

# A Longitudinal Historical Population Database in Asia. The Taiwanese Historical Household Registers Database (1906–1945)

By Chia-chi Lin, Shu-juo Chen, Ying-chang Chuang, Wen-shan Yang, James Wilkerson, Ying-hui Hsieh, Ko-hua Yap and Yu-ling Huang

To cite this article: Lin, C., Chen, S., Chuang, Y., Yang, W., Wilkerson, J., Hsieh, Y., Yap, K. & Huang, Y. (2020). A Longitudinal Historical Population Database in Asia. The Taiwanese Historical Household Registers Database (1906–1945). *Historical Life Course Studies*, 9, 218–227. <https://doi.org/10.51964/hlcs9300>

## HISTORICAL LIFE COURSE STUDIES

Content, Design and Structure of Major Databases with  
Historical Longitudinal Population Data

VOLUME 9, SPECIAL ISSUE 5,  
2020

GUEST EDITORS

George Alter

Kees Mandemakers

Hélène Vézina



## MISSION STATEMENT

# HISTORICAL LIFE COURSE STUDIES

*Historical Life Course Studies* is the electronic journal of the *European Historical Population Samples Network* (EHPS-Net). The journal is the primary publishing outlet for research involved in the conversion of existing European and non-European large historical demographic databases into a common format, the Intermediate Data Structure, and for studies based on these databases. The journal publishes both methodological and substantive research articles.

### Methodological Articles

This section includes methodological articles that describe all forms of data handling involving large historical databases, including extensive descriptions of new or existing databases, syntax, algorithms and extraction programs. Authors are encouraged to share their syntaxes, applications and other forms of software presented in their article, if pertinent, on the EHPS-Net website.

### Research articles

This section includes substantive articles reporting the results of comparative longitudinal studies that are demographic and historical in nature, and that are based on micro-data from large historical databases.

*Historical Life Course Studies* is a no-fee double-blind, peer-reviewed open-access journal supported by the European Science Foundation (ESF, <http://www.esf.org>), the Scientific Research Network of Historical Demography (FWO Flanders, <http://www.historicaldemography.be>) and the International Institute of Social History Amsterdam (IISH, <http://socialhistory.org/>). Manuscripts are reviewed by the editors, members of the editorial and scientific boards, and by external reviewers. All journal content is freely available on the internet at <http://www.ehps-net.eu/journal>.

### Co-Editors-In-Chief:

Paul Puschmann (Radboud University) & Luciana Quaranta (Lund University)  
[hislives@kuleuven.be](mailto:hislives@kuleuven.be)

**The European Science Foundation** (ESF) provides a platform for its Member Organisations to advance science and explore new directions for research at the European level. Established in 1974 as an independent non-governmental organisation, the ESF currently serves 78 Member Organisations across 30 countries. EHPS-Net is an ESF Research Networking Programme.



**The European Historical Population Samples Network** (EHPS-net) brings together scholars to create a common format for databases containing non-aggregated information on persons, families and households. The aim is to form an integrated and joint interface between many European and non-European databases to stimulate comparative research on the micro-level.  
Visit: <http://www.ehps-net.eu>.



HISTORICAL LIFE COURSE STUDIES  
VOLUME 9 (2020), published 14-12-2020

# A Longitudinal Historical Population Database in Asia

## The Taiwanese Historical Household Registers Database (1906–1945)

Chia-chi Lin	Tamkang University
Shu-juo Chen	National Museum of Natural Science
Ying-chang Chuang	Academia Sinica
Wen-shan Yang	Academia Sinica
James Wilkerson	National Tsing Hua University
Ying-hui Hsieh	Tzu Chi University
Ko-hua Yap	National Sun Yat-sen University
Yu-ling Huang	Academia Sinica

### ABSTRACT

For the past 35 years, the Taiwan Historical Household Registers Database (THHRD) has been significant for historical demographic research on Asia. In recent years, researchers have continued adding new demographic information to the database. This allows for the expansion of research on the topic of historical households in the region. However, there are still many issues to address in the field of Asian historical demography. This paper provides a brief introduction on the uses of THHRD for future research.

**Keywords:** Taiwan Historical Household Registers Database, Historical demography, Life events, Taiwan

e-ISSN: 2352-6343  
DOI article: <https://doi.org/10.51964/hlcs9300>  
The article can be downloaded from [here](#).

© 2020, Lin, Chen, Chuang, Yang, Wilkerson, Hsieh, Yap, Huang  
This open-access work is licensed under a [Creative Commons Attribution 4.0 International License](http://creativecommons.org/licenses/), which permits use, reproduction & distribution in any medium for non-commercial purposes, provided the original author(s) and source are given credit. See <http://creativecommons.org/licenses/>.

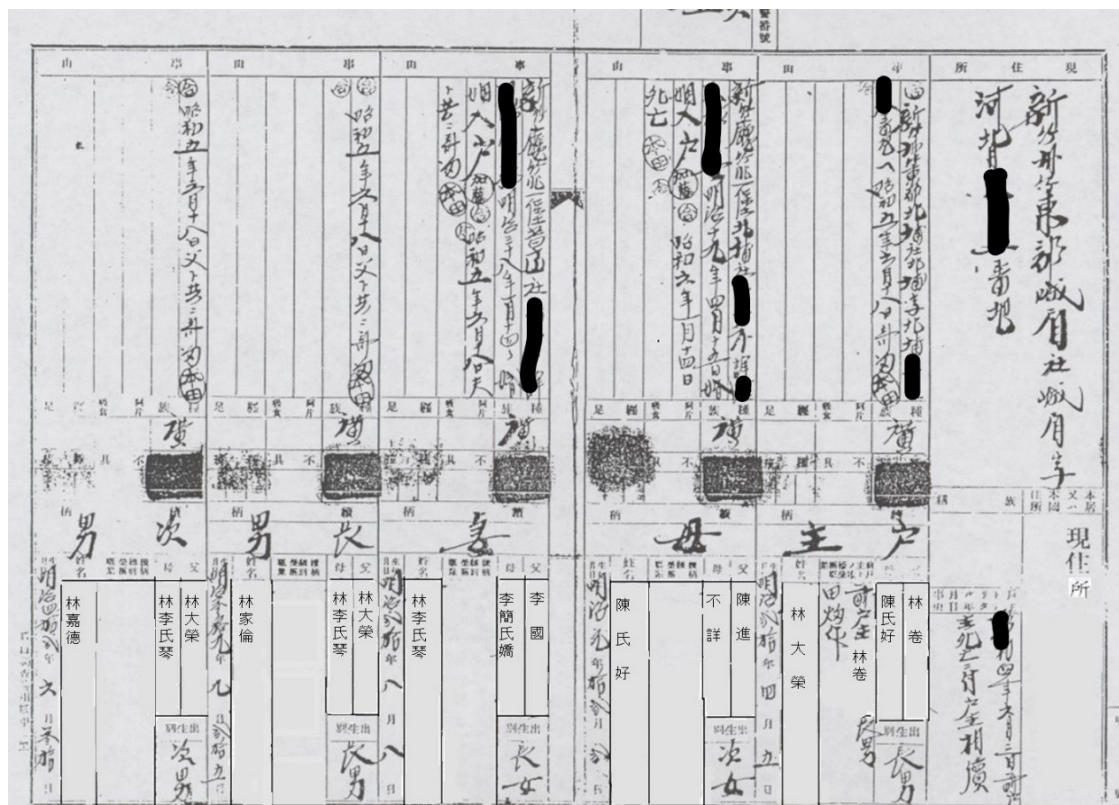
# 1 INTRODUCTION

Stanford anthropologist Arthur P. Wolf was the first scholar to recognize the academic value of the Taiwanese household registers. He utilized them to explore the marriage and adoption customs of the Han Chinese (Wolf, 1968; Wolf & Huang, 1980). Thanks to Professor Wolf we have some unpublished manuscripts about the Taiwan Historical Household Registers Database, 1906–1945 (THHRD), maintained by the Program for Historical Demography (PHD) at the Academia Sinica, Taipei, Taiwan. This paper is based on Professor Wolf’s 2009 manuscript, as well as recent developments and achievements.

In 1985, Professor Arthur P. Wolf began to cooperate with Ying-chang Chuang, Research Fellow of the Institute of Ethnology, Academia Sinica. Together they collected the Taiwanese household registers<sup>1</sup> compiled during the Japanese colonial era. They then digitized the information in these registers in order to construct a historical demographic database. In 2003, the Program of Historical Demography<sup>2</sup> was officially launched at the Research Center for Humanities and Social Science (RCHSS), Academia Sinica, to continue the project of digitizing the data of the Taiwanese household registers.

Taiwan was ruled by Japan from 1895 to 1945 after China was defeated in the Sino-Japanese War of 1894. In order to tightly monitor and control this newly seized island, the Japanese colonial government soon implemented a carefully designed household registration system (Figure 1). The language of the household registers is Japanese. It covered great details of the social life of individuals and families at that time and serves as a precious legacy left behind by the colonial authorities. 'One can recover a large part of the life history of every person alive in the period 1905–1945, and reconstruct the exact composition of each family he or she joined.' (Wolf, forthcoming). These detailed records allow for a variety of studies on demographic events from a longitudinal perspective and can make a contribution to many academic disciplines.

Figure 1 A household register of Colonial Taiwan



Source: *The Program for Historical Demography* (2020).

Note: Due to *privacy protection regulations*, the names in Figure 1 are censored.

- 1 These household registers are preserved in the household registry office in the located townships or districts.
- 2 See <https://www.rchss.sinica.edu.tw/PHD/main.php>. Researchers can apply for access to the database through the PHD website.

This paper first briefly introduces the historical institutions and contents of the Taiwanese household registers from the Japanese colonial period. Then, it offers an overview of the THHRD and its limitations. Finally, it reviews studies that made use of the THHRD and discusses the potential value of the THHRD for research.

## 2 HOUSEHOLD REGISTERS IN THE JAPANESE COLONIAL PERIOD

After taking over Taiwan in 1895, the Japanese soon issued an order pertaining to the implementation of a household registration system and its related regulations in the following year (Liao, 2010). The task of conducting a household survey and registering every household and its members were carried out by the military police. The registers compiled by the military police were no longer used, and were replaced by household registers of a new format after new registration regulations were promulgated on December 26, 1905. The new registers were officially established on January 15, 1906.

Instead of the military police, the new law made the municipal police and the so-called *Baochia* 保甲 in charge of the administration of household registration. The word *Baochia* denotes the head of *Bao* and the head of *Chia*. One *Chia* consisted of ten households; one *Bao* consisted of ten *Chias* (Lin, 2011; Wolf & Huang, 1980). Individuals had to report changes in their situation, including births, deaths, marriages and changes of address, to the *BaoChia* 保甲, which were the heads of the local *HoKou* 戶口 ('household') networks, within ten days, and then the police paid a home visit to verify the report (Engelen & Hsieh, 2007; Katz & Chiu, 2006). The *Baochia* functioned as a Chinese community policing system (Katz & Chiu, 2006).

To establish the initial set of the new household registers, the Japanese police reexamined the information from the defunct household registers. They interviewed family members and consulted private sources such as ancestral tablets and clan genealogies when the information appeared insufficient or missing in the records (Wolf, forthcoming). The household registration system required everyone to be registered in one household. The police also made regular door-to-door checks and irregular household surveys to make sure the accuracy of the information in the registers (Hong, 2013).

The meaning of the columns in the household registers are shown in Figure 2. If a household consisted of more than five persons, there were more pages for their household. In the Chinese household formation system, it is possible to have more than one family in a household/a house address. There were three types of household registers in colonial Taiwan: the active register, the inactive register, and finally the sojourner register. A register was a set of sheets. At the beginning of a household, the household register belonged to the active register file, when the household closed, the household registers would be moved to the inactive register file. Sojourners were the transient residents in the household. They were not part of the family and sojourned in the household because of work or some other reason. The three types of household registers shared the same registration form (Lin, 2011).

To ensure that the data in the Taiwanese household registers were accurate, they were updated regularly. Those individuals that were distrusted (vagrants and criminals) had to report to the registry office every month. For people belonging to higher social classes, this obligation was extended to every three or six months (Wolf & Huang, 1980).

The household register should be read from right to left and from top to bottom. The first item, column I, is filled in for every household register and includes the address of the household and the date and the reason for its establishment (Lin, 2011). The other columns, II to VI in Figure 2, record personal events, including the name of the other persons involved, the date when the event took place, the related address and the type of event. Sometimes a member of the household was struck out from the record, in such circumstances the individual's departure would be recorded in the personal event column (Wolf & Huang, 1980). In the case of more information, small pieces of paper would be pasted on top of it to provide additional writing space to record the new event (Lin, 2011). Each of the columns II–VI is assigned to one member of the household, except the column II which is always reserved to the household head.



The information collected in an individual member column (in the boxes 8–13) contains the name of a household member, the person's birthdate, his/her parents' names, his/her same-sex sibling order, and his/her relationship to the household head. The occupation of a household head and in some cases, other household members, when they had occupations which differed from the occupation of the household heads.

In 1935, the regulation of the Taiwanese household registration system was altered (Engelen & Hsieh, 2007). The information about ethnicity, police rating, physical deformities, smallpox immunization, opium smoking and foot-binding were no longer required in household registers according to the amendment (Hsu, 2014; Lin, 2011). With an exception for the occupation of a household head and in some cases other household members when they had occupations which differed from the occupation of the household heads. The sojourner register was set up only after 1935 (Chiu, 2003). Before 1935, there was no specific sojourner register book, and the sojourners were recorded together with household members in the active register. As a consequence, some sojourners have two similar records in the household registration system: one in the sojourner's original household, the other in the temporary household.

When a household member died or exited because of adoption, marriage or household division, his name was deleted from the register. When a new member arrived by means of birth, marriage or adoption, he was added to the next open column in the register. When a household head died or retired, information concerning all household members was copied onto new forms, and the old register was assigned to a file containing all the registers retired that year. When a family<sup>3</sup> moved from one registration district to another, all information relating to its current members was copied onto fresh forms, which were sent to the registry office responsible for the household's new dwelling place. The old register was then cancelled and filed as closed registers. However, when a family moved to another village or neighborhood within the same registration district, the relevant sheets of the register were simply passed from one registry office to another without a note 'the household was quitting' in the records held by the registry office of the community (Wolf, forthcoming).

Use of the Japanese registers continued through most of 1947, despite the change of government at the end of World War II. However, the THHRD did not include any of the data recorded in 1946 and 1947 since the change of administration may have affected the reliability of such sources (Wolf, forthcoming).

## 3 THE DATABASE

### 3.1 COVERAGE

Arthur Wolf's book (forthcoming) introduces two kinds of databases of Taiwanese household registers: the Stanford Archive and the Taiwan Historical Household Registers Database, 1906–1945 (THHRD). These two databases are based on the same household registers, but include different locations and are based on different computing systems. The database of Stanford archive only consists of household registers from the Hai-san area where Arthur Wolf did his field research for many years. For more information about the Stanford Archive, see Wolf (forthcoming). In this article, we mainly introduce THHRD which is a longitudinal historical demographic database.

The THHRD database covers the period of 1906–1945. In 1906, the household registration system, as carefully designed in the household registration regulations of 1905, was put into practice. It lasted until the nationalist party took over Taiwan from the Japanese colonial government in 1945. The time span of 40 years contains up to 4 generations (Dong, Campbell, Kurosu, Yang, & Lee, 2015). By 2019 there were 369,373 individuals, and 55,810 households in THHRD. The database was constructed from various contributions. We are grateful to the collectors (see Table 1) who kindly provided their collections of household registers with the researchers.

3 In traditional Chinese society, a household could include more than one family. A family consists of at least two generations.

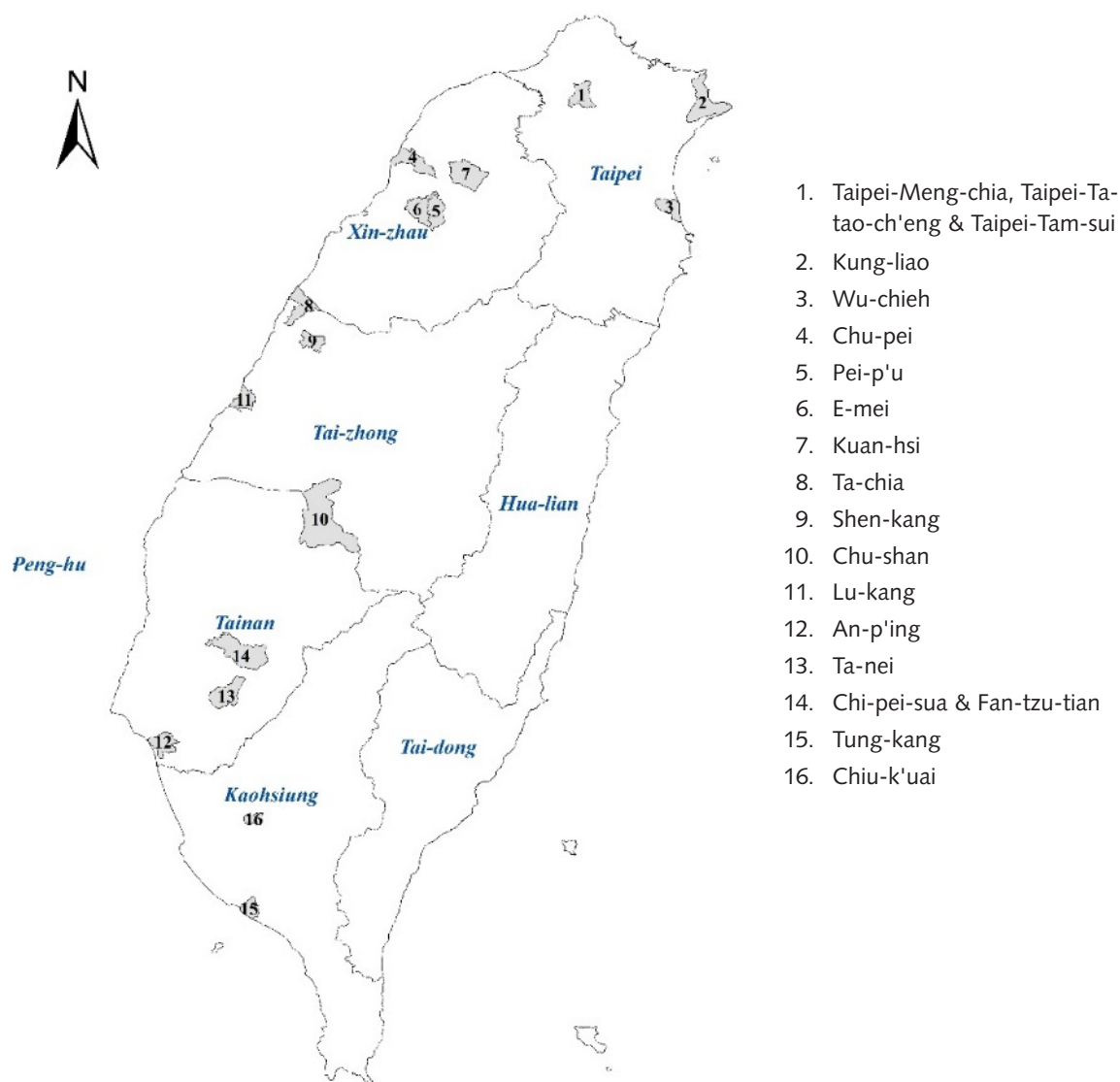
Table 1 *Research Sites and collectors of THHRD*

Reference to figure 3	Research sites	Collectors	Numbers of individuals
1	Taipei-Meng chia & Taipei-Ta-tao-ch'eng	Arthur Wolf, Hill Gates	35,133
	Taipei-Tam-sui	Chia-chi Lin	8,261
2	Kung-liao	Ing-hai Pan	4,066
3	Wu-chieh	Ing-hai Pan	16,780
4	Chu-pei	Ying-chang Chuang	19,671
5	Pei-p'u	Ying-chang Chuang	40,680
6	E-Mei	Ying-chang Chuang	14,216
7	Kuan-hsi	Ying-chang Chuang	53,807
8	Ta-chia	Ying-chang Chuang	11,561
9	Shen-kang	Ying-chang Chuang, Ing-hai Pan	13,854
10	Chu-shan	Ying-chang Chuang	13,241
11	Lu-kang	Guang-hong Yu	10,518
12	An-p'ing	Ing-hai Pan	17,078
13	Ta-nei	Ing-hai Pan	20,909
14	Chi-pei-sua & Fan-tzu-tian	Ing-hai Pan	4,011
15	Tung-kang	Paul Katz	11,444
16	Chiu-k'uai	Hsiang-shui Chen	4,628
Total			299,858
	Hu-hsi	Guang-hong Yu, James Wilkerson	under construction (7,508)
	Pai-sha	Guang-hong Yu	under construction (8,074)
	Ma-kung	Guang-hong Yu	under construction (16,225)

As for its spatial coverage, the THHRD contains digitized data from 30 research sites while still more localities in Taiwan are being added. Except Eastern Taiwan, they represent all of the Taiwan mainland and Pescadores Islands. Nowadays, among 30 research sites, only 16 sites are available for research, which are scattered in different regions of Taiwan (see Table 1 and Figure 3). They include eight sites in Northern Taiwan, four in Central Taiwan and four in Southern Taiwan. Among these sites, some are in urban areas, and others are in rural areas. Therefore, the THHRD allows for an observation of urban and rural differences. The mentioned program for historical demography only provides open access to the data of three research sites: Chu-pei, Pei-p'u and E-mei. As for the rest of research sites, please first contact with contributors and the program for historical demography.



Figure 3 The distribution of research sites in THHRD (2019)



### 3.2 CONTENTS

In the THHRD, following the design of Professor Wolf and Professor Chuang, there are 9 different tables (see Table 2) to transcribe the enormous and complex details from the household registers. The history of a household could be recorded in more than one register if the household ever experienced the death or retirement of a household head, or if one of its members ever departed to create a new household. As for an individual, he/she could also be observed in different registers in any of the previously mentioned cases as well as if he/she ever departed from his/her original household through adoption, marriage or other means.

Through linkage, household and individual histories can be reconstructed and various research tasks can be conducted. For instance, with the help of the recorded relationship of each individual to his household head, it is possible to identify the relationship between any two individuals within one household and thus to reconstruct the exact structure of a household (Wolf, forthcoming). By linking the Personal Stat Table, the Occupation Table and so on, Chia-chi Lin (2011) has published a book on female-headed households in Eurasian societies.

Table 2 *Nine information tables from household registers*

Individual-level	Household-level	Others
Personal Stat	House Stat	Address
Personal Dynamic	House Dynamic	Occupation
Personal Location		Relationship to the household head
		Time of entering or leaving

### 3.3 DATA LIMITATIONS

There is always a limitation in everything. As for using THHRD, users have to keep the following things in mind. First, events occurring before 1906 were usually recorded a long period after they actually happened and were mainly based on a reporter's recollection. In addition, as mentioned before, the dates of these events might have been reported according to the lunar calendar instead of the solar calendar used by the Japanese government. The lunar calendar was used in the pre-colonial farm society. This changed under the Japanese governance. So, one has to consider the accuracy of the dating of the earlier events (Hsu, 2014; Wolf, forthcoming).

Second, the way by which 'persons in temporary stay' (*Jiliouren* 寄留人) are dealt with in the database deserves some attention. Because the types of 'person in temporary stay' are of great diversity, it is hard to handle them with a computer program. Therefore, they are excluded from the Personal Dynamic Table and the Personal Location Table, while they are still included in the Personal Stat Table. The reason to include them in the Personal Stat Table is that some people in temporary stay could have blood ties with members of the household in which they were registered.

Third, information about ethnicity, police rating, physical deformities, smallpox immunization, opium smoking and foot-binding was no longer recorded in the registers after 1935.

Fourth, the household registers did not record everyone's occupations. Only 10% of the recorded occupations were from other persons in the household other than that of the head of the household. However, these records did not include the dates when the occupations were valid, but they did note changes of occupation.

Fifth, the THHRD database is based on regions. Once individuals moved out of the selected regions, there was no information in the database anymore. If individuals arrived from other regions, only the reason of moving and the address of the former household from the foregoing period were recorded.

## 4 POSSIBILITIES FOR RESEARCH

The THHRD has been applied to various research topics intending to understand the family composition and social structure of Taiwan in the early 20th century. The topics include adoption, ethnicity, fertility, gender differences, marriage, mortality and the related life course researches. Chuang and Wolf (1995) claim that different marriage forms have different issues of concern. Moreover, in 1996, on the cooperation of Professors Arthur P. Wolf, Ying-chang Chuang and Theo Engelen of Radboud University, the project of the 'Population and Society in Taiwan and the Netherlands' was launched. The THHRD, together with the database of the Historical Sample of the Netherlands (HSN), was utilized to make Eurasian comparative studies, and a series, *Life at Extremes*, produced four books from the project. The first book, *Marriage and the Family in Eurasia: Perspectives on the Hajnal Hypothesis*, reviewed the contribution of Hajnal's hypothesis to historical demography (Engelen & Wolf, 2005).

The second book, *Positive or Preventive? Reproduction in Taiwan and the Netherlands, 1850–1940* (Chuang, Engelen, & Wolf, 2006), discussed the Malthus hypothesis proved by the results of the Eurasia historical population database. Moreover, *Two cities, One Life. Marriage and Fertility in Lugang and Nijmegen* provided a case study furthering discussion on Eurasia difference (Engelen & Hsieh, 2007). After the marriage issue, *Death at the Opposite Ends of the Eurasian Continent: Mortality Trends in*

*Taiwan and the Netherlands 1850–1945* gave information on mortality topics. Another important element in Malthus' hypothesis (Engelen, Shephard, & Yang, 2011).

The occupation titles recorded in the household registers are combined with those from the 1915 Taiwan household census into a database by Professor Chia-chi Lin. She further linked these Taiwan's historical occupation titles to HISCO (Historical International Standard Classification of Occupations) to establish 'Formosa Historical International Standard Classification of Occupations' (Formosa HISCO; see [asiahisco.hisotry.tku.edu.tw](http://asiahisco.hisotry.tku.edu.tw)), which aims to provide 'economic variables' for Taiwan's historical demography.

Professor Ko-hua Yap published a paper about foot-binding studies. In general, the Hoklo people preferred bound feet while the Hakka people preferred natural feet. He found that Hoklo female with cross-ethnic family background were more likely to get rid of foot binding, according to the household registers. Furthermore, the Hoklo women without cross-ethnic family background but close to the Hakka areas also had unbound feet as compared to their counterparts in other Hoklo areas. Professor Ko-hua Yap explained the above phenomenon as 'arms race'. That is, the more popular foot binding was in the surroundings, the more likely parents bound their daughters' feet, to avoid having a disadvantage in the marriage market. Conversely, the existence of people who did not desire bound feet in the surroundings, drastically reduced the pressure of pursuing foot binding (Yap, 2017).

Professor James Wilkerson (2010) published a chapter in a Ruizhi Lian and Ying-chang Chuang edited volume on late Qing dynasty era literati marriage. The literati status in Hsinchu at that time was a legal status for men who successfully passed one or more of the various levels of the Qing imperial exams. Both before and after marriage, women in literati families were under constant surveillance through standard Chinese style sub-bureaucracies (*BaoChia*) to impose a variety of prescriptive standards for female 'domestic decorum' (*Fudao*). When these literati are compared with non-literati, the literati had extremely low rates of violations of female domestic decorum in comparison with the high rates of violations of female domestic decorum as reported and discussed by Arthur P. Wolf and others for Hsinchu and elsewhere in Taiwan. This chapter is a series of publications discussing marriage and sub-bureaucracies in Taiwan and China.

In 2015, Professor Wen-shan Yang further joined the East Asian Population and Family History Project (EAP 2), therefore the THHRD was included in EAP 2. This project focuses on neighboring populations in East Asia that are more similar in terms of background and context. Instead of comparing European and Asian populations, it aims to point out the similarities and differences in East Asian population behavior through comparative analysis of 5 population register databases from East Asia (Dong, Campbell, Kurosu, Yang, & Lee, 2015).

## 5 CONCLUSION

The Taiwan Historical Household Registers Database has been known as a treasure for historical demography of Asian study. It has been established for more than 30 years and keeps growing. It has provided fruitful and successful research results. With the advancement of statistical methods and computer science, we believe there are still many issues that researchers might study by using the THHRD. This paper is a brief introduction for those who are interested in the Taiwan historical household registers database, and it is also an invitation to join us!

## ACKNOWLEDGEMENTS

The source data from the Taiwan household registers used in this paper are collected by Arthur Wolf, Hill Gates, Ying-chang Chuang, Wen-shan Yang, Guang-hong Yu, Ing-hai Pan, Hsiang-shui Chen, Paul Katz, James Wilkerson, and Chia-chi Lin. Those registers were digitized as 'Taiwan Historical Household Registers Database, 1906–1945 (THHRD)' by the Program of Historical Demography,

Research Center for Humanities and Social Sciences, Academia Sinica, and are at the center of this paper. We are grateful to the members of the Program of Historical Demography for their assistance, comments, corrections, and other feedback. The analysis and results expressed here are solely those of the authors and do not necessarily represent the views of THHRD.

## REFERENCES

- Chiu, C. (2003). Jihchih shinchi huchi izuliao te shinliao tase yu liyung-yl hsilaian shinchian yenchiu weili [The characteristic and using of the historiography of household registers in colonial Taiwan: A case study of Hsilaiian event]. *Taiwan shin liao yen chiu* [Journal of Taiwan historiography], 20, 94–117.
- Chuang, Y., & Wolf, A. P. (1995). Marriage in Taiwan, 1881–1905. An example of regional diversity. *The Journal of Asian Studies*, 54(3), 781–795. doi: [10.2307/2059451](https://doi.org/10.2307/2059451)
- Chuang, Y., Engelen, T., & Wolf, A. P. (Eds.). (2006). *Positive or preventive? Reproduction in Taiwan and the Netherlands, 1850–1940*. Amsterdam: Aksant Academic Publishers.
- Dong, H., Campbell, C. D., Kurosu, S., Yang, W., & Lee, J. Z. (2015). New sources for comparative social science: Historical population panel data from East Asia. *Demography*, 52(3), 1061–1088. doi: [10.1007/s13524-015-0397-y](https://doi.org/10.1007/s13524-015-0397-y)
- Engelen, T., & Hsieh, Y. (2007). *Two cities, one life: Marriage and fertility in Lugang and Nijmegen*. Amsterdam: Aksant Academic Publishers.
- Engelen, T., & Wolf, A. P. (Eds.). (2005). *Marriage and the family in Eurasia: Perspectives on the Hajnal hypothesis*. Amsterdam: Aksant Academic Publishers.
- Engelen, T., Shephard, J., & Yang, W. (Eds.). (2011). *Death at the opposite ends of the Eurasian continent: Mortality trends in Taiwan and the Netherlands, 1850–1945*. Amsterdam: Aksant Academic Publishers.
- Hong, R. (2013). *Rizhi shiqi huji dengji falu ji yongyu bianyi* [The law of household registration during the Japanese colonial period and the translation of terms]. Taichung: Household register office.
- Hsu, M. (2014). *Rizhi shiqi ji guangfu chuqi taiwan huzheng gaikuang* [An overview of household registration in Taiwan during the Japanese colonial period and the Early Recovery]. Tainan: Household register office.
- Katz, P. R., & Chiu, C. (2006). Quantifying the colonized. The history and significance of demographic sources from colonial Taiwan. In Y. Chuang, T. Engelen & A. P. Wolf (Eds.). *Positive or preventive? Reproduction in Taiwan and the Netherlands, 1850–1940* (pp. 19–38). Amsterdam: Aksant Academic Publishers.
- Liao, Y. (2010). Rizhi shiqi huji dangan zhi jianli yu yingyong: Yi yilan diqu keja yimin yanjiu weili [The establishment and application of household registration archives during Japanese colonial period: A case of Yilan county's Hakka household registers]. *Archives Semiannual*, 9(1), 40–53. Available from <https://www.airitilibrary.com/Publication/alDetailedMesh?docid=P20190425001-201003-201904250026-201904250026-40-53>
- Lin, C. (2011). *Female heads of households in eurasian societies. Taipei and Rotterdam in times of industrialization*. Taipei: Program for Historical Demography, RCHSS, Academia Sinica.
- Program for Historical Demography. (n.d.). Retrieved from <https://www.rchss.sinica.edu.tw/PHD/main.php>. Accessed on July 27, 2020.
- Wilkerson, J. (2010). Diguo, wenren yu hunyin: Qingmuo Zhujian [Hsinchu] wenren jiating zhong di nuxing hunying xingshi chutan [Empire, literati, and marriage: A preliminary discussion of female marital patterns in Zhujian [Hsinchu] literati families late in the Qing Dynasty]. In R. Lian & Y. Chuang (Eds.). *Hakka, women, and marginality* (pp. 161–206). Taipei: Nantian shuju.
- Wolf, A. P. (1968). Adopt a daughter-in-law, marry a sister: A Chinese solution to the problem of the incest taboo. *American Anthropologist*, 70(5), 864–874. doi: [10.1525/aa.1968.70.5.02a00040](https://doi.org/10.1525/aa.1968.70.5.02a00040)
- Wolf, A. P. (forthcoming). *Records of a natural experiment*. Taipei: Program for Historical Demography, RCHSS, Academia Sinica.
- Wolf, A. P., & Huang, C. (1980). *Marriage and adoption in China, 1845–1945*. Stanford: Stanford University Press.
- Yap, K. (2017). Dang chanzu yushang tianranzu: Zuqun ronghe yu shehui yali [When bound feet encounter natural feet: Ethnic assimilation and social pressure]. *Minsu Quyi* [Journal of Chinese Ritual, Theatre and Folklore], 197, 107–133. doi: [10.30157/JCRTF](https://doi.org/10.30157/JCRTF)