after that year. The population data based on the Manchurian police registration and those published by the SMR and KTLT authorities are assembled in Table 1.

Tables 2 and 3 show the official data on sex ratios and vital statistics. All the vital statistics are, as will be seen later, seriously biased downward; but the biasing factors seem to have been fairly stable as to have yielded nearly constant vital statistics except for 1935 and 1936. The rates for 1935 are relatively low whereas those for 1936 are relatively high, as compared with other years. It is suspected that when the law requiring the reporting of deaths and births was first promulgated in 1935, many families failed to comply promptly so that many deaths and births reported in 1936 actually took place in the preceding year. If the two years are combined, the average birth rate becomes 16.1 and the average death rate 10.9, both quite consistent with the rates in other years.

Owing to their keen interest in Manchuria the Japanese made persistent efforts to compile annual immigration data for the region long before the Mukden Incident. The data collecting work was improved after the establishment of Manchukuo, covering all Chinese and other migrants who came by

Table 1 Official Data of Population in Manchuria 1924-41  
(1,000 persons)

|      | KTLT<br>(I) | SMR Zone<br>(II) | Manchuria excl.<br>KTLT and SMR Zone<br>(III) | Manchuria<br>excl. KTLT<br>(IV) | Whole<br>Manchuria<br>(V) |
|------|-------------|------------------|---|---------------------------------|---------------------------|
| 1924 | 726         | 252              |   |                                 |                           |
| 1925 | 758         | 275              |   |                                 |                           |
| 1926 | 772         | 287              |   |                                 |                           |
| 1927 | 805         | 303              |   |                                 |                           |
| 1928 | 837         | 322              |   |                                 |                           |
| 1929 | 884         | 342              |   |                                 |                           |
| 1930 | 939         | 352              |   |                                 |                           |
| 1931 | 938         | 337              |   |                                 |                           |
| 1932 | 961         | 363              | 29,605  | 29,969                          | 30,930                    |
| 1933 | 1,004       | 404              | 30,880  | 31,284                          | 32,288                    |
| 1934 | 1,051       | 446              | 32,869  | 33,315                          | 34,366                    |
| 1935 | 1,120       | 501              | 34,201  | 34,720                          | 35,822                    |
| 1936 | 1,148       | 533              | 35,338  | 35,871                          | 37,019                    |
| 1937 | 1,190       | 558              | 36,392  | 36,950                          | 38,140                    |
| 1938 | 1,226       |                  |   | 38,624                          | 39,850                    |
| 1939 | 1,274       |                  |   | 39,454                          | 40,728                    |
| 1940 | 1,393       |                  |   | 41,661                          | 43,054                    |
| 1941 | 1,493       |                  |   | 43,188                          | 44,681                    |

Notes: (a) In a few cases the figures are October or mid-year counts.  
Most are year-end figures.

(b) The SMR Zone was integrated into Manchukuo in 1938.

Sources of data:

Column I: 1924-25: from Kanto Kyoku, *Kanto kyoku tokei sanjunen shi* (Thirty years' Statistics for the Kwantung Administration), Dairen, 1937, p. 25.

1926-41: from *Mantetsu chosa geppo* (Monthly of the South Manchuria Railway Surveys), August, 1942, p. 24.

Column II: 1924-29: from *Thirty Years' statistics*, p. 25.

1930-32: from *Manshu keizai nenpo* (Economic Yearbook of Manchuria), Tokyo, 1933, p. 427.

1933-37: from *Manshu keizai tokei nenpo* (Economic Statistics Yearbook of Manchuria), Dairen, 1935, Vol. 2, p. 5. and 1937, p. 7.

Column III: 1932-36: from *Economic Yearbook of Manchuria*, 1939, p. 312.  
 1937: IV minus III.

Column IV: 1932-36: II plus III.  
 1937-41: from *Manshu keizai tokei kiho* (Economic Statistics Quarterly),  
 Dairen, 1943, No. 3, p. 3.

Table 2 Sex Ratios of the Population in Manchuria, According to  
 the Police Register, 1934-41

| YEAR | MANCHURIA excl. KTLT | KTLT   |
|------|----------------------|--------|
| 1932 | 123.37               | 130.81 |
| 1933 | 122.49               | 131.17 |
| 1934 | 122.20               | 132.04 |
| 1935 | 120.76               | 133.91 |
| 1936 | 120.22               | 132.64 |
| 1937 | 120.57               | 133.88 |
| 1938 | 119.91               | 133.76 |
| 1939 | 120.12               | 132.99 |
| 1940 | 120.64               | 133.47 |
| 1941 | 120.77               | 134.20 |

Source of data:

From *Economic Statistics Quarterly of Manchuria*, 1943, No. 3, p. 3.

Table 3 Official Vital Statistics of Manchuria excl. KTLT, 1935-41  
 (per 1,000)

| YEAR | BIRTH RATE | DEATH RATE | RATE OF NATURAL<br>INCREASE |
|------|------------|------------|-----------------------------|
| 1935 | 12.3       | 7.4        | 4.1                         |
| 1936 | 19.8       | 14.3       | 5.5                         |
| 1937 | --         | --         | --                          |
| 1938 | 16.1       | 10.9       | 5.2                         |
| 1939 | 14.4       | 10.5       | 3.9                         |
| 1940 | 14.5       | 10.1       | 4.4                         |
| 1941 | 14.2       | 9.6        | 4.6                         |

Sources of data:

From The National Northeastern University, *Tung-pei yao-lan* (Compendia of the Northeast Region), Chungking, 1944, p. 114; *Manshu nenkan* (Yearbook of Manchuria), Dairen, 1937, p. 40; and The Manchukuo Government, *Manshukoku gensei* (Present Conditions of Manchukuo), Hsinching, 1938, p. 31.

ship and train and those who crossed the borders afoot.<sup>(4)</sup> Prior to 1932, the net migration through oversea routes was compiled from ship reports of passengers arriving or leaving Manchurian ports; the net inflow of laborers through those routes was estimated by subtracting the numbers of women, children and the aged from the net migration. Estimates of overland migration were mainly based on the passenger counts of the Peking-Shenyang Railway, the only railway then connecting Manchuria and China proper, and the number of migrant workers was similarly derived. Based on past experience, a 10 percent of the migration by railway trains was taken as an approximation for people crossing borders afoot in either direction. Although the estimation methods remained the same, the quality of immigration data was greatly improved after a special agency, the Ta Tung Company, was formed by the Manchurian government to be in charge of all affairs related to Chinese immigration.

Immigration data of the Japanese and Koreans into and out of the region were not regularly released. We have to make our own estimates. Tables 4, 5, and 6 present the relevant immigration data and they will be used later to check the reliability of the official demographic data and to make new estimates of the Manchurian population.

### The Census of 1940

The first modern census in Manchuria was taken on October 1, 1940.<sup>(5)</sup> To assure a satisfactory result the Japanese government mobilized their leading demographers and statisticians to assist the Manchurian government in preparing for this task. However, the police registration continued as usual and the results

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(4) For details of the computation see SMR, *Manshu keizai nenpo*. (Economic Yearbook of Manchuria), Tokyo, 1933, pp. 445-454.

(5) *Manshu Daily News*, *Manshu Nenkan* (Yearbook of Manchuria), 1942, p. 37. Some preliminary results of the census were released before the publication of the final counts.

Table 4 The Non-Chinese Population in Manchuria 1924-1941  
(1, 000 persons)

|      | KTLT<br>(I) | SMR Zone<br>(II) | KTLT and<br>SMR Zone<br>(III) | Manchuria excl.<br>KTLT and SMR Zone<br>(IV) | Whole<br>Manchuria<br>(V) |
|------|-------------|------------------|-------------------------------|--|---------------------------|
| 1924 | 87          | 90               | 177                           | 643  | 820                       |
| 1925 | 92          | 94               | 186                           | 555  | 741                       |
| 1926 | 95          | 98               | 193                           | 666  | 859                       |
| 1927 | 99          | 101              | 200                           | 701  | 901                       |
| 1928 | 104         | 104              | 208                           | 717  | 925                       |
| 1929 | 110         | 112              | 222                           | 690  | 912                       |
| 1930 | 119         | 117              | 236                           | 702  | 938                       |
| 1931 | 123         | 121              | 244                           | 718  | 962                       |
| 1932 | 129         | 146              | 275                           | 704  | 979                       |
| 1933 | 142         | 169              | 311                           | 757  | 1,068                     |
| 1934 | 153         | 194              | 347                           | 817  | 1,164                     |
| 1935 | 164         | 223              | 387                           | 943  | 1,330                     |
| 1936 | 172         | 235              | 407                           | 1,120  | 1,527                     |
| 1937 | 180         | 248              | 428                           | 1,168  | 1,596                     |
| 1938 | 186         |                  |                               |  | 1,798                     |
| 1939 | 191         |                  |                               |  | 2,026                     |
| 1940 | 210         |                  |                               |  | 2,405                     |
| 1941 | 225         |                  |                               |  | 2,663                     |

Notes: The non-Chinese population includes Japanese, Koreans, the Chinese from Taiwan, Russians, others, and people without nationality.

Sources of data:

- Column I: 1924-28: from *Thirty Years' Statistics*, pp. 120-6.  
 1929-32: from *Economic Yearbook of Manchuria*, 1933, p. 427.  
 1933-37: from *Economic Statistics Yearbook of Manchuria*, 1935, p. 5 and 1937, p. 7.  
 1938-39: from *Yearbook of Manchuria*, 1940, p. 505.  
 1940-41: from *Present Conditions*, 1943, p. 293 and 715.
- Column II: 1924-28: from *Thirty Years' Statistics*, pp. 120-6.  
 1929-32: III minus I.  
 1933-37: from *Economic Statistics Yearbook of Manchuria*, 1935, p. 5 and 1937, p. 7.
- Column III: 1924-35: from *Thirty Years' statistics*, pp. 74-98.  
 1936-37: I plus II.

Column IV: 1924-31: and 1933, VI minus III.

1932: from *Man-chu-kuo nien-pao* (Manchukuo Annals) Hsinching, 1933, p. 29.

1934-36: from *Economic Statistics Yearbook of Manchuria*, 1937-38, p. 269.

1937: V minus II.

Column V: 1924-31: from *Manshu sangyo tokei* (Manchurian Industrial Statistics) dairen, 1936, p. 176.

1932: from *Manchukuo Annals*, 1933, p. 29.

1933: Interpolated.

1934: III plus IV.

1935-37: from *Economic Yearbook of Manchuria*, 1937, Vol. 1, p. 368.

Table 5 Net Migration to Manchuria, 1924-1941

(1,000 persons)

|      | Non-Chinese          |                      |                      |                    | Chinese        |                |                   | Total              |
|------|----------------------|----------------------|----------------------|--------------------|----------------|----------------|-------------------|--------------------|
|      | Total Population (I) | Annual Increase (II) | Natural Growth (III) | Net Migration (IV) | Immi-gration V | Emi-gration VI | Net Migration VII | Net Migration VIII |
| 1924 | 820                  | -18                  | 13                   | -31                | 493            | 233            | 259               | 228                |
| 1925 | 741                  | -79                  | 12                   | -91                | 533            | 215            | 318               | 227                |
| 1926 | 859                  | 118                  | 11                   | 107                | 607            | 299            | 308               | 415                |
| 1927 | 901                  | 42                   | 13                   | 20                 | 1,160          | 317            | 843               | 872                |
| 1928 | 925                  | 24                   | 14                   | 10                 | 1,074          | 381            | 693               | 703                |
| 1929 | 912                  | -13                  | 14                   | -27                | 1,046          | 601            | 445               | 418                |
| 1930 | 938                  | 26                   | 14                   | 12                 | 748            | 513            | 232               | 244                |
| 1931 | 962                  | 24                   | 14                   | 10                 | 432            | 448            | -16               | -6                 |
| 1932 | 979                  | 17                   | 14                   | 3                  | 414            | 499            | -85               | -82                |
| 1933 | 1,068                | 89                   | 15                   | 74                 | 631            | 497            | 134               | 108                |
| 1934 | 1,164                | 96                   | 16                   | 80                 | 691            | 440            | 251               | 331                |
| 1935 | 1,330                | 166                  | 17                   | 149                | 519            | 495            | 24                | 173                |
| 1936 | 1,527                | 197                  | 20                   | 177                | 437            | 450            | -13               | 164                |
| 1937 | 1,596                | 69                   | 23                   | 46                 | 362            | 296            | 66                | 112                |
| 1938 | 1,798                | 202                  | 24                   | 178                | 574            | 283            | 291               | 469                |
| 1939 | 2,026                | 228                  | 27                   | 201                | 1,176          | 454            | 722               | 923                |
| 1940 | 2,405                | 379                  | 30                   | 349                | 1,619          | 958            | 661               | 1,010              |
| 1941 | 2,663                | 258                  | 36                   | 222                | 1,206          | 820            | 386               | 608                |



Note: The immigration data of Chinese for the years before 1932 Probably do not include migrants to and from Jehol, which was then not a part of Manchuria. However, since migration movements to and from Jehol were negligible in size, the immigration data of Chinese for the early years and those for the later years in this table may be considered comparable in coverage.

Sources of data:

Column I: From VI of Table 4.

Column II: Derived from I.

Column III: Derived by assuming a constant 1.5% annual rate of natural growth. This was the actual average rate of natural increase for the Japanese in KTLT in the period 1908-40.

Column V and VI: 1924-26: from SMR, *Manshu no kuri* (Coolies in Manchuria) Dairen, 1934, pp. 15 and 25.

1927-32: from *Economic Yearbook of Manchuria*, 1933, p. 445.

1933-38: from *Economic Statistics Yearbook of Manchuria*, 1936-37, p. 158 and 1937-38, p. 300.

1939-41: from *Monthly of SMR Surveys*, 1942, No. 4, p. 12

Column VII: V minus VI

Column VIII: IV minus VII.

were published. (6) It is useful to compare the two population returns for the same year. The census gives a total population in 1940 in Manchuria excluding the KTLT at 43,203 million, and it was 41,661 million based on the police registration, with a difference of 1.5 million, or 3.6%. If the census data are accepted as more accurate, the enumeration from the police registration must have contained a downward bias. In fact, this evaluation applies to all the previous population returns based on the police registration.

From Table 1, one can derive an average growth rate of 42 per 1,000 per annum for the population in Manchuria excluding the KTLT between 1932 and 1941. Yet the data in Tables 3 and 6 suggest that the average rate of natural increase was only 4.8 per 1,000 and the net migration would increase the total population by 12 per 1,000 a year in the period. Thus, about 60 percent of

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(6) SMR, *Manshu keizai tokei kiho*. (Economic Statistics Quarterly of Manchuria), 1943, No. 3, p. 3.

Table 6 Net Migration to Manchuria Excluding KTLT 1924-41  
(1,000 persons)

|      | Total<br>Population<br>in KTLT | Natural Growth<br>of Population<br>in KTLT | Net<br>Migration<br>to KTLT | Total Net<br>Migration<br>to Manchuria | Net Migration<br>to Manchuria<br>excl. KTLT |
|------|--------------------------------|--|-----------------------------|--|---|
| 1924 | 725                            | 10   | 8                           | 228                                    | 220   |
| 1925 | 758                            | 11   | 22                          | 227                                    | 205   |
| 1926 | 772                            | 7  | 7                           | 415                                    | 408   |
| 1927 | 806                            | 10   | 24                          | 872                                    | 848   |
| 1928 | 837                            | 8  | 23                          | 703                                    | 680   |
| 1929 | 884                            | 8  | 39                          | 418                                    | 379   |
| 1930 | 939                            | 12   | 43                          | 244                                    | 201   |
| 1931 | 938                            | 12   | -13                         | -6                                     | 7   |
| 1932 | 961                            | 10   | 13                          | -82                                    | -95   |
| 1933 | 1,004                          | 14   | 29                          | 108                                    | 79  |
| 1934 | 1,051                          | 12   | 35                          | 331                                    | 296   |
| 1935 | 1,120                          | 11   | 58                          | 173                                    | 115   |
| 1936 | 1,148                          | 13   | 15                          | 164                                    | 149   |
| 1937 | 1,190                          | 13   | 29                          | 112                                    | 83  |
| 1938 | 1,226                          | 13   | 23                          | 469                                    | 446   |
| 1939 | 1,274                          | 14   | 34                          | 923                                    | 889   |
| 1940 | 1,393                          | 15   | 104                         | 1,010                                  | 906   |
| 1941 | 1,493                          | 16   | 84                          | 608                                    | 524   |

Sources of data:

Column I: from Table 1.

Column II: Computed from the natural rates of population increase in KTLT.

Column III: Subtract (II) from the annual increment of (I).

Column IV: From Table 5.

Column V: (IV) minus (III).

the population increase is left unaccounted for. Theoretically, there are two possible explanations for this large statistical discrepancy: (1) a serious understatement of net migration, and/or (2) an undercounting of population in the early part of the period accompanied by a gradual improvement in the police registration system.

There is little doubt that the official data of immigration were not very accurate, but one can hardly hold the immigration data alone responsible for the

above-mentioned discrepancy. The size of total net migration in this period would have to be blown up three times in order to close the entire gap. This is extremely unlikely. In fact, the possible errors in the immigration data were probably relatively unimportant. One publication of the SMR has identified a number of factors that might have contributed to the downward bias in the immigration data.<sup>(7)</sup> The counting of passengers could be mistaken because small children were not required to purchase tickets; the crude estimation of people crossing borders afoot is also taken as a potential source of errors. But, in view of the fact that the destinations of most Chinese migrants to Manchuria were distant from the border lines dividing China proper and Manchuria, people who intended to walk to their destinations could not be large in number. It should also be noted that all these possible sources of biases were applicable to both emigration and immigration so that in computing the figures of net migration, which is the difference of the two flows, biases in the opposite directions would, to some extent, offset each other. Moreover, these shortcomings in the immigration data were comparatively serious before 1932, but they were considerably mitigated after the Manchurian government established a special office to control immigration affairs. An inspection of the data in Table 6 shows that they are generally consistent with other relevant information. For instance, there was a net outflow of people in 1931-32 as a result of the Mukden Incident, and another low point of net migration appeared in 1937 when the full-scale war between China and Japan broke out and a stricter law concerning labor migration was promulgated by the Manchurian government.

There is indication that the Manchurian authorities already realized the internal inconsistency of the population returns from the police registration. If one takes, say, 1937's population count and adds the reported natural increase (=the difference between the reported number of births and the reported number of deaths) in 1938 and the net migration in 1938 he obtains a figure which is

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(7) Manchukuo Government, *Manshu tikoku tokei geppo* (Monthly Statistical Report of the Manchu Empire), July-September, 1942, p. 2.

short of the new return for 1938. Since the Manchurian statistical authorities believed that both the net migration data and the vital statistics as basically correct, they created a new column in the demographic statistical table to accommodate these unexplained discrepancies for various years under the heading "population increase due to the improvement of investigation." Following are such discrepancies. <sup>(8)</sup>

|      | Unexplained<br>Discrepancy | Percentage of<br>Total Population |
|------|----------------------------|-----------------------------------|
| 1937 | 1,350,270                  | 3.7%                              |
| 1938 | 534,968                    | 1.4%                              |
| 1939 | 1,763,505                  | 4.5%                              |

The population registration system improved continuously so that each year it was able to uncover some of the previously unaccounted people. That is to say, the Manchurian population was seriously under-registered in the early years of the regime but the degree of under-registration diminished gradually as the registration system improved and was extended to more remote localities. By October, 1940, there was 3.6 percent of the population still left unregistered, as reflected in the difference between the census total and the police count for the same year.

As shown in Table 2, the sex ratio of the Manchurian population based on the police counts varied from 119.9 to 123.4 in the period of 1932-1940, characteristic of a frontier population with a large proportion of new male migrants. High sex ratios usually have a depressing effect on the birth rates. However, even if this possible effect is taken into consideration the birth rates manifested by the police registration still appear to be too low. This is evidenced by a comparison of the data in Table 3 with the vital statistics of the KTLT presented below (per 1,000 persons). <sup>(9)</sup>

(8) Ibid.

(9) Kanto Kyoku, *Kan'o kyoku tokei sanjunen shi* (Thirty Years' Statistics of the Kwantung Leased Territory), Dairen, p. 170, and *The Yearbook of Manchuria*, 1938, p. 38.

Demographic Development in Manchuria, 1924-1941

|      | BIRTH RATE | DEATH RATE | RATE OF NATURAL INCREASE |
|------|------------|------------|--------------------------|
| 1932 | 31.4       | 20.6       | 10.8                     |
| 1933 | 30.4       | 16.6       | 13.8                     |
| 1934 | 28.9       | 17.9       | 11.0                     |
| 1935 | 28.4       | 18.2       | 10.2                     |
| 1936 | 25.7       | 14.8       | 10.9                     |

In view of the long experience of the Japanese statistical workers in the KTLT and the small size of the territory the demographic data of KTLT may be regarded as fairly reliable. Even with much higher sex ratios (see Table 2) the birth rate in the KTLT turn out to be substantially higher, not lower, than the Manchurian rates. Nor can the lower death rates in Manchuria, as compared with those in the KTLT, be justified, because the KTLT had better economic and sanitary conditions and more adequate medical supplies for its residents.

Fortunately, the Manchukuo authorities published the population data by age group on the basis of police registration for 1939, which enable us to identify

| Age Group   | 1939 Police Registration | 1940 Census |
|-------------|--------------------------|-------------|
| 1-5         | 94.1                     | 132.5       |
| 6-10        | 94.6                     | 115.4       |
| 11-15       | 92.3                     | 113.9       |
| 16-20       | 83.1                     | 93.1        |
| 21-25       | 77.0                     | 76.4        |
| 26-30       | 79.8                     | 83.7        |
| 31-35       | 77.1                     | 78.2        |
| 36-40       | 73.8                     | 67.7        |
| 41-45       | 69.7                     | 58.3        |
| 46-50       | 62.8                     | 48.2        |
| 51-55       | 54.2                     | 38.0        |
| 56-60       | 47.8                     | 33.6        |
| 61 and over | 93.4                     | 60.3        |

the source of bias with certainty. Above is a comparison of the age distributions of the 1939 police registration and the 1940 census (with total population as 1,000).

Apparently, the 1939 data greatly understated the shares of the younger groups and consequently overstated the shares of older age groups. Moreover, the understatement in the younger groups was particularly serious for females, as evidenced by the following data for the two years.

|                         | 1-5 Years | 6-10 Years | 11-15 Years |
|-------------------------|-----------|------------|-------------|
| <b>1939 Data</b>        |           |            |             |
| Male Population         | 1,950,080 | 1,977,712  | 1,929,570   |
| Female Population       | 1,754,123 | 1,737,715  | 1,695,293   |
| Sex Ratio               | 111.1     | 113.8      | 113.8       |
| <b>1940 Data</b>        |           |            |             |
| Male Population         | 2,874,907 | 2,545,937  | 2,630,941   |
| Female Population       | 2,851,805 | 2,442,606  | 2,302,323   |
| Sex Ratio               | 100.8     | 104.2      | 113.8       |
| <b>Implied Increase</b> |           |            |             |
| Male Population         | 924,827   | 568,225    | 691,371     |
| Growth Rate             | 14.7      | 12.9       | 13.6        |
| Female Population       | 1,097,682 | 704,891    | 607,030     |
| Growth Rate             | 16.3      | 14.0       | 13.6        |

The implied growth rate for the three age groups are obviously impossible. Furthermore, in view of the fact that although immigration would distort the

| Age Group | 1920  | 1925  | 1930  | 1935  |
|-----------|-------|-------|-------|-------|
| 1-10      | 102.9 | 103.0 | 102.2 | 102.9 |
| 11-20     | 154.2 | 137.8 | 142.1 | 137.2 |
| 21-30     | 250.8 | 214.3 | 209.4 | 191.5 |
| 31-40     | 237.9 | 207.9 | 203.1 | 194.0 |

sex ratios of adult groups it should have no effect on the sex ratios of new-born babies, the sex ratios for the first two age groups in the 1939 data appear to be too high. According to the KTLT population data, which are believed to be fairly reliable, the sex ratios for the populations below 40 were as above.<sup>(10)</sup> The sex ratios for the age group 1-10 in various years were quite stable, and they were consistent with the results of the 1940 census for whole Manchuria so far as this age group is concerned (102.4).

It is now clear that the systematic bias in the population registration by the Manchurian police prior to 1940 gave rise to three types of persistent distortions: (1) the total population counts were biased downward, (2) the sex ratios for the whole population were slightly exaggerated because of the larger omissions of girls, (3) the birth rates were greatly understated because a considerable proportion of new births, especially female babies, were not reported. Some of the unreported children were finally "discovered" by the police registration when they grew older; they constituted the column of "population increase due to the improvement of investigation" shown in the official population statistics before the 1940 census.

### New Estimates

An attempt will be made in this section to make new estimates to replace the population counts for the years before 1940. The basic assumptions involved in deriving such estimates are: (1) we accept the KTLT population data, (2) we consider the 1940 census results fairly reliable, and (3) while we have some reservation on the quality of the immigration data we believe that the margin of errors is not large enough as to constitute a major source of distortion. The basic biasing factor was the underreporting in the police registration, which yielded systematic understatements in birth rates and natural growth rates.

When satisfactory statistics of births are not available the general level of

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(10) Kanto Kyoku, *Showa junen kanto kyoku kokusei chosa* (Report of the 1935 Census for the Kwantung Territory), Dairen, 1939, p. 18.

fertility may be estimated from the number of children enumerated in the census by calculating the probable number of births from which this number of children survived. Using this estimate we may make a reverse projection of the Manchurian population before 1940.<sup>(11)</sup> To prepare for such a projection we must first adjust the age distribution originally given in the census reports because in that census age was reckoned according to the Chinese lunar system. Under this system, the child was recorded one year old at birth and became a year older on the first day of the Chinese lunar new year. The census was taken on October 1, 1940, whereas the Chinese lunar new year is usually around late January or early February. Therefore, a child born between October 1, 1939

Table 7 Adjusted Age Distribution of Manchurian Population, 1940

| Age Group | Original Age Distribution<br>(1) | (2)     | (3)       | Adjusted Age Distribution<br>(4) |
|-----------|----------------------------------|---------|-----------|----------------------------------|
| 1-5       | 5,726,712                        | --      | 5,726,712 | 6,059,448                        |
| 6-10      | 4,988,543                        | 332,736 | 4,655,807 | 4,984,189                        |
| 11-15     | 4,923,264                        | 328,382 | 4,594,882 | 4,863,204                        |
| 16-20     | 4,022,820                        | 268,322 | 3,754,498 | 3,974,776                        |
| 21-25     | 3,302,523                        | 220,278 | 3,082,245 | 3,323,525                        |
| 26-30     | 3,617,389                        | 241,280 | 3,376,109 | 3,601,542                        |
| 31-35     | 3,379,802                        | 225,433 | 3,154,369 | 3,349,714                        |
| 36-40     | 3,928,711                        | 195,345 | 2,733,366 | 2,901,379                        |
| 41-45     | 2,518,937                        | 168,013 | 2,350,924 | 2,490,041                        |
| 46-50     | 2,085,706                        | 139,117 | 1,946,589 | 2,056,327                        |
| 51-55     | 1,645,248                        | 109,738 | 1,535,510 | 1,632,509                        |
| 56-60     | 1,454,260                        | 96,999  | 1,357,261 | 1,531,279                        |
| 61+       | 2,608,965                        | 174,018 | 2,434,974 | 2,434,974                        |
| TOTAL     | 43,202,907                       |         |           | 43,202,907                       |

NOTES: (1) Original age distribution

(2) = (1) × 0.0667, except for the first age group

(3) = (1) - (2)

(4) = each age group in (3) plus the number in the next age group given in (2)

(11) United Nations, *Population Studies*, No. 25, New York, 1956, pp. 41-47.



and February 1, 1940, was considered two years old, one born between October 1, 1938 and February 1, 1939 as three years old, and so on. The original age distribution is adjusted by a factor of 4/60 which is 0.0667, and the results are presented in Table 7.

On the basis of the adjusted age distribution, if we take the number of children 1 to 5 years of age and compare with the number of women in reproductive ages from 16 to 50 we obtain a ratio of 644 children per 1,000 women. This ratio is surprisingly close to the ratio (669 children per 1,000 women) for the whole Chinese population as given by the 1953 census.<sup>(12)</sup> The closeness suggests that the general level of fertility of the Manchurian population was basically consistent with the reproductive mores of the Chinese people in general.

Assuming the average life expectancy at birth being 37.5 years, one can derive the value of survival ratio from birth to lunar ages 1-5. The survival ratio is then applied to the adjusted number of children in the 1-5 age group in order to estimate the number of births, which, when divided by the total population size, gives the conventional crude birth rate. One can then estimate the number of deaths by applying age-specific mortality rates to the population of each age group. A crude death rate is then obtained by dividing the estimated number of deaths by the total population. The results are as follows:

|                        |                 |
|------------------------|-----------------|
| Crude birth rate       | 37.25 per 1,000 |
| Crude death rate       | 24.86 per 1,000 |
| Rate of natural growth | 12.39 per 1,000 |

The reverse projection of population is then made by applying the following formula to the 1940 census total:

$$P_x = P_{x+1}(1-G) - M_{x+1}$$

Where  $P_{x+1}$  is the population size in the current year,  $P_x$  is the estimated population for the preceding year,  $G$  is the natural growth rate which has

(12) Nai-Ruenn Chen, *Chinese Economic Statistics*, Chicago, 1967, p. 135. The number of children refers to those in the age group of 0-4 years and the number of women refers to those in 15-49 years in accordance with the standard system of counting ages.

been estimated to be 12.39 per 1,000, and  $M_{x+1}$  is the net number of migrants in the current period.

If our estimates are reasonably close to the true situation, the annual growth rate of the Manchurian population implied by the 1932 police count and the 1940 census total may be broken down as follows:

|                                |                |
|--------------------------------|----------------|
| Implied growth rate            | 42 per 1,000   |
| Natural growth rate            | 12.4 per 1,000 |
| Net Migration                  | 12.0 per 1,000 |
| Due to statistical improvement | 17.6 per 1,000 |

Since the KTLT is considered as part of Manchuria in this study, we must add the KTLT population figures to the totals estimated above. We also extend

Table 8 Population In Manchuria, New Estimates 1924-1941

(1,000)

|      | Manchuria<br>excl. KTLT | KTLT  | Whole<br>Manchuria |
|------|-------------------------|-------|--------------------|
| 1924 | 30,316                  | 714   | 31,030             |
| 1925 | 30,904                  | 766   | 31,670             |
| 1926 | 31,705                  | 772   | 32,477             |
| 1927 | 32,962                  | 806   | 33,768             |
| 1928 | 34,064                  | 837   | 34,901             |
| 1929 | 34,875                  | 884   | 35,759             |
| 1930 | 35,516                  | 939   | 36,455             |
| 1931 | 35,963                  | 938   | 36,901             |
| 1932 | 36,318                  | 861   | 37,279             |
| 1933 | 36,854                  | 1,004 | 37,858             |
| 1934 | 37,617                  | 1,051 | 38,668             |
| 1935 | 38,205                  | 1,120 | 39,325             |
| 1936 | 38,836                  | 1,148 | 39,984             |
| 1937 | 39,408                  | 1,190 | 40,598             |
| 1938 | 40,354                  | 1,226 | 41,580             |
| 1939 | 41,761                  | 1,274 | 43,035             |
| 1940 | 43,203                  | 1,393 | 44,596             |
| 1941 | 44,262                  | 1,493 | 45,755             |

the reverse projection to the years before 1932 plus a forward projection for the year of 1941, though we recognize that to assume constant birth and death rates over such a long period of time is a questionable practice. The final results are shown in Table 8.

### **Characteristics of the Manchurian Population**

The population in Manchuria manifested some of the traditional traits of the Chinese people as well as some peculiar characteristics of a frontier population. Some of the demographic features significantly reflect the process of economic development in the region.

Most of the people in the region had moved from Shantung and Chihli (Hopei) at different points of time. After they arrived at the region, they were engaged in more or less the same type of agricultural production, built the villages in the same manner, maintained similar social and cultural lives, and, more important, adhered to the same family institution. It is no wonder, therefore, that the ratio of children of 0-4 ages per 1,000 women of childbearing ages in Manchuria in 1940 was extremely close to that of whole China in 1953. There is no reason to believe that the Chinese population had significantly changed its basic characteristics between 1940 and 1953. The crude birth rate estimated on the basis of the 1940 census is 37 per 1,000, whereas the rate for China as a whole in 1952-54 is in the narrow range of 37 to 38.<sup>(13)</sup> According to Professor John L. Buck's farm survey conducted in 1929-32, the rural populations in 101 sample localities in China proper showed an average crude birth rate of 38.3 and an average crude death rate of 27.1.<sup>(14)</sup> The breakdown data further reveal that the crude birth rate and death rate in north China were, respectively, 37.4 and 24.1, whereas the rates in south China were 39.0 and 30.0, respectively.<sup>(15)</sup> The Manchurian rates, as we have computed above, are

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(13) Op cit. p. 136.

(14) John L. Buck, *Land Utilization in China*, Nanking, 1937, p. 361.

(15) Op cit., pp. 383 and 387.

virtually identical to those in north China. All these similarities can hardly be interpreted as a pure coincidence.

In accordance with our estimates, the Manchurian population grew at an average rate of 2.4 percent a year in the 1930's and 1920's, one half of the growth was attributed to the natural increase and the other half to net migration. This is a typical feature of a frontier population. As can be seen from Table 5, the population flow was exceedingly uneven in that period, with the net annual migration varying from the highest one million to some negative figures. Obviously, migration was sensitive to economic and political conditions in Manchuria and those in the areas of origin. Thus, net immigration tended to increase sharply in the years when north China was devastated by famine or wars and it tended to decline or even became negative when the political environment turned out to be unfavorable in Manchuria. Moreover, an unfavorable political environment to the Chinese might not be unfavorable to non-Chinese migrants. Therefore, when the Chinese migration declined the migration of non-Chinese might not decline or might even rise. Due to the large share of migration in the overall growth of the Manchurian population and the highly unstable nature of immigration, the actual annual growth appeared to be unstable, too.

It is further observed from the immigration data that, up to 1928, while the net migration of non-Chinese fluctuated widely, there was discernible rising trend of net Chinese migration, probably reflecting the mounting population pressure in north China year after year. Since the Chinese migration outweighed the non-Chinese migration by a large margin the overall net migration showed a rising trend in this period. After 1928, however, the non-Chinese migration (predominantly Japanese) showed a steadily increasing trend up to 1940 whereas the net migration of Chinese fluctuated enormously. As a result of the changing pattern of immigration, the total population in Manchuria demonstrated an accelerated growth up to 1928 but the annual growth rate began to fluctuate rather drastically thereafter.

Another important feature of a frontier population is its high sex ratio-- the number of males per 100 females. This is so because the majority of new migrants are male adults who either have left their families in the areas of origin but will send for their families after having settled in the new places or are not married at all. The Manchurian population inevitably shared the same characteristics; its sex ratio was 123.9 in 1940 according to the census data.

One can observe three distinct patterns of sex ratios revealed by the 1940 census for various provinces (according to the political divisions of the Manchukuo government). For Chinchou, Jehol, Antung, Fengtien, Ssiping and Kirin, the sex ratio ranged from 107.8 to 120.8, i. e., all below the regional average of 123.9; those six provinces had a population density ranging from 44 persons per square kilometer to 138 persons per square kilometer, i. e., all above the regional average density of 33 persons per square kilometer. Those provinces were closer to China geographically and had been the destinations of Chinese immigration in the early years. But by the 1930's their population densities were already high and very few new migrants could be taken except as new workers in cities and industries; the existing population was gradually normalized in the sense that males and females were relatively balanced. For Lungkiang, Pinkiang, Peian, Sankiang, Tunghua, Mutankiang, Tungan, North Hsingan, East Hsingan, and Heiho, the sex ratio ranged from 125.0 to 327.0, whereas the population density ranged from 1 to 31 persons per square kilometer. The extreme case were North Hsingan and Heiho, where the population densities were as low as one person per square kilometer and the sex ratios were 223.2 and 327.0, respectively. Those provinces were farther to the north but had been made accessible by the newly built transportation lines, hence they became the main destinations for new migration in the 1930's. The third pattern is found in South Hsingan and West Hsingan. These two provinces were bordering with Outer Mongolia and the densely populated Fengtien, Chinchou, Ssiping, and Kirin. However, there were vast pastural lands but rather limited arable areas due to the lack of rainfall. After the limited arable land had been

occupied by early Chinese migrants these two provinces could no longer attract new migrants from North China. In the meantime there was a high proportion of mongol in the native population, engaging in husbandry. In a sense the population in South Hsingan and West Hsingan had been stabilized, too; they showed low densities (10 and 13 persons per square kilometer) but the sex ratio was not too high (130.3 and 127.5).

If we take the 17 municipalities (with 50,000 or more people) as a whole the sex ratio was 167, which implies a sex ratio for the remainder of Manchuria as 115. This differential suggests that a considerable proportion of new migrants in the 1930's came to the urban centers and the migration flow into rural Manchuria in general was slowing down. In fact, this was a clear sign of rapid industrialization and urbanization processes which had attracted male adults not only from outside but also from the rural areas within Manchuria. As well illustrated by the case of Fengtien province, three of the hsien adjacent to large cities showed sex ratios below 100. For those rural areas not only immigration had ceased to come but a large number of male adults were also moving out every year to take industrial and construction jobs.

The following data show that the sex ratio varied from city to city by sizeable margins.

|                      | Population<br>(in 1,000) | Sex Ratio<br>(males per 100 females) |
|----------------------|--------------------------|--------------------------------------|
| Shenyang             | 1,134                    | 172                                  |
| Harbin               | 661                      | 174                                  |
| Changchun (Hsinking) | 555                      | 167                                  |
| Antung               | 315                      | 137                                  |
| Fushun               | 270                      | 183                                  |
| Anshan               | 214                      | 161                                  |
| Yinkou               | 181                      | 143                                  |
| Mutankiang           | 178                      | 200                                  |
| Kirin                | 173                      | 150                                  |
| Fouhsin              | 143                      | 184                                  |

Demographic Development in Manchuria, 1924-1941

|           |     |     |
|-----------|-----|-----|
| Chinchou  | 142 | 160 |
| Chichihar | 133 | 164 |
| Chiamussu | 129 | 195 |
| Penchi    | 100 | 260 |
| Ssuping   | 68  | 144 |

To some extent the differentials are indicative of the nature of these cities and their relative speed of urbanization just prior to the census. Many male adults came to cities to take non-agricultural jobs, but as soon as they settled down there they usually sent for their families who had been left in the rural homes. Moreover, the proportion of male adults without families was generally much higher among industrial and construction workers than in other higher income occupational groups such as civil service and professionals. The cities with sex ratios above 180, such as Penchi, Fouhsin, Fushun and Mutankiang, were newly emerged centers of large-scale mining or other industries. The administrative centers showed generally lower sex ratios, in the range of 150-180, because in addition to new industries the number of civil service employees and professionals had increased rapidly in the Manchukuo period. Antung (137) and Yinkou (143) were two old ports whose development began much earlier and became relatively mature in the 1930's.

The contention that sex ratios can reflect the speed of urbanization is fully supported by the KTLT data, as shown below.<sup>(16)</sup>

|      | Dairen | Lushun |
|------|--------|--------|
| 1920 | 309.5  | 202.4  |
| 1925 | 208.8  | 189.4  |
| 1930 | 192.3  | 178.8  |
| 1935 | 187.9  | 156.4  |

The high speed of construction in Dairen and Lushun took place much earlier

(16) 1935 *Census*, p. 21

than in the rest of Manchuria, and by the 1930's the development of the two cities gradually slowed down. Hence, the sex ratios of the populations in Dairen and Lushun continuously declined from the extremely high figures of 1920.

In sum, the inter-locality differentials of sex ratios can divulge two important aspects of economic developments. First, they can tell the direction and stages of agricultural migration. If one computes the sex ratios for various provinces exclusive of cities (i. e., the sex ratios of rural areas in various provinces) and the population densities, he can find a high correlation between the two. Secondly, the sex ratios of cities are indicative of the speeds of construction and industrialization and the degree of rural-urban migration.

The ethnic distribution of the population in Manchuria in 1940 was as follows (total population as 100):

|          |       |
|----------|-------|
| Chinese  | 94.2% |
| Japanese | 2.3%  |
| Koreans  | 3.3%  |
| Others   | 0.2%  |

Table 9 Occupational Distribution of the Manchurian Population,  
by Ethnic Group, 1940  
(Percent of total population)

|                                     | Overall | Chinese | Japanese | Korean | Others |
|-------------------------------------|---------|---------|----------|--------|--------|
| Agriculture, Forestry and Husbandry | 73.6    | 75.2    | 13.0     | 73.3   | 29.3   |
| Fishing                             | 0.2     | 0.2     | 0.1      | 0.1    | 0.1    |
| Mining                              | 1.4     | 1.2     | 7.4      | 0.9    | 0.5    |
| Industry                            | 5.8     | 5.5     | 20.3     | 5.1    | 17.9   |
| Commerce                            | 6.7     | 6.4     | 17.4     | 7.0    | 9.1    |
| Transportation                      | 0.7     | 0.6     | 6.6      | 1.0    | 1.8    |
| Civil Service and Professional      | 5.0     | 4.5     | 23.9     | 6.7    | 17.0   |
| Household Service                   | 2.0     | 2.0     | 3.1      | 1.6    | 3.5    |
| Others                              | 4.6     | 4.4     | 8.2      | 4.3    | 20.8   |

Source: *Statistics of Current Population in Manchuria*, 1942, p. 6.  
The data did not include the population in the KTLT.



It is clear from Table 9 that the Chinese were predominantly farmers. Only about seven percent of them were in the fields of mining and industry, mainly as unskilled workers recruited for the industrialization programme. The Koreans, about 1.5 million in 1940, formed the second largest ethnic group in the region. They concentrated in Chientao, Mutankiang, and the eastern portion of Kirin. Nearly 0.9 million of the 1.5 million Koreans moved into the region during the Manchukuo period. The Koreans showed an occupational distribution almost identical to that of the Chinese. However, Korean farmers there specialized in production of paddy rice, a crop the Chinese migrants from north China did not know how to grow.

The Japanese group in the Manchurian population was unique. In 1932, there were 792,230 Japanese: 225,759 in the KTLT and the SMR Zone and 566,471 in the rest of Manchuria.<sup>(17)</sup> The number of Japanese in whole Manchuria rose to slightly over one million by the end of 1940. It should be noted that these figures refer to Japanese civilians only; military personnel was reported through military channels and was included in the population of Japan proper. During the Manchukuo period Japanese armed forces stationed in the region had increased by about a half million. The relatively slow increase in Japanese civilians was to a large extent attributed to the failure of the resettlement projects which called for an immigration of one million Japanese farmers to Manchuria. The Japanese who did come to the region were government employees, technicians, managers, administrative staff, professionals, and skilled workers.

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(17) Manchukuo Government, *Man-chu-kuo nien-pao* (The Manchukuo Annals), Hsinching, 1933, p. 37.