

Toward an Historical Demography of Thailand

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In this paper we review the rapidly changing field of historical demography, outlining how the field has advanced over the last seven decades or so, particularly with respect to methodologies, and pointing to the contributions the field has made to social history. Then we turn to the social and economic history of Siam and review what is known from existing studies of Siam's historical population trends. We indicate why demography is central to historical social change in Southeast Asia generally and in Siam in particular. In light of its importance in Siam's social and economic history, we consider why so little empirical historical demography has been carried out. Finally, we provide an overview of materials in the nation's historical collections that might provide a basis for an historical demography for Thailand.

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Introduction

It is striking how great the importance of demography for Siam's¹ history, yet how limited the body of population data is that can be drawn upon in historical research. There are numerous historical studies of great importance, yet many of these would be even more valuable had there been population data to draw upon. This paper focuses on the field of historical demography, which has produced such information in other regions and countries. We outline how the field has advanced over the last seven decades or so, particularly with respect to methodologies, and the impacts

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it has had on social history, first across Europe and more recently in many other historical settings. We indicate why demography is central to historical social change in Southeast Asia generally and in Siam in particular. Then we turn to the social and economic history of Siam and review what is known from existing studies of Siam's historical population trends. In light of its importance in Siam's social and economic history, we consider why so little empirical historical demography has been carried out. Finally, we provide an overview of certain materials in the nation's historical collections that might provide a basis for an historical demography for Thailand.

Questions of population size and rates of growth have been considered seriously throughout history. These ideas range across European mercantilist views (Charbit, 2009, 2010)² to the writings of Lao Tzu linking Chinese dynastic cycles and population dynamics (Chu & Lee, 1994). The Kingdom of Siam had its own clearly formulated ideas about population numbers, as we discuss below, centered around its labor needs for infrastructure projects and for warfare. Thus, Siam's official ideas were consonant with those of the Europeans who visited with increasing frequency in the 17th and 18th centuries. These foreign observers considered Siam's population, which they thought was relatively small for the land area of the kingdom, and found that the Siamese elite had a very similar view.

The European view in the 17th century and before combined mercantilism with populationism (Charbit, 2010: 63ff) reinforced by the optimism of the Enlightenment (Glacken, 1967:357–374). But by the onset of the 19th century competing ideas have arisen, most prominently Malthus' analysis of the drawbacks of population growth and the relative roles of positive versus preventative checks in regulating population size. This European debate did not affect Siam at first, except through the emerging notions of counting and measurement and classification introduced mostly through Western advisors (Porter, 1995; Winichakul, 2000). By the end of the 19th century Siam was an explicitly Populationist state, favoring a large and growing population, and also one that supported reformed and scientifically efficient public administration which encompassed map-making, census-taking, and a program of public health along western lines (Puaksom, 2007; Winichakul, 1994) among other innovations. All of this placed value on accurate knowledge of the population of the Kingdom, and is reflected in the 1882 census-like “postal census,” the first official census of population in 1909-1910³, and the onset of vital registration in 1920. It became important to know much more clearly what Siam's path of population change had been during the long 19th century

since the beginning of the Bangkok Period in 1782. Steps were taken to improve demographic surveillance as the 20th century progressed, The modern data sources support demographic estimation from about 1920 onward, but remarkably little has been done to uncover, so far as possible, Siam's 19th century demography.

Within the foregoing framework then, this paper is intended to comment on Thailand's demographic history, in the context of historical demography - the field of study that seeks to generate such knowledge. We will find that the demographic history of Thailand before the 20th century is not well studied thus far, but we also note that there is potential for pursuing topics in Thailand's historical demography - based on documents that are well known and others that are yet to be explored carefully from the standpoint of demographic history.

We will be referring to a global literature on the demographic histories of other places and times, but our treatment is not meant to be comprehensive. Rather, we cite exemplary studies, and on those our comments are directed in part to the particular relevance of an approach, data source, or analytic method to developing historical demography as a field of study in Thailand. What can be accomplished toward a demographic history of Thailand depends largely on the historical materials that can be discovered in the nation's repositories and then analyzed in the most productive ways available. This review is intended to provide both substantive background and, we hope, a measure of motivation in support of both discovery and analysis of the Thai demographic record.

First we need some definitions. The standard definition of "demography," by Hauser and Duncan (1959) says that: it is the study of the size and composition of human populations, of changes in size and composition, and of the fertility, mortality and migration components of those changes. It is useful to distinguish within this field the "formal demography" of mathematical relationships among fertility, mortality, migration and age-sex composition. If formal demography is focused on those relationships (and the underlying models such as the population renewal equation), then we must recognize the much broader field of inquiry, usually termed "population studies," which seeks to understand the interplay between formal demography and the surrounding social, economic and cultural formations. One can examine a society's contemporary demography, or the history of its demographic processes, the latter being the field of "historical demography." That field of study produces a body of knowledge termed "demographic history."

Careless reference to “historical demography” versus “demographic history” can cause confusion. According to the *Dictionary of Demography* (Pressat, 1985) “historical demography” refers to applications of the techniques of demographic analysis to historical source materials, usually aimed at improving understanding of the history of a particular population. Van de Walle and Kantrow (1974) note that “demographic history essentially has been equated with studies on the histories of population while historical demography can be defined as the application of modern methods of analysis to records assembled in the past for non-demographic purposes or at least for purposes that were different from those of present-day demographers.”

Methods of Historical Demography

For a long time there has been work on population history, but this has been largely descriptive and without theoretical motivation or methodological focus. A prominent example is the medieval European studies of Russell (e.g. 1948, 1958). Vincent (1947), writing at that early date on the demography of 18th century France, felt obliged to justify his interest: “... to relate the history of demography is ... to write a chapter in the general history of the development of ideas. There is no doubt that the task is worth undertaking.” Buckatzsch (1951) had no doubt of the value of the English parish records, but noted the “sheer volume” and “the labour involved ... far beyond the powers of an isolated research worker.” He warned against “...uncoordinated picking about in the mass of material...” Buckatzsch was interested to explain the constancy of local populations before 1800, while Connell (1951) explored the rapid (and at that time largely unexplained) growth of the English and Irish populations sometime after 1750. These are both issues that could only begin to be resolved a quarter-century later and then comprehensively only near century’s end (Wrigley, 1997; Wrigley & Schofield, 1989).

Between Buckatzsch, Connell and others at mid-century, and Wrigley’s volumes with the Cambridge Group for the Study of Population and Social Structure, there was a sustained and methodologically sophisticated effort to collect documentary evidence from local village or parish archives and to extract demographic understanding from those records. What occurred in England at that time led by the work of Wrigley (1966) had as a precursor the village studies of Gautier and Henry (1958) and others in France. The methods that emerged from these efforts included “aggregative analysis” and “family reconstitution”, the legacy of those developments continues to shape the field of historical demography to this day.

Aggregative Analysis

Aggregative methods, usually applied at the level of the village or small town, involve traditional estimates of the incidence of one or more demographic events on a yearly or most often monthly basis, whenever possible as a function of those exposed to the risk of those events as observed during a given period of time. Total population counts are used whenever possible to estimate at-risk populations (Gautier & Henry, 1958; Wrigley, 1973). The method allows determination of general trends establishes representative tendencies and suggests correlates with related social and economic phenomena (Adams, 1976, 1979). There are numerous parish level aggregative analyses for England. Among the earliest ones are Chambers (1957), Drake (1962), Eversley (1966), and Sogner (1963); these revealed much about such places as Coalbrookdale in Shropshire (1711-1760) and the Vale of Trent (1670-1800).

The British Cambridge Group devised an appealing way to harness interest in this kind of local history. They created a huge network of amateur historians and data aggregators, who often over time became talented data analysts. The Cambridge Group published a journal as a venue for this work, *Local Population Studies* that survives to this day (c.f.: LocalPopulationStudies.org.uk).

Aggregative data are typically employed at the level of small communities that have existed for very long durations of time. More difficult and less successful were efforts to consolidate local results upward to larger regions such as the Vale of Trent (Chambers, 1957). To do so requires essentially complete records for all of the localities involved, and this is frequently a barrier. In any case, the aggregative analysis of localities brings out the considerable demographic variability that generally exists across localities (e.g. Adams, 1979 and Spagnoli, 1977 on France).

Later in this paper we will be discussing the prospects for doing historical demography in Thailand. Anticipating that, we can state here that the closest Thailand may ever come to this style of local demographic reconstruction is by exploitation of the “*Tabien Hangwow*” (ทะเบียนหางวัว), *corvée* registration lists which are described later in this paper.

The initial work with aggregative time series of events was largely descriptive, organized around the calculation of simple ratios. For example, the ratio of annual births to annual marriages stands as a measure of the level of childbearing within

marriages. Rates (events relative to populations at risk) could only be calculated when population totals were also available along with the counts of events. In the intervening years aggregative analysis has taken two paths. One has been taken whenever population totals or sometimes even population age distributions were available at one or more points in time (e.g. Smith & Ng, 1982 on a town in the Philippines). The other path has been to combine the time series of events with models from formal demography, thereby adapting to the lack of age-specific data on population structure and levels of fertility and mortality.

The most common algorithm for this is called “Inverse Projection.” Inverse Projection yields a more comprehensive and systemic view of population change, though important assumptions are required to accomplish this. In Bunnag’s (2012) dissertation research Inverse Projection is employed as implemented by software called “POPULATE” (McCaa, 2001). There has been an important evolution of the method since it was first developed by R. Lee (1974) - from the “back projection” employed by (Wrigley, 1997) with English data, to Generalized Inverse Projection (Oeppen, 1993) to a number of other recent variations: see Galloway (1994) on Northern Italy, and Del Panta & Rodilossi (2004) for “differentiated” and “stochastic” variations.

Other kinds of time-series models have been developed, notably for situations in which very limited information is available and a general picture is sought in order to examine particular hypotheses. Examples include the work of Turchin on long-term demographic cycles (P. Turchin, 2009) and on the demographic impact of internal warfare (P. Turchin, 2005; P. Turchin & Korotayev, 2006), and on spatial synchronicity in the demography of empires (Turchin & Hall, 2003). Fletcher et al., (2011) model state interactions within a world system framework. In these exercises hypothetical data are generally employed. Another application of such models is to assess the long-term impact of demographic disaster, as for example the demographic collapse in the San Francisco Bay area during 1776-1840 (Jackson, 1990, 1992), or the 16th century demographic collapse of the Basin of Mexico (Whitmore, 1991). As we will note below, such models may be useful over the long spans of Siam’s history when documentation is not available.

Family Reconstitution

The modern era of historical demography is most compellingly represented by the pioneering family reconstitution studies. First was Louis Henry’s monograph on the

French Normandy village of Crulai (Gautier & Henry, 1958). This was the archetype for studies to follow in at least three ways - (1) it introduced the methods of family reconstitution to a whole generation of demographers in France and elsewhere; (2) it was above all a village study in contrast to large, aggregate kinds of studies typical at this time; (3) it dealt with an on-going research problem in historical demography - fertility behavior in eighteenth century Europe. As already noted, the same role was taken in England by E. A. Wrigley. The British equivalent of Crulai is Wrigley's (1966) reconstitution study of the village of Colyton in Devonshire. Throughout much of England, church registries provide both aggregative and nominal data extending from 1537 up until the onset of civil registration in 1837.⁴

Family Reconstitution is a method well suited to historical studies and involves the nominal linkage of vital events by individual and family lineage (genealogies), often with accompanying social and economic data (Henry, 1968; Wrigley, 1966, 1973). The procedure for collecting data brings together every available piece of information about the births, marriages, and deaths of each member of a family, and links this information, both across the life of each individual, and among the individuals in a family unit. Family reconstitution enables the reconstruction of the demographic history of families and of communities, though the degree of precision and completeness is disputed (Hollingsworth, 1969; Wrigley, 1997). The method allows intensive investigation of life histories and provides new opportunities to observe demographic behavior at the family level. Data are often analyzed by tracing cohorts of individuals through time (the life history approach), thereby avoiding the assumptions which are necessary in many time-specific (synthetic cohort) demographic models. Cohort analysis, transverse samples and the usual rates, ratios, and tables of fertility, nuptiality, mortality, and migration are also found in these studies. Until recently, model life tables were only available for relatively contemporary large populations, but models perhaps more reflective of the full range of historical populations are now used widely.

Perhaps the most notable feature of family reconstitution is the considerable amount of labor involved in carrying it out (Wrigley 1966), and for this reason the communities covered by the method have tended to be smaller than average in population numbers. There have been advances in the area of automated record linkage (Winkler, 2006) but it is not clear if any of this would be helpful for languages other than the European ones.

Related to family reconstitution, though methodologically quite different, is the use of genealogical information such as found in family histories. In East Asia family records have been a valuable resource, serving as the foundation for much of Hayami's work on Japan (Hayami, 1979, 2001) and for the work of Lee, Campbell and Feng (1991) and Lee and Feng (1999) on Qing China. In such records the "nominal linkage" problem is avoided because the genealogical links are already known. We note below the possibility of using genealogical records for Thai historical demography, representing at least a few elite families.

Census Analysis

National censuses in many countries form a valuable time series of social indicators, permitting the measurement of many social facts across time periods. Moreover, it is possible to examine the same social measurements across time for each of the geographic units at each available geographic level (in Thailand in 2000, for example, indicators can be constructed for 76 *changwat*, 926 *amphoes*, 7,396 *tambon*, 39,042 enumeration districts, and 99,039 census blocks. Since the advent of machine-readable data files, there is considerable flexibility with regard to both the geographic units and the indicators examined. Across Southeast Asia there are presently 182 censuses covering the 25 countries, and a standard and simple measure such as the percent single (for each age-sex category) can be obtained for nearly all of them.

Starting in the 1960s census data have been coded to electronic media, first magnetic tapes and now direct access media. Access remains a serious problem in some countries, but there is now an international repository of consistently formatted data files thus putting many census micro-files in the hands of any interested researcher without charge. At present, the Public Use Micro Data Series—International (IPUMS) collection of censuses worldwide (c.f.:<https://international.ipums.org/international/>) numbers 185 covering 62 countries. This includes the censuses of Thailand for 1970, 1980, 1990 and 2000, for which samples of 1-2 percent of enumerated persons (over 165 thousand cases in 2000) can be downloaded.

There are some important instances of Asian censuses being examined as a time series of cross-sections, usually at the province level. Among these are Mosk's (1983) study of fertility in Japanese prefectures, Casterline's (1980) and Montgomery and Casterline's (1993) investigations of nuptiality and fertility change in Taiwan (spanning 1905-1990), Smith's (1975a, 1975b) studies of Philippine nuptiality

spanning 1903-1970 and of the Ilocos Coast in the Philippines (Xenos, 1998) covering the same period of time, and Smith's (1980) Asian regional study of nuptiality encompassing 523 province-level units in 21 countries. Thailand's censuses have been examined in this way by Chamratrithirong (1980), among others.

Most interesting from the perspective of this paper is the example set by the work of Vanlandingham and Hirschman (2001). This paper illustrates the use of administrative units in an early census (in this instance the *changwat* in the census of 1929 (for measures of land pressure) and the 1960 census for measures of fertility. These authors are able to show that the *changwat* which were on the land frontier in the early decades of the 20th century generally had the highest levels of fertility. This substantive result speaks to an important historical issue for Thai demography, the suggestion in the literature for Thailand (A. Bunnag, 2012; Carmichael, 2008) that the fertility of the population of Thailand rose as a result of the expanded economic opportunities that started late in the 19th century with the economic reforms of that time. It also illustrates analysis of a series of national censuses disaggregated into administrative units (among the studies mentioned here, this includes, besides Vanlandingham and Hirschman (2001), Xenos' (1998) study of the Ilocos Coast in the Philippines, and Casterline's (1980) study of Taiwan. Such examples of census analysis address the need in demographic research for data and analysis that spans the temporal gap between the historical records that exist (generally colonial, except for Siam's), for the 19th century and before, and the modern data series that often begin after the middle of the 20th century. The early years of the 20th century often are not covered well. Data exist to support such studies, as the examples here serve to illustrate, but effort and imagination are required.

Census taking began much earlier in most of the countries of Europe. Taking advantage of this resource, in 1964 the Office of Population Research at Princeton University launched the European Fertility Project (EFP) with the aim to analyze the decline of fertility throughout Europe at the level of 532 province-sized administrative units. The two main objectives of this project were to create a quantitative record of the European fertility transition and to look into the social and economic circumstances that prevailed when the modern fertility declines began. The study highlighted demographic and social changes over two centuries in almost all provinces of Europe. The hope was to clarify the causal mechanisms of the fertility transition. Over the 18th - 19th century time frame examined, fertility started out at a diverse range of levels across areas, but then these fell steadily (though at different rates) before converging at a common low level many decades later.

This framework of census analysis gave rise to a valuable body of national studies such as Van de Walle's (1974) study of French *department*. Other areas of Europe have been examined closely as well. Massimo Livi-Bacci (1971, 1977) studied Portugal and Italy in separate volumes, Knodel (1974) studied Germany, Lesthaeghe (1977) examined Belgium, Coale, Anderson, and Härm (1979) studied Russia, and Teitelbaum, (1984) examined Britain. Studies by others in relation to this issue also extend to other areas of Europe such as in Spain, Denmark, Sweden, Greece and Switzerland. Despite a body of criticism of individual studies and even of the whole framework (e.g., Brown & Guinnane, 2007), the study remains a bench mark demonstration of the power of a time series of census data. It provided a viewpoint on the historical record of fertility decline in developed countries and its findings challenged the demographic transition theory conventional at that time.

These then are the standard methodologies of historical demography - aggregative analysis, family reconstitution, and census analysis - each designed to exploit a different kind of documentary evidence. But it is important in addition to mention new or newly invigorated approaches to historical demography that seem to hold much potential.

History by Other Means

History is generally a matter of good judgments made about the meaning of documents. This is also true of historical demography, but there are important approaches to historical demography which do not involve documents. These include bioarchaeology and dendrochronology. These fields have recently become promising enough to be mentioned in the present context.

Bioarchaeology is defined by Larsen (2002) as the study of "the lives and lifestyles of past peoples." This field has advanced remarkably in recent years, not least in Southeast Asia (Bellwood, 2007). Oxeham and Tayles (2006) have brought together representative examples of this literature. In his forward to that volume Larsen refers to "emerging frontiers" of post-1990 bioarchaeological studies of Southeast Asia, saying that "These bioarchaeological studies provide a wealth of new information about population history, colonization, lifestyle, foodways, nutrition, adaptive shifts, and specific and general aspects of health" (Larsen p. xii in Oxeham & Tayles, 2006). To cite just one example among many, (Cox et al., 2011) illustrates the connections between this work and theories and models of long-term population change.

Dendrochronology (the science of tree-ring dating) has a long history, and Southeast Asia has been at the forefront from the beginning (e.g. De Boer, 1951 on Java). Analysis of ring thickness has given way to the dating of rings with isotopic measurements of carbon, hydrogen and oxygen. There is now an International Tree-Ring Data Bank and a Tree-Ring Search Engine (ncdc.noaa.gov/paleo/treering.html). A search there for "Thailand" brings up, for example, the *Monsoon Asia Drought Atlas* (MADA) spanning the last millennium (Cook et al., 2010). Pumijumnong (2003) provides a recent survey of tree-ring research in Thailand.

Southeast Asia and Siam

Before we turn to Siam and its demographic history, it is important to comment on Siam's Southeast Asian regional context. This section is intended to describe certain features of that setting of importance for population change, and for the study of long-term population change.

It is not sufficiently recognized that most of lowland Southeast Asia, characterized today by very high population densities and the full utilization of arable land, comprised areas of low population density only a few generations ago. The point is clear, for example, for the central plain of Thailand, the Chao Phraya river basin, which was settled mainly in the late 19th century under the impetus of the Siamese monarchy (Johnston, 1975; Douglass, 1984), and many areas of the northeast (Keyes, 1976) and north of Thailand (Mougne, 1982) were settled but recently as well. This frontier condition was found throughout the region in the 19th century. Movement was mainly into areas we now regard as the heartlands (generally, the lowlands) of Southeast Asia. We have excellent studies on this of the Burma delta (Adas, 1974) and the central plain of Luzon in the Philippines (McLennan, 1977, 1980) among many others, and the process is still underway in much of modern Malaysia. Even densely settled Java saw new land being brought under cultivation until the end of the 19th century (Pelzer, 1941). This frontier condition has been a shaping influence on social organization in the region for a very long time.⁵

There are important implications of these at all levels. At the societal level commentary has focused on such issues as the nature of statecraft, and ways that legitimacy was established and power accumulated and maintained in the traditional Southeast Asian setting. One broad observation from this which is of direct relevance to historical demography, and demographic record-keeping, derives

from a key fact about frontiers – they are relatively land abundant and labor scarce. Power stems from control over labor, from cumulating numbers of loyal followers, more than from control over land. One of the consequences of this stress on control over people is an important role for warfare in Southeast Asia, with the military goal most often being the capture of people rather the taking of territory. This is associated with institutionalized “bondage” in Southeast Asia and a recognized gradient in civil condition from free to slave (Feeney, 1989, 1990; Hoadley, 1983; Lasker, 1950; Reid, 1988, 1993; Scott, 1991; Turton, 1980; Worcester, 1913).

All this is clearly seen in the relations among states in the region, and in the relationships between individuals and states. The next section looks at Bangkok Period Siam as a case in point and illustrates in that setting the interplay between demography and state power, and the state’s efforts to monitor population. We focus on the historical population records in Siam and then we discuss how much of this record still survives, and finally we consider the possibility of using the available data to reconstruct Siam’s demographic history.

Siam’s Bangkok Period Demography

Before the Bangkok Period, Thai demographic changes are scarcely represented in the documentary record of the Kingdom. This is because most conscription records and chronicles were destroyed when the capital, Ayutthaya, was sacked by the Burmese in 1767, and because during the era of the Thonburi Kingdom (1767-1782), the population of Siam was further engaged in warfare with Burma (Damrong Rajanubhab, 1900; Ruangsin, 1974; Thipakôrawong, 1869; Wilson, 1983; Wyatt, 1994; Wyatt & Wilson, 1965). Later came the construction of Bangkok city, the symbol of the Rattanakosin era (or the Bangkok Period), which has lasted until the present day. Most of the historical records of Siam from the beginning of Bangkok (1782) up until King Mongkut, Rama IV (1868) were reviewed by Chao Praya Thipakôrawong in 1869 and revised again by Prince Damrong Rajanubhab covering the period of King Chulalongkorn, Rama V (1868-1910). These records are kept in the form of *‘Phra Ratcha Phongsawadan Krung Rattanakosin’* in each reign (Chronicles of each reign in Bangkok) and in the form of *‘Chot Mai Het’* (annual records). Besides, some ancient manuscripts of this period still exist in the Thai National Library and Thai National Archives.

Demographic Accounting and Record Keeping

Siam recorded its population since the Sukho Thai period or around the 13th century with the purpose to obtain the numbers of *corvée* who were available to serve the country either by paying taxes or contributing labor. This system continued for the whole period of Ayutthaya (1350-1767). It was noted by La Loubère in 1688 that “The Siamese keep an exact account of men women and children...in this vast extent of land”. The records of *corvée*, slaves and prisoners of war were separated (La Loubère, 1689: 239–241). In other words, *corvée* registration was related to the control of manpower by the ruler (Pitawan, 1983; Sukpanich, 1976; Susayanha, 1980; Terwiel, 1989). Manpower was crucial for Siam because the country was frequently involved in warfare. The principal means for the kingdom to obtain more people was through war fighting. After winning any war, the accumulation of war captives was a reward for the winner and the process of registration of the newcomers was conducted by those supervisors who owned the new people, mostly classified as slaves (Ruangsin, 1974; Udomsombat, 1972: 349). Since most rulers of mainland Southeast Asia placed great importance on human resources, competition for such resources was intense.

The demographic data system in the Siamese Kingdom includes three main types of record: (1) population registration through the *corvée* system; (2) population censuses; and (3) a vital registration system. In addition, there are some family lineage records existing among the royal family and noble families such as the *Chakri*, *Bunnag*, *Singhasene*, *Kodchasene*, and *Na Nakorn per se* (Akin Rabibhadana, 1969: 436-490).

(1) Population Registration

a. Through the corvée system: Within this system, three groups of people were recorded separately - supervisor (*Mul Nai*), *corvée* or freemen (*Prai*), and slaves (*Tat*). However, the coverage of people in this system was not extended to the whole kingdom. Besides, the data that resulted are believed to have been seriously underreported for many reasons, such as freeman avoiding being recorded by escaping to the forests (Damrong Rajanubhab, 1916, 1960). Moreover, recording was difficult because the people in these three groups could change their status, for example when they encountered economic hardship (Sukpanich, 1976; Susayanha, 1980). All people in the *corvée* and slave categories were to be registered together with their parents whose ages were over 60, wives, and children (see also A. Bunnag,

2012: 69-83). The registration of *corvée* was later terminated (in 1905) and the *corvée* system was integrated and structured to be a government system (Susayanya, 1980: 148-159).

The main objective of this *corvée* registration was to determine how much manpower was in hand as a measure of national strength, especially during the early Bangkok Period of the Siamese Kingdom. *Corvée* registration produced estimates of the number of able-bodied men, the sources of labor and tax revenue. During the early period (1782-1850), labor was a major need, while from 1850 onwards tax revenue became more significant. Even though the *corvée* system became less significant and then was abolished late in the reign of King Chulalongkorn (Rama V), it showed itself in a new structural form - a military structure within the government service. Evidently, population registration for two types of people in Siam - soldiers and civilians continued to be conducted in order to tax labor for the first group and revenue for the latter group.

b. Population household records: The idea of a population enumeration for the whole kingdom seems to have emerged for the first time under King Mongkut (Rama IV) in 1852. He wrote an order to Chaopraya Yommarat in 1852 to conduct household registration “*Raung Hai Tum Summanokrua C.S.1214.*”⁶ In this declaration, it is said that “.....In the Siamese Kingdom, many races and languages are accumulated but there are no obvious population numbers presented. Other kingdoms, having huge lands and tributary states, tended to have lists of household records indicating male and female members, migrations, births and deaths... But for the Siamese kingdom, there has never been conducted...” (translated from Thai manuscript). Then he indicated that the *Nakorn-ban* (Ministry of Metropolis) should instruct the *Pra* and *Luang*⁷ to monitor District Officers (*Nai Amphoe*) and Chief of Village groups (*Kumnan*) to enumerate and record numbers of people in households by sex and age group (*Skun, Roon, Lan, and Joong*).⁸ The household record was to include all people indicating the name, age and sex of each household member.

The Population Registration of the Whole Siamese Kingdom Act was ratified in R.S.128⁹, B.E. 2452 (1909) with the essential keys to record: (1) population in a household, (2) births and deaths and (3) in and out migrants. This was the same year that the population census for the whole Siamese kingdom was held (1909/1910) as the first countrywide census.

This idea then developed into a population census during the reign of King Chulalongkorn (Rama V), starting with the management of provincial administration by Prince Damrong Rajanubhab, Chief of the Ministry of Interior or *Mahad Thai*.¹⁰ As an attempt to support centralization, the Provincial Administration Act R.S.116 was enacted in B.E. 2440 (1897) (Damrong Rajanubhab, 1960).

(2) *Population Census*

The first nationwide population census was that of 1909-1910. However, a trial census had been implemented in 1882 under the name *postal census* based on its objective. It was limited to the area of the capital city and its surroundings (Grabowsky, 1996; Sternstein, 1984; Wilson, 1982, n.d.). After the postal census, population registration was carried out to run the postal system. The ‘*Sarabanchi*’ or Bangkok Postal Directory was divided into four sections which included population by provinces, government institutions, villages, roads and lanes, rivers, waterways, irrigation and canals. The registration of heads of households showed only a single name without a surname. However, ethnic identity was also indicated (Wilson, 1982, 1983). Local censuses to determine the numbers of population were conducted in certain areas such as Nakorn Khuankhun (Prapadang), Samut Prakarn, Phatumthani and Nontaburi in 1899 (Grabowsky, 1996). Subsequently, the population census in Siam began to take shape in the reign of King Chulalongkorn, as recommended by Prince Naresvararit on 7 October B.E. 2434 (1891).¹¹

Then in R.S. 122 or B.E. 2446 (1903/1904) the number of population in the areas under the responsibility of the Ministry of Interior were counted; those in the outer area covering 12 *Monthons* (regions) from a total of 18 *Monthons* which were Nakorn Sri Thammarat, Ratchasrima, Nakornsawan, Krungkao, Chumporn, Ratchaburi, Nakornchaisri, Pisanulok, Prajinburi, Phuket, Chantaburi and Petchabun¹². The information recorded included sex and race/ethnicity. To indicate the race of each person was difficult because of mixed blood, therefore, the type of dress was applied to distinguish each race, a method that could easily cause errors. Some Thai may have dressed like Chinese to avoid the *corvée* system¹³. A census for the whole kingdom was conducted in 1909/10, and this was followed by the censuses in 1919, 1929, 1937 and 1947 conducted by the Central Registration Office, Ministry of Interior. All the information from each census was published in the *Statistical Yearbook of the Kingdom of Siam* which had its first issue in 1916 and then continued annually.

(3) Vital Registration

The recording of births and deaths during the early Bangkok Period or around the first half of nineteenth century was practiced only among groups of the royal family and nobles including some political and religious leaders and those who converted themselves to Catholicism. However, little devotion was put into vital-record keeping (Rungpitartangsi, 1974; Sternstein, 1965; Terwiel, 1989; Wilson, 1982; Wyatt & Wilson, 1965). Even the parish records in the Catholic church, for example in Chantaburi province, were eliminated when “the new administrative building was opened” (Terwiel, 1989). The regulation of registration of births, deaths, and migration among *Tambons* was set for the Bangkok area and its surroundings under control of the Ministry of *Nakorn Ban* in 1909. And the regulation for births and deaths in outer provinces was ratified in 1916 (Gray et.al, 2008; National Archives Microfilm, MR5M30/2). In the Bangkok area, birth and death registration was first recorded in 1916 (from 31 March, 1916 to 31 March, 1917). There was a serious vital registration effort after the Population Registration Act, relating to birth, death and migration for the entire kingdom, was enacted in 1917. It took three years to successfully record birth and death events but this has continued annually since 1920 (National Archives Microfilm, MR5M30/2).

On the *Tabien Hangwow* as a Source for Historical Demography

It remains to be determined what of the total original record of *corvée* registration still exists to be used for the construction of an historical demography for Siam. The population censuses and vital registration are 20th century accounts primarily, and full descriptions of these data and their possible uses have been provided by others as well as by two of the present authors elsewhere (Gray et al., 2008). In the following section we focus on less well-known materials in the National Archives and National Library. We described earlier the possibility of a census in 1852. Here we describe the 19th century system of population enumeration through the *corvée* lists.

The recording of demographic information in the *Tabien Hangwow* seems to have involved two steps. First, at the local level the official (*Mul Nai*, មុនាយ or supervisor) recorded the *corvée* available to him as well as those who were not eligible due to their age, physical condition (disability or aging), death, or escape from the system, including slaves. The families of these *corvée* were also documented, with information on their ages, sexes, with their supervisor’s name. In principal, each of these

“Primary” or “Micro-level *Tabien Hangwow*” at the local level describes an entire population, but organized through the eligible corvée. In some respects, these lists may be the Siamese equivalent of Wrigley’s British “listings of inhabitants,” the even more ancient “*status animarum*,” or the Spanish period Philippines’ *Plan de Almas*. However, one important difference is that it is not clear whether the phrase “entire population” should be thought of in geographic terms (the population of locality x) or as referring to a population that is under an official’s unified control though perhaps geographically dispersed. In any case, it seems that hardly any of these listings has survived - though several examples of these documents exist in the National Library.

These listings of inhabitants were summarized statistically as what we will call “Aggregative *Tabien Hangwow*” and forwarded to the *Prasurasawadee* (พระสุรัสวดี), who had responsibility for assembling such reports into a summary for higher administrative levels and ultimately for the king. These statistical summaries, the *Tabien Hangwow*, are found in the National Library in large numbers, though it is clear that only a fraction of the massive original body of documents has been preserved.

Beginning in 1970, the National Library has had a project to collect and register ancient manuscripts and keep some of them in 17 local branches of the National Library in various regions of Thailand. Some sacred ancient manuscripts are registered and kept in local temples and in some local official communities. Ancient manuscripts are now found and collected more than before and the project is continuing (Department of Fine Arts, 2009).

In the Ancient Manuscript Section of the National Library, general historical official records from King Rama I to Rama V are listed under named of “*Chot Mai Het*” (Archival list). These manuscripts were written on *Khoi* paper (coated with lacquer or a charcoal paste) covering all 6,837 volumes classified into four main topics - administration, ceremony and religions, relations with Asian countries and miscellaneous¹⁴.

The records most directly relevant to historical demography are the *corvée* registration records found in the National library under topics related to “*Sammanokrua, Hang Wow, Lek, and Prai*.” Within each *Hangwow*, different types of records exist - e.g. name of *corvée*, age of the *corvée* and the name of a *corvée*’s wife were specified. Some official *Hangwow* record numbers of able-bodied men and specified sub-groups of them (such as disabled men, *Prai* (*corvée*) and *Tat* (slaves). These records are

maintained separately for each reign - there are about eight from *Chot Mai Het* of Rama I and a similar number for Rama II while for Rama III and Rama IV there are more than one hundred for each. There are also some original lists of revenue, in which are recorded the names of farmers, the amounts collected from them, and the way in which the money was distributed for the year 1845 or in the reign of King Rama III.

In the reign of Chulalongkorn, within *Mahad Thai*, the Registration Department was set up in 1899 comprising four sections: Official Accounts, Household Registration, Official's History record, and Record Keeping. The Official Account section did the printing of name lists of all officials in *Monthons*, provinces and sub-districts. Household Registration (ແນກສໍານະໂນຄຮ້າ) registered able-bodied men and started collecting numbers of people in all households (T. Bunnag, 1977). Fragmentary records of the Household Registration department now exist in the National Library and National Archives. However, most have disappeared without explanation. In the National Archives there are demographic records showing in the related topic of “*Sammanokrua* (ສໍານະໂນຄຮ້າ) and *Samruad Polamuang* (ສໍາຮວຈພລເມືອງ)”. All the new types of paper called “*Kradad Fa-rang* (ກະດາຍຝ່າຮ່າງ)” which were different from the original manuscripts produced by the local Siamese were kept here while the old manuscripts were kept in National Library. Some of population records seem to exist but no exact number was presented and since 1970 many new collections continued coming to the list due to the campaign to promote historical record keeping. And some records were kept in the local Archives and Library.

Conclusion

This paper is drawn from a larger project (A. Bunnag, 2012) with the goal to uncover, so far as possible, Siam's 19th century demography. The field of historical demography is relatively undeveloped in Thailand, and so much of this paper explores the progress of this discipline in other societies, particularly in Europe where the modern era of historical demography began, in order to draw substantive and methodological lessons. Some notable differences between the European and the Siam settings are discussed. European records, both secular and religious, focus on vital events, describe the whole population, and are found today in local archives. Siamese records, on the other hand, focus on available labor pool, providing only a few demographic characteristics (certainly do not record births and deaths). However, some of the Siamese materials, albeit local in origin, are now found in the national repositories, although only a fraction of them seem to have survived.

Nevertheless, we emphasize the importance of demography to the Siamese state both traditionally and as it underwent its 19th and 20th century transformations, and we stress the need to draw whatever knowledge we can from the existing materials. We point to the possibilities for analysis of surviving *Tabien Hangwow* found in the National Library, and the importance of a careful inventory of these records. We suggest the possibilities for genealogical analysis of family records that may be available for a few elite families. Finally, we discuss the demographic data system that developed in the 20th century and point to ways of using that information and models from formal demography in order to propose likely scenarios of Siam's demography in the past.

Notes

1. The Kingdom of Siam became a constitutional monarchy in 1932, and its name was changed from Siam to Thailand in 1939. We use "Siam" when referring to the Bangkok Period until 1939.
2. Especially Charbit (2010), Chapter 4, "The Prince and His Population."
3. There was a partial census in 1904-1905 (Grabowsky, 1996).
4. An important collection of historical demography is found in R.D. Lee (1977). That volume gives an excellent overview of issues and methods, especially if combined with critical reviews of the book by Eversley (1966) and Hollingsworth (1969). Important work by these two historical demographers is very useful as well. Another important collection is Tilly's work (1979) which focused on European fertility change and demographic transition.
5. A clear-cut exception is the Red River delta in Vietnam (Gourou, 1936).
6. National Library, 1852. *Annual Records of King Mungkut (Rama IV), C.S. 1214*, "Declaration on Conducting Household Registration" (จดหมายเหตุ ร. ๔ จ.ศ. ๑๒๑๔, "ประกาศเรื่องให้ทำสำมະโนนครว").
7. *Pra* and *Luang* are Siamese official ranks.
8. *Skun* (สครรจ) means an able-bodied men aged 18-60, *Roon* (รุ่น) are aged 11-17, *Lan* (แล่น) aged 4-10, *Joong* (จุง) aged 2-3 (see also Gray et al., 2008:19).

9. R.S. or Ratanakosin Sok is one of the chronological systems used in Siam during the Bangkok Period or Rattanakosin period, started in the reign of King Rama V in 1888. The reference date was the start of the Bangkok Period in B.E. 2325 or in A.D.1782. R.S. 1 started from 1 April, 1782 and ended on 31, March, 1783. R.S. terminated on 21 March, B.E. 2455 or A.D.1912 during the reign of King Vachiravuth due to the need for accurate reference for historical records. (R.S. + 1781= A.D., except for the months of January, February and March of the Ratanakosin Sok. R.S. + 1782 = A.D. (Nartsupa & Prasartset, 1981:8).
10. The Ministry of Interior was founded in 1892 to facilitate and control provincial administration of the Kingdom. However, the serious clash between Siam and France in Indo-China R.S. 112 or in 1893 was continuing (T. Bunnag, 1977: 112, Sternstein, 1966 (a): 60).
11. National Archives. R5 N30/1. Official Records of Royal Secretariat Department of King Rama V, about Opinions on Conducting Household Registration in the Kingdom of Siam, 7. October R.S.110 (เอกสารกรมราชเลขาธิการ รัชกาลที่ ๕ กระทรวงนครบาล เรื่อง ความเห็นจัดการทำบัญชีสำมะโนครัวในสยาม, 7 ตุลาคม ร.ศ. ๑๑๐).
12. National Archives. Microfilm. of King Chulalongkorn (Rama V), MR5 M30/2. Reporting Results of the Household Registration, carried out in the year R.S. 123 (22 November R.S.124) (ไมโครฟิล์ม รัชกาลที่ ๕ กระทรวงมหาดไทย ม.ร.5ม.30/2 เรื่อง ทุลเกล้าฯ ถวายบัญชีสำมะโนครัวผลเมืองซึ่งได้สำราญเมื่อ ศก 123 (22 พฤศจิกายน ร.ศ. 124).
13. National Archives, R5M2.19 Folder 4 “Explanation on Household Registration” R.S. 122 (คำอธิบายเกี่ยวกับบัญชีสำมะโนครัว ร.ศ. ๑๒๒).
14. See also the article by Damrong Rajanubhab (1914) translated by O. Frankfurter (1914-15) which explains the record keeping. Also useful is the paper by Wyatt and Wilson (1965) which provides a catalogue of materials including many historical documents in the National Archives up until 1965. These two sources give an overall picture of historical documentary records in Siam since the Ayudhaya period through the early Bangkok Period up until the reign of King Prajadhipok, Rama VII (1925-1935).

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