Development and Demographic Change in Taiwan

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In memory of

my parents

Isaac Saul Selya
1910–1985

Lillian Aronson Selya
1910–2002

my parents-in-law

Phillip King
1910–1988

Frances Goldberg King
1903–1995

May their memories be for a blessing.

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Preface

The direct inspiration for this monograph is Barclay's (1954) study on population and development in Taiwan under the 50 years of Japanese administration (1895–1945). Barclay's findings were most intriguing in regard to the possible relationships between economic and demographic change: he found that economic growth in Taiwan under the Japanese only affected the mortality of the population, and that the declines in mortality were related to basic, elementary, preventative public health measures. Despite increased income and some industrial development, fertility, marriage, and migration patterns appeared to be hardly affected. Barclay attributed this lack of change to deliberate Japanese policy: they did not want to bring about social change and so carefully implemented economic change so as to insure that only minimal social changes would take place. Since there are now data documenting economic, demographic, political, and social changes that have taken place in the 50 year period since the end of World War II and Taiwan's Retrocession to China, it seemed appropriate to review how these changes have interacted.

Although the original inspiration comes from Barclay, this work differs from his in a number of respects. First, when Barclay wrote he did not relate his material to any models or theories of economic and population change, in part perhaps because these models and theories

were still being developed. This research seeks to establish which among competing theories will help best explain Taiwan's changes. Second, Barclay used census materials. The main demographic source for this research is the *Taiwan Demographic Fact Book*, and *Taiwan-Fukien Demography Quarterly, Republic of China*, which are based on population registers. When necessary, the *Taiwan Demographic Fact Books* were supplemented by additional sources such as *Health and Vital Statistics, Republic of China*, and the *Statistical Yearbook of Taiwan Province*. There are three major reasons for choosing these sources over census materials. First, Shih (1979) has argued that these non-census sources have a low (2 percent) overall error rate and that even for migration data at worst there is but a 3 month time lag. Although it appears that only 29.04 percent of neonatal deaths (Chen *et al.*, 1998) and only 63.14 percent of maternal deaths are reported as such (Kao, *et al.*, 1997a, b), there is no danger in using the published data since they are unbiased because under-reportings are systematically and evenly distributed temporally and spatially. The real danger in using data plagued with under-reporting would be in any international comparisons. Second, the data in these sources are more timely since the sources are quarterly and annual publications. Third, both sources present the data at a lower level of enumeration (city wards, and *chen* (urban) and *hsiang* (rural) townships), than does the census, which shows data at the city and county (*hsien*) levels. Thus, these sources permit the finest temporal and spatial frameworks possible for describing and analyzing the changes in Taiwan's population. The 318 cities and townships used in this study are shown in Fig 0.1. Specific townships mentioned in the analysis are displayed in Fig 0.2. The only changes in enumeration of district borders included in this study are the transfers in 1968 of the Yangmingshan Administrative district and the four Taipei *hsien* townships of Chingmei, Nankang, Neihu, and Mucha to Taipei City. Readers requiring further details of names and locations should refer to Chang (1972).

A third difference with Barclay's work focuses on the fact that it is not clear whether or not post-1949 economic policies were implemented with any regard to their demographic effects. The literature on Taiwan's population policies suggests that the major concern was for

Figure 0.1 Taiwan's Administrative Boundaries

Figure 0.2 Taiwan Place Name Map

implementing population policies that would foster rapid economic growth.

A fourth difference deals with methodology. In addition to the demographic methods and tabular listings used by Barclay, a more geographical approach is used here. Since city and township data are the basis of the study, these will be graphed, mapped, and subject to analysis using geographic concepts and methods of testing spatial distributions (Plane and Rogerson, 1994).

A final difference is that in addition to exploiting primary data sources, secondary sources are presented, compared, and contrasted, in order to give a sense of how answers to questions about Taiwan's changing population have evolved over time. As such, then, this work is by necessity explicitly inter- and multi-disciplinary in nature. Two technical notes are necessary in this regard. First, Chinese language materials are indicated in the references by the * symbol. Second, when transliterating Chinese names or titles the Wade-Giles system has been used, since this is the one most commonly found in Taiwan. Despite these differences, in order to preserve the comparison with Barclay's work, the description and analysis will focus on the period 1945-95, subject to the availability of data. This proviso especially applies to the spatial analyses. In some cases, data for all 318 township units are not available until the mid-1960s, thus precluding a full 50 year analysis. Wherever possible, however, the latest socioeconomic data and research findings are included.

I owe a debt of gratitude to many institutions and individuals for their help in preparing this work. In particular, I wish to thank the staff of the Interlibrary Loan Office, Langsam Library, University of Cincinnati, for their patience and perseverance in locating materials, and staff of the Division of Population Statistics and Census, Department of Population, Ministry of Interior, R.O.C., and The Department of Health, Executive Yuan, R.O.C., for generously providing their materials on a timely and regular basis. Ms Jacqueline Gonima and Ms Shirley H. Philley helped develop the initial bibliography for me to explore, while Brad Connelly helped to organize the references into manageable categories. Ms Wu Qiutao and Ms Zhou Li assisted by collating and organizing various data bases. Ms Laura Miller

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Cincinnati, Ohio

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