

San Jose, Batangas: A Study in Historical Demography
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Marlou O. Castillo

Contents

Prologue (November 2018: 46 Years Later)	1
Introduction and Summary	2
Introduction	2
Summary	3
Chapter I: A Brief Historical Sketch of San Jose, Batangas	5
Chapter II: Source of Information	6
Appendix 2-1: Sample Entries from the Parish Registers, c. 1870	7
Chapter III: The Natural Increase (Decrease) in the Population	8
Chapter IV: Estimates of the Intercensal Migration	10
The Formula	10
An Illustration	10
Migration After the Turn of the Century	11
Migration During the Nineteenth Century	11
Some Qualifications	12
Appendix 4-1	13
Chapter V: Trial Estimates of Population, Birth Rates and Death Rates for San Jose (Plus Cuenca), 1818-1903	15
Findings and Observations	15
Estimating Vital Rates	16
Results and Observations	16
Chapter VI: Reliability of the Civil and Church Registers and Estimation of Death Rate	19
Matching Procedure	19
Findings	20
Different Death Rates	20
The Chandra-Sekar-Deming Method	20
Chapter VII: The 1887 and 1960 Populations of San Jose Compared	26
Sources of Data	26
How the Population Changed	26
The 1887 Households	27
Appendix 7-1: Sample Entries from the “Padron General de las Almas”	31
Bibliography	32

Prologue (November 2018: 46 Years Later)

When I was researching and writing this paper, and especially when it garnered the gold medal for research in Economics, my two thesis advisers¹ suggested that I pursue further studies in Demography. My response to them, only half in jest, was that I was not interested in counting babies all my life.

Although my response has truth to it, the real reason was that I knew there was no money in Demography. I was able to go to college at De La Salle, as opposed to a “lesser” school more affordable to my parents, only because I got a scholarship. But throughout my five years in college, I did not have the spending money I wished I had and so after graduation the only thing I wanted to do was to earn a living right away.

There were two promises I made to myself after I graduated from college —once I earn a decent living I would (a) provide scholarships to youngsters similarly situated; and (b) ensure that the ecclesiastical records of San Jose are preserved for posterity. I realized even then that these archival records are priceless and that they were but a cigarette butt away from being irretrievably lost.

The first promise was relatively easy to fulfill and almost effortless: you simply write checks when you could afford to. It became even easier after our own children completed their college education and were already on their own. The fulfillment of the second promise was put off and put off and put off. Several reasons for this: (a) nobody reminded me of it during alumni homecomings; (b) I did not know how to go about it, and what/how much resources would be needed; and (c) it could wait as it has waited the last 2-1/2 centuries.

Fast forward 46 years. Last February, my wife Leah, our daughter Elise, and son-in-law Nick visited San Jose mainly to see the house I grew up in.² As I had been telling Elise and Nick about the centuries-old ecclesiastical records of San Jose and my college thesis, they wanted to take a look at those books. We thus requested Fr. Norman Banzuela, OSJ, Parish Priest of St. Joseph, the Patriarch, to give us access to the archives which he graciously did.

I was upset by what I saw —the deterioration over the last c. 50 years is so pervasive that I believe if nothing is done, these archival records will be irretrievably lost in another 20 years or so. There is now a sense of urgency to try to preserve these historical documents. Thus, the “Kasaysayan ng San Jose: Preserving a Historical Heritage” was conceived with the support of Fr. Banzuela.

Through Ms. Cecille Gelicame, Director of Museo De La Salle and an advisor to this project, I contacted the National Commission on Culture and the Arts (NCCA) to request assistance on how to proceed with the preservation. They were quite supportive and in April 2018, an archival expert from NCCA traveled to San Jose to assess the condition of the ecclesiastical records. NCCA has since issued a technical report, reproduced in the project website, setting out their assessment and recommendations. Fr. Harold Ll. Rentoria, OSA, Head of the National Committee on Archives of the NCCA, also agreed to be a project advisor. Elise and Nick continue to work with me on this project, with Nick designing the Kasaysayan project website and both providing editorial support and suggestions.

I debated for a few months whether or not to include my college thesis in the project website as doing so could be misconstrued as self-aggrandizement. I decided to include it only to demonstrate what information and knowledge social scientists can mine from these ecclesiastical records. It would be a tragedy if these archival books are lost to future generations of demographers, economists, sociologists and other social scientists because our generation neglected to preserve them.

With your assistance, I hope a promise made by a 21-year old student almost half a century ago could be fulfilled.

¹I had two thesis advisers: Fr. Georges Piron, Head of Economics Department at De La Salle, and Dr. Thomas Hollingsworth, a visiting professor from the University of Glasgow at the University of the Philippines Population Institute (UPPI). Fr. Piron requested help from the UPPI as there was no subject matter expert at De La Salle to advise me on Demography. Prior to Dr. Hollingsworth, another visiting professor from the UPPI, Dr. Peter Smith, advised me.

²Elise was born in the U.S. and only occasionally visited the Philippines with us and her two siblings when I was on job assignments and we were living in Jakarta, Taipei and Singapore in the 1990s; Nick is an American and that was his first visit to Batangas. Both are however Philippine history and folklore buffs, and addicted to Filipino food, much to my pleasant surprise.

Introduction and Summary

Introduction

In early February 1970, the writer accompanied Fr. Georges Piron of the De La Salle Economics Department and Dr. Thomas H. Hollingsworth of the University of the Philippines Population Institute to his hometown, San Jose, Batangas, in order to take a look at the parish archive there. And what they saw was a historical goldmine—the parish registers of baptisms, burials and marriages from 1767, the year San Jose was founded, to 1970; and an ecclesiastical census of 1886.

The writer however did not attach much importance to their discovery until he came across the works that English and French scholars were doing. The parish records in England and France, at least from the way D.E.C. Eversley describes them in *An Introduction to English Historical Demography*, seem to be more defective and less complete owing to the fact that several religions and non-conformity flourished there before the Industrial Revolution. And yet demographers in these countries were able to do a very fine work in historical demography. Now, why can't we do the same thing in the Philippines where parish records appear to be more complete and well-kept? Indeed, why not?

Hence, began the writer's interest in historical demography; interest which caused him to do something with the parish registers in his hometown and write this paper.

At this juncture, it is prudent to put forth a disclaimer. This paper is not the work of an expert in demography. Rather, it is the work of a student who wants to prove that a great deal of new information which will interest not only demographers and historians but also economists, sociologists and other social scientists can be generated from the books, which for the last centuries, have been gathering dust in the parish archives of the different parishes throughout the archipelago.

Even in England and France, historical demography is still in its infancy, having begun only about 20 years ago. Hence, if this paper is lacking in quantity and quality it is understandable—the field is young and the writer is a neophyte. But the writer intends this only to serve as a first step—it is hoped that with this, he can generate the enthusiasm of local experts and scholars to do something with the “goldmine” that lay idle in our parish archives.

Because this paper is supposed to be a thesis paper in Economics, one might ask the relevance of historical demography to economics. To him the writer's answer is simple:

Economics cannot be detached from the rest of the social sciences. If one wants to have a thorough grasp of economics, he has to understand the rest of the social sciences. Thus, if one wants to analyze why the Philippine economy is the way it is, he has to look back at the sociological, historical, political and demographic background of the Filipino. A study of Philippine economic development is not complete without reference to such demographic concepts as population growth, migration, fertility rate, death rate, etc. On the importance of demography to economists, a notable demographer said:

Economic historians have always been interested in population and social structures and have long been accustomed to the construction of models and to statistical method. A fuller knowledge of the history of fertility and mortality in England before and during the Industrial Revolution would add immensely to our understanding of that period of fundamental social and economic change. The link between economic and demographic history is very intimate and the connection goes both ways.

On the whole, the two years of research work and other necessary efforts that went with the preparation of this thesis paper gained for the writer incalculable and invaluable knowledge. It is hoped that the readers would gain the same.

Summary

By way of summary, this paper may be broken down into five major portions: (1) an analysis of the natural increase or decrease in the population of San Jose; (2) the estimates of the intercensal migration in San Jose from the turn of the nineteenth century up to the present; (3) estimates of the annual population and vital rates from 1818 to 1903; (4) a study of the reliability of the civil and church registers and the derivation of an accurate estimate of the death rate; and (5) a comparison of the 1887 and 1960 populations of San Jose. These topics are lengthily covered in Chapters III to VII, respectively.

Chapter III. In this chapter, the annual numbers of births, deaths and marriages since the 1800's, the five-year moving averages thereof, and the differences between the annual numbers of births and deaths (natural increase in the population) were put in graphical form.

In an easily understood form, these graphs give the reader the trend of mortality and fertility in the parish. Aside from showing the natural increase or decrease in the population, they pinpoint years of epidemics and catastrophes, the consequences of marriage booms, and the impact of measures for controlling mortality.

Chapter IV. A formula for getting the net intercensal migration was derived and explained in this chapter. With the aid of parish records of births and deaths and the population estimates for several years (the earliest of which is 1800), the net migration for different intercensal periods was calculated. The results are shown in several tables in the chapter.

This chapter merely tries to underscore several important uses for which the parish registers can be employed. The migration figures arrived are not 100 per cent accurate because the sources of data may be deficient. Parish baptismal and burial records may not be very reliable for several reasons illudicated in the chapter.

Chapter V. This is perhaps one of the most interesting if not the most interesting chapter of this thesis paper. Here, with the aid of the 1818, 1879 and 1903 population estimates and again, the annual numbers of births, deaths and marriages obtained from the parish registers, we tried to estimate the annual populations and vital rates for San Jose from 1818 to 1903.

The procedure is rather simple and the results are enlightening. First, we calculated the net migration for the two intercensal periods thru the formula derived in Chapter IV. Then we made a simplifying assumption about migration rate. Having known the annual natural increase in the population (births minus deaths) and the annual migration, the population base for each year was computed.

Using the population base and the annual numbers of births, deaths and marriages, the vital rates for each year were estimated and their trend analyzed.

Historians have much to gain from the procedure employed in this chapter. Using this procedure to a wider base, we may yet discover some things that history books do not as yet contain.

Chapter VI. One is very often confronted with this question: Which is more accurate—the civil or the church records? In this chapter, we tried to resolve this question once and for all.

The first step was to match the deaths recorded in the civil register with the deaths recorded in the church register with special matching forms devised for the purpose. We chose three years—1959 through 1961—for this study.

The matched forms were analyzed and classified upon completion.

Findings: Neither record is accurate. There are events appearing in the church register but not in the civil and events appearing in the civil register but not in the church one. This was evidenced by the fact hat some entries in one register did not have partners in the other. Ergo, for statistical purposes, it is best to consult both records and take account of events appearing in one but not in the other.

But what about events that are not recorded in both registers? The Chandra-Sekar-Deming method which was described and used in this chapter estimates the number of such events.

In this chapter, we calculated the 1960 death rate for San Jose using (1) the church record alone; (2) the civil register alone; (3) both registers; and finally, (4) the Chandra-Sekar-Deming method. The latter is obviously the most accurate for here, all events whether recorded or not are taken into consideration.

Chapter VII. With the use of the 1887 ecclesiastical census and the 1960 census, we compared in this chapter the 1887 and 1960 populations of San Jose.

We used as our bases of comparison the sex ratio, dependency ratio, and average household and family sizes. We also compared the mean household size of San Jose in 1887 with other Western European villages during the same period.

The 1887 households were further scrutinized by examining their distribution by size, by type of head and by type of.

This chapter will surely interest social scientists and historians.

Chapter I: A Brief Historical Sketch of San Jose, Batangas

Situated about 95 kilometers south of Manila, the parish of San Jose was canonically founded on 26 April 1767.

Before that time, San Jose used to be a barrio of Bauan town under the name “Malaking Tubig.” It acquired that name from a big river passing through its center. When finally converted into a town in 1767, the name was changed to “San Jose de Malaking Tubig” in honor of Fr. Jose Victorias, OSA, the first parish priest. Later on through the years, the phrase “de Malaking Tubig” was dropped and the town became known only as San Jose.

In the permit establishing the town, the territorial extension covered not only its present territory but also the barrios of Makolot, Bungahan, Dalipit and Ibabaw. In 1875, the latter barrios separated from San Jose to form the town of Cuenca. It is said that Cuenca was separated from San Jose to form a new parish because of the hardships met by the Cuenca people in going to San Jose and through the efforts of one Don Martin Marasigan.

The original parish church of San Jose was made of bamboo and cogon grass. Destroyed by fire, it was only in 1812, when the famous botanist Rev. Fr. Manuel Blanco, OSA was the parish priest, that a new church and convent were constructed.

Since its foundation until April 1899, the parish of San Jose was under the care of the priests of the Order of St. Augustine. In April 1899, the secular Filipino priests took over until May 1911 when the Hollander fathers of the MSC order became the stewards. Finally, when the Hollander priests left the parish in 1915, the Italian Oblates of St. Joseph took over. Up to the present time, the parish is still under the care of the Filipino Oblates.

At present, San Jose with its poblacion and 22 barrios has 24,533 inhabitants (1970 census) and is a third class municipality.

Chapter II: Source of Information

The bulk of the information used in this thesis paper came from the parish archives of San Jose and Cuenca. These parish archives contain the registers of baptisms, burials and marriages of the two towns since the date of their respective foundations. Taken together, the baptismal, burial and marriage registers of San Jose and Cuenca comprise over a hundred volumes. (Sample entries from the three registers during the Spanish era are reproduced in Appendix 2-1.)

To a lesser extent, the civil death register of San Jose was also used—specifically for Chapter VI.

The other sources of information—especially on census data—are the *Padron General de las Almas*,³ an ecclesiastical census of 1885 and 1886; several historical books located at the Lopez Museum, Pasay City;⁴ and the censuses conducted by the Bureau of the Census and Statistics for the years 1903, 1918, 1939, 1948, 1960 and 1970.

³See Chapter VII for a more complete discussion of this book.

⁴See Appendix 4-1.

Appendix 2-1: Sample Entries from the Parish Registers, c. 1870

From the Baptismal Register

“En veintiuno de Octubre de mil ochocientos setenta y cuatro anos, Yo Fr. Bruno Laredo Religioso de orn. de N.P.S. Agustin Cura Paroco y Minro. de Doctrina de este pueblo de S. Jose bautize solemnemente y puse los Santos alios en esta Yglesia de mi cargo a un nino de dos dias nacido a quien puse por nombre Hilarion hijo legitimo y de legitimo Matrimonio de Manuel Alejandre y de Maria Loria indio de este pueblo BY. de Balagtasin abuelos paternos Calentro Alejandre y Margarita Loria maternos Laureana Loria y Honoria Dimaculangan Naturales de este otro Pueblo. Fue su Padrino Crispin Sordan casado de este mismo a quien adverti el parentenco espiritual y obligaciones que contrajo y por verdad lo firmo.

(SGD.) Fr. Bruno Laredo"

From the Death Register

“En veinticinco de Julio de mil ochocientos setenta y dos anos. Yo Fr. Bruno Laredo Religioso del orden de N.P. San Agustin Cura Parroco y Ministro de Doctrina de este pueblo de S. Jose enterre en el Campo Santo de esta Yglesia de mi cargo a Josefa Ariola parbula hija de Fulgencio Ariola y de Feliciano Mapalad indios de este pueblo y del Barangay de Balet con entierro resado. Y por verdad lo firmo ftra ut. supra.

(SGD.) Fr. Bruno Laredo"

From the Marriage Register

“En veinticuatro de Junio de mil ochocientos setenta y ocho anos. Yo Fr. Bruno Laredo Religioso del orden de N.P. San Agustin Cura Parroco y Ministro de Doctrina de este pueblo de San Jose, precedidas las tres amonestaciones y demas diligencias que previene el Santo Consilio de Trento, y no habiendo resultado impedimento alguno que a mi noticia haya llegado, con mi licencia el Padre Don Simon Dimayacyac Doadjutor de este pueblo, case por palabras de presente y velo en esta Yglesia de mi cargo segun rito de Nuestra Santa Madre Yglesia a Jose Orense soltero hijo de Mariano Orense y de Nicolasa Caguimbal indio de este pueblo y del B.Y. de Galamayamo: con Emerenciano Murfi dalaga hija de Felix Murfi y de Maria Hidalgo india de este pueblo y de BY. de Calansayan. Fueron testigos Pedro Caguimbal y Mauricio Orense, ambos de este dicho pueblo. Y por verdad lo firmo.

(SGD.) Fr. Bruno Laredo"

Chapter III: The Natural Increase (Decrease) in the Population

Figure 3-1 shows the annual number of births, deaths and marriages in San Jose since the 1800's in graphical form. Fig. 3-2 shows the five-year moving averages of the births, deaths and marriages. We transformed Fig. 3-1 into the five-year moving average graph in order to even out the effects of late registrations, especially in baptism⁵ and because the latter figure depicts the trend better. As can be observed, the second figure is not as erratic as the first.

In Fig. 3-3, we graph the annual natural increase or decrease in the population—i.e., the annual births minus deaths. In other words, this figure graphs the vertical distance between the birth line and the death line in Fig. 3-1.

Simple as they may seem, these graphs are very important and useful. Aside from showing the natural increase or decrease in the population, “such graphs have the merit that in an easily understood form, they tend to pinpoint years of epidemics and catastrophes, the consequences of marriage booms (or periods of fewer marriages), and the impact of measures for controlling mortality.”⁶

Very noticeable from the three graphs is the decrease in mortality from the 1910's onward. Before that time, mortality was very high—at times higher than fertility. For example, in the years 1862, 1868, 1883, 1889 and 1890, and during the cholera epidemic of 1900-1902, the number of people who died exceeded the number of people who were born. With the introduction of modern medication, the epidemics and catastrophes that were so common before and during the turn of the century were put under control.

The sudden decline in births during the late 1870's was the result of the division of San Jose. It will be recalled that in 1875, Cuenca broke off from San Jose. The black dotted line in Fig. 3-3 shows what the annual natural increase (decrease) in the population of San Jose could have been if the town had not been divided. This dotted line gives the natural increase (decrease) in the population of San Jose and Cuenca.

One could also observe from Fig. 3-2 that there is some correlation between marriages and births—i.e., the number of births is directly proportional with the number of marriages over a long time period. It is apparent from the graph that over a long time period, births follow the trend of marriages; as the latter increase, the former increase too.

The increase in population beginning in the mid-1940's is a result, not only of the decrease in mortality but also of the increase in fertility. Figs. 3-1 and 3-2 show that beginning the mid-1940's, the decrease in mortality went hand in hand with the tremendous increase in fertility. Fig. 3-3 shows the sudden natural increase since that time.

Innumerable other observations like the above can be generated by the reader from the three graphs we have presented with this chapter.

⁵In this chapter, we assume that the number of baptisms as shown by the church register is reflective of the number of births, i.e., people who were born in a given year were also baptized during that said year. However, since late registration is possible not only in baptism but also in burials and marriages, we graphed the 5-year moving averages in the hope that this method will somehow even out the effects of late registrations. The effects of late registration and the unreliability of the church records are discussed lengthily in the last portion of the next chapter.

⁶E.A. Wrigley, ed., *An Introduction to English Historical Demography* (New York: Basic Books, Inc., 1966), p. 61.

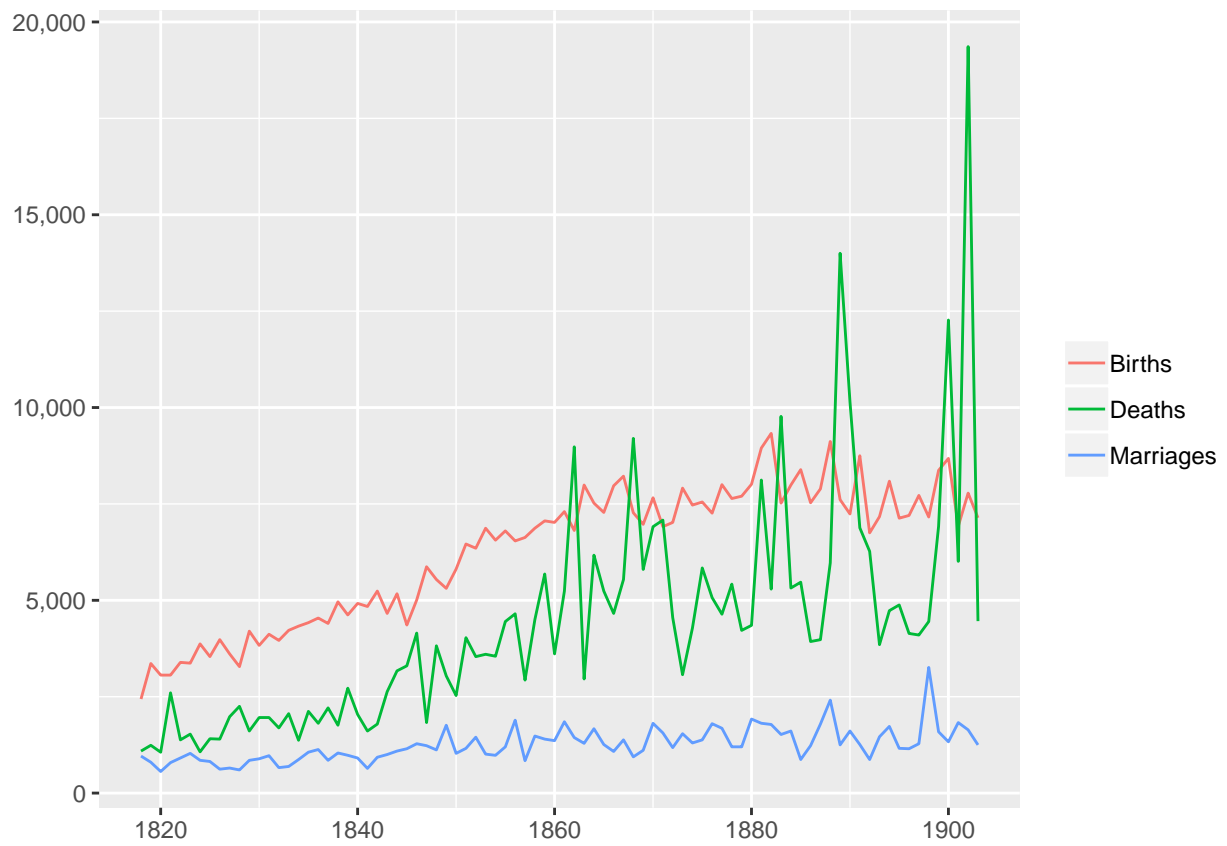


Figure 3-2: San Jose Births, Deaths, and Marriages (5-year moving averages)

Chapter IV: Estimates of the Intercensal Migration

The Formula

With the census data for different years and the church records of births (baptisms) and deaths (burials) one can compute intercensal migration using the formula:

$$M = P_t - [P_0 + \sum_0^t (B - D)]$$

Where:

- M = net migration
- P_t = population at census year t
- P_0 = population at census year 0, which is prior to year t (also called “initial population”)
- $\sum_0^t (B - D)$ = natural increase or decrease in the population between years 0 and t . (summation of births (B) and deaths (D) that occurred over the period)

If there is no in or out migration, population at time t (P_t) should be equal to the population at time 0 (P_0) plus the natural increase or minus the natural decrease in the population $[\sum(B - D)]$. In other words, P_t minus $[P_0 + \sum(B - D)]$ would be zero in the absence of migration.

A positive M will give the net intercensal immigration (in) while a negative M will give the net intercensal emigration (out).

An Illustration

For an illustration, let us calculate the net intercensal migration in San Jose for the period 1903 - 1918 using the formula above.

The population of the town in March 1903 (P_0) was 8,996 and 11,074 in December 1918 (P_t). The natural increase in the population $[\sum(B - D)]$ from March 1903 to December 1918 as shown by the church records of births and deaths was +4,154.

Therefore:

$$\begin{aligned} M &= 11,074 - (8,996 + 4,154) \\ &= 11,074 - 13,150 \\ &= -2,076 \end{aligned}$$

The net intercensal emigration between March 1903 and December 1918 was 2,076—i.e., 2,076 persons left San Jose between these two points in time.

Migration After the Turn of the Century

The migration for different intercensal periods after the turn of the century is shown below:

Table 4-1

Period	P_0	$\sum(B - D)$	M	Yearly Average
Mar 1903 - Dec 1918	8,996	4,145	-2,067	-131
Dec 1918 - Jan 1939	11,074	3,256	-2,133	-106
Jan 1939 - Oct 1948	12,197	2,350	98	10
Oct 1948 - Feb 1960	14,645	5,311	-1,281	-113
Feb 1960 - May 1970	18,675	5,294	564	55
May 1970 -	24,533			

Migration During the Nineteenth Century

Some estimates and censuses of the population of San Jose during the Spanish era are available (Refer to Appendix 4-1, p. 23). Assuming these estimates are accurate, and with the aid of the church registers of births and deaths, the intercensal migration during the 1800's can be calculated.

Here we divide the nineteenth century into two eras: (1) 1800-1876, from the date of the first population estimate up to the last year that Cuenca was still a part of San Jose;⁷ (2) 1885-1903, from the first census year after Cuenca broke off from San Jose up to the first post-Spanish census. In the case of the latter era, we are dealing with a "smaller" San Jose—i.e., San Jose minus its former barrio of Cuenca.

The intercensal migration estimates for the 1800-1876 era are shown in Table 4-2 below. For the 1885-1903 era, refer to Table 4-3.

Table 4-2

Period	P_0	$\sum(B - D)$	M	Yearly Average
1800 - 1818	3,200			
1818 - 1850	6,065	7,175	-1,761	-55
1850 - 1870	11,479	4,092	-3,183	-159
1870 - 1876	12,388	1,423	1,461	244
1876 -	15,272			

* The natural increase or decrease for the 1800-1818 period cannot be ascertained because the parish death register from 1767, the year the town was founded to 1817 is so damaged that the number of decedents cannot be determined.

† The natural increase of 7,175 for the 1818-1850 period can be understated or overstated. The death register for the years 1829, 1830 and 1844 is badly damaged with pages missing. The number of deaths for these years was obtained through interpolation.

⁷Although strictly speaking, Cuenca was no longer a part of San Jose in 1876 having been separted the year before, we can surmise that during that year and up to early 1879, the Cuenca people still went to San Jose for their spiritual needs. The baptismal, death, and marriage registers of Cuenca began only in May 1879.

Table 4-3

Period	P_0	$\sum(B - D)$	M	Yearly Average
1885 - 1886	10,042	188	202	202
1886 - 1895	10,432	-52	-380	-42
1895 - 1897	10,000	464	476	238
1897 - 1903	10,940	-592	-1,352	-225
1903 -	8,996			

Some Qualifications

This method of computing the net intercensal migration is, at best, a very crude way of doing so because the sources of data may be deficient for a number of reasons:

1. For arriving at the natural increase or decrease in the population, the number of burials was subtracted from the number of baptisms as shown in the church records and the annual differences were summed for the period involved. However, baptisms are not births—they may not necessarily correspond to births. “Births take place which are not recorded as baptisms at the time, and conversely, there are many baptisms which refer to births in previous periods, even earlier decades, or births which took place elsewhere.”⁸ Of course, if the number of births in a given period that are not recorded as baptisms for that period is equal to and hence, cancels out the number of baptisms for that period which refer to births in previous periods, then the baptismal register would be fairly accurate.
2. The number of baptisms may fall short of the actual number of births because underregistration is possible. Also, since the Catholic church baptismal register was used, the non-Catholics are not accounted for.
3. Although the number of burials may correspond better to the number of deaths than the number of baptisms would to the number of births, underregistration is also possible as the study on the reliability of church and civil death records will show. (See Chapter VI) For one thing, the church death register will not reflect the death of non-Catholics.
4. The accuracy of the estimate of the population during the Spanish era and especially the ones prior to 1886 is dubious.

The difficulty here is that we cannot say how much of the resulting discrepancy between P_t and $P_0 + \sum_0^t (B - D)$ is in fact due to migration and how much to deficiencies in the sources of data.

⁸Wrigley, *loc. cit.*

Appendix 4-1

I. Before Cuenca Separated from San Jose:

Date	Population	Sources and comments
1800	3,200	Zuniga, <i>Estadismo de las Islas Filipinas</i> (Madrid: 1893), Vol. II, p. 78. Estimate is 800 “tributes” times 4. This multiplier may be too low.
1818	6,065	Buzeta, Manuel, <i>Diccionario Geografico, Estadistico, Historico de las Islas Filipinas</i> (Madrid: 1851), Vol. I, p. 367. The multiplier used here is 5.
1850 (~=)	11,479	Buzeta, <i>ibid.</i> , p. 364. Figure refers to some point between 1845 and 1850.
1870	12,388	Cavada, Agustin de la and Mandez de Vigo, <i>Historica Geografica, Geologica y Estadistica de Filipinas</i> (Manila: 1876) 2 vols.
1876	15,272	<i>Censo de Poblacion de las Islas Filipinas Perteciente al Ano de 1876</i> (Manila: 1878), p. 4.

II. After Cuenca Separated from San Jose: (Figures refer to San Jose only unless specified otherwise)

Date	Population	Sources and comments
1885	10,042	<i>Padron General de las Almas</i> (an ecclesiastical census)
1886	10,432	<i>Ibid.</i>
1887	15,518	Census (Figure includes Cuenca)
1895	SJ: 10,000	Sastron, Manuel, <i>Filipinas Pequenos Batangas y su Provincia</i> (Malabong: 1895), pp. 155 and 205.
1897	10,940	Valero, Mariano Diaz, <i>Diccionario Geografico-Judicial y Estadistico</i> (Madrid: 1897) p. 415. This book gives 2 San Joses under the “juzgado” of Bataan—one with population of 425 and another, of 10,940. We assumed that the latter refers to San Jose, Batangas.
1903	SJ: 8,996 C: 5,990 Total: 14,986	Census
1918	11,074	Census
1939	12,197	Census
1948	14,645	Census
1960	18,675	Census
1970	24,533	Census

Chapter V: Trial Estimates of Population, Birth Rates and Death Rates for San Jose (Plus Cuenca), 1818-1903⁹

In this chapter, we shall try to derive a simple procedure for obtaining annual estimates of vital rates and population for 19th century San Jose (plus Cuenca).¹⁰ Available data for this purpose include:

- occasional estimates of total population (See Appendix 4-1); and
- annual numbers of births, deaths and marriages obtained from the parish registers.

As a trial procedure, we accept as accurate the following:¹¹

- the 1818 population estimate of Buzeta (6,065 inhabitants)
- the Ecclesiastical Census of 1876 (15,272 inhabitants)
- the U.S. Census of 1903 (14,986 inhabitants. This figure is for San Jose and Cuenca)

The two periods (1818-1876 and 1876-1903) are treated separately because they are, as we shall see, demographically as well as historically quite distinct.

Findings and Observations

Over the 58 years from 1818 to 1876, the population grew by 9,207 persons—from 6,065 in 1818 to 15,272 in 1876. The parish registers recorded 32,512 births and 19,822 deaths over the same period or a natural increase of 12,690. This represents an average annual rate of natural increase of 20.5 per thousand per year.¹² There was a net out-movement (emigration) of 3,463 or an average of 60 out-movements per year.

Over the next 27 years from 1876 to 1903, the population declined by 286 persons—from 15,272 in 1876 to 14,986 in 1903. During the same period, there were 21,178 births and 17,895 deaths. Natural increase therefore was 3,283 persons or an average annual rate of natural increase of 8.03 per thousand per year.¹³ There was a net out-movement of 3,569 over the 27-year period or an annual average of 132 out-movements.

From the findings above, two observations are clear:

- some out-migration occurred over both periods, though out movement was heavier in the last quarter of the century;
- natural increase appears unexpectedly high early in the century.

The latter condition, however, may stem largely from the former. Persons born in San Jose did not always die there, thus raising the average ratio of births to deaths.

Figure 5-1 shows the five-year moving averages of births, deaths and marriages. The trend portrayed is one of relative stability and considerable natural increase during the first half or two-thirds of the century, followed by a traumatic period of volatile death rates and diminished births. This late 19th century demographic crisis was of course not unique to San Jose.¹⁴

⁹The writer is indebted to Dr. Peter Smith of the UPPI for the ideas presented in this chapter.

¹⁰For the sake of continuity and expediency, we consider San Jose here as if it had not been divided in 1875. In other words, we are dealing here with a “big” San Jose.

¹¹The Buzeta estimate for c. 1850 is dubious as to date while the Cavada estimate for 1870 seems much too low.

¹²This figure was obtained from the following formulae: $\text{Natural increase/Number of years} = \text{Annual natural increase}$. $\text{Annual natural increase}/((1818 \text{ Pop.} + 1876 \text{ Pop.})/2) = \text{Average annual rate of natural increase}$.

¹³Same formulae as footnote 12.

¹⁴See, for example, Dean Worcester, *A History of Asiatic Cholera in the Philippines*.

Estimating Vital Rates

But frequencies of births, deaths and marriages, or even moving averages thereof, are difficult to interpret, especially when the base population is disturbed significantly by widely fluctuating death rates. The more meaningful figures to look at are the vital rates. But to translate the frequencies of births, deaths and marriages into rates, the base population of each year is required.

Given our initial and terminal populations, we can estimate annual population totals by the formula we derived in Chapter IV,¹⁵ provided we make a simplifying assumption about migration.

For the 1818-1876 period, for example we can elect to distribute the net movement of -3,483 evenly over the 58 years—i.e., 60 net moves per annum. But given the observed growth of population, this is tantamount to assuming a declining rate of out-movement. Therefore, what we did instead was to distribute net movement over the 58 years so that the rate of net out-movement remains approximately constant.¹⁶ Thus, net migration for the mid-year (1847) is assumed to be -61; the figures for 1819 and 1876 are -34 and -85, respectively. Net movements for intermediate years were likewise obtained by applying the net migration rate.

Knowing the natural increase in the population and the migration in a given year, and the population for the previous year, we can proceed with estimating the base population for each year.

An analogous procedure was applied for the 1876-1903 period, where an out-movement of 132 was assumed for each year. Because total population was largely stationary over this period, the even distribution over time does not lead to distortion in net migration rates.

Now, having estimated the base population for each year, from 1876 to 1903, we can calculate the birth, death, and marriage rates for each year by simply dividing the numbers of births, deaths and marriages respectively by the population.

Results and Observations

The resulting vital rates and base populations are shown in Figure 5-2 and Table 5-1. The rates are considerably smoother than were the raw frequencies. If our assumptions are correct, the demographic situation of 19th century San Jose can be described in a general way as follows:

The margin between birth rates and death rates seems to have been quite wide early in the century, but it rapidly closed, especially in the mid-1840s and thereafter. Mounting death rates caused a definite slackening of population growth in the 1860's, but mortality subsided and population expanded again until the epidemics and violence of the 1880's and 1890's. Between 1887 and 1891, the population decline began in 1899 and continued to 1903.

Overall, instead of the steady fertility and gradually diminishing mortality associated with the second stage of the demographic transition, we find high and fluctuating birth rates and steadily increasing mortality, with a level so high and fluctuations so great that for several short periods natural increase is negative.

¹⁵ $M = P_t - [P_0 + \sum_0^t (B - D)]; P_t = P_0 + \sum_0^t (B - D) + M$

¹⁶As per computation, a constant migration rate of .0056 per annum will result in, more or less, 3,483 out-moves for the 58 years. To get the number of out-moves for any given year, multiply this rate by the population of the previous year.

Table 5-1

Year	Population	Birth Rate	Death Rate	Marriage Rate
1818	6,065	40.23	17.97	15.83
1819	6,243	53.82	19.86	12.81
1820	6,408	47.75	16.54	8.74
1821	6,618	46.24	39.29	11.94
1822	6,782	49.99	20.35	13.42
1823	6,928	48.64	22.08	14.87
1824	7,169	53.98	14.93	11.86
1825	7,342	48.22	19.20	11.17
1826	7,559	52.65	18.52	8.20
1827	7,680	47.01	25.78	8.46
1828	7,740	42.38	29.07	7.75
1829	7,956	52.79	20.24	10.68
1830	8,098	47.30	24.20	10.99
1831	8,269	49.82	23.70	11.73
1832	8,450	46.86	20.00	7.81
1833	8,619	48.98	23.90	8.01
1834	8,867	48.83	15.45	9.81
1835	9,047	48.86	23.43	11.72
1836	9,269	48.98	19.53	12.19
1837	9,436	46.63	23.42	9.01
1838	9,703	51.12	18.14	10.72
1839	9,839	46.96	27.65	9.96
1840	10,072	48.85	20.25	9.03
1841	10,339	46.81	15.57	6.19
1842	10,626	49.31	16.85	8.75
1843	10,769	43.27	24.42	9.29
1844	10,909	47.39	29.06	9.99
1845	10,954	39.80	30.13	10.50
1846	10,979	45.63	37.80	11.66
1847	11,322	51.85	16.16	10.86
1848	11,431	48.46	33.42	9.80
1849	11,594	45.80	26.22	15.18
1850	11,857	49.00	21.34	8.69
1851	12,034	53.68	33.49	9.64
1852	12,248	51.85	28.90	11.84
1853	12,506	54.93	28.79	8.08
1854	12,737	51.50	27.87	7.69
1855	12,901	52.71	34.49	9.30
1856	13,018	50.24	35.72	14.52
1857	13,315	49.79	22.01	6.31
1858	13,477	50.98	33.39	10.98
1859	13,541	52.14	41.96	10.34
1860	13,806	50.85	26.15	9.85
1861	13,935	52.39	37.60	13.28
1862	13,640	49.93	65.84	10.56
1863	14,067	56.80	21.04	9.17
1864	14,123	53.25	43.69	11.82
1865	14,248	51.09	36.78	8.84
1866	14,499	54.97	32.14	7.45
1867	14,686	55.97	37.72	9.40

Year	Population	Birth Rate	Death Rate	Marriage Rate
1868	14,411	50.45	63.84	6.52
1869	14,447	48.25	40.15	7.68
1870	14,441	53.04	47.85	12.53
1871	14,343	48.18	49.36	10.88
1872	14,510	48.38	31.36	8.13
1873	14,913	53.04	20.59	10.33
1874	15,149	49.31	28.25	8.58
1875	15,235	49.56	38.33	9.06
1876	15,369	47.24	32.99	11.71
1877	15,476	51.69	29.98	10.86
1878	15,566	49.08	34.82	7.71
1879	15,782	48.79	26.74	7.60
1880	16,016	50.01	27.16	11.99
1881	15,967	56.05	50.85	11.34
1882	16,239	57.45	32.58	10.96
1883	15,882	47.35	61.52	9.57
1884	16,017	49.88	33.21	10.05
1885	16,177	51.86	33.81	5.38
1886	16,405	45.90	23.96	7.50
1887	16,664	47.35	23.88	10.74
1888	16,847	54.13	35.44	14.31
1889	16,076	47.34	87.09	7.78
1890	15,653	46.25	64.84	10.29
1891	15,708	55.70	43.80	8.02
1892	15,624	43.20	40.13	5.57
1893	15,824	45.31	24.33	9.23
1894	16,028	50.47	29.52	10.79
1895	16,121	44.23	30.27	7.20
1896	16,295	44.19	25.41	7.06
1897	16,525	46.72	24.81	7.75
1898	16,664	42.97	26.70	19.56
1899	16,677	50.19	41.49	9.53
1900	16,186	53.63	75.80	8.22
1901	16,145	42.86	37.23	11.33
1902	14,855	52.37	130.33	11.04
1903	14,991	47.63	29.75	8.34

Chapter VI: Reliability of the Civil and Church Registers and Estimation of Death Rate

In practically every parish in the Philippines, there are two records that can be consulted regarding births, deaths, and marriages—the civil register, which is kept at the Municipal Hall, and the Catholic church register, which the parish priest keeps. The usual question which arises is this: Which record is more accurate for estimating vital rates and other demographic statistics?

In an attempt to answer this question, a simple study was devised which entails the matching of the civil and church records of deaths that occurred in San Jose during the years 1959, 1960 and 1961.

Matching Procedure

The first step in the study was the construction of a form for all the information that could be obtained about each death. Two kinds of such form were made—white for the church register and yellow for the civil register—which give the following information about each death:

- full name of decedent
- date of death
- date of burial
- age at death
- civil status
- name of parents/guardians
- residence (barrio or town if not San Jose)
- cause of death
- name of cemetery

Then all the detail of deaths in the parish for the 3 years from the church register were copied to the white forms. After this was done, the details found in the civil register were copied onto the yellow forms.

The completed forms were then paired and classified twice into three classes: (1) perfect matches; (2) probable matches; and (3) unmatched.

In the first classification, if the white and yellow forms matched perfectly, they were paired and classified under the “perfect matches” category. If there are slight discrepancies in the details—e.g., in case where a name is spelled in 2 different ways, the ages are slightly different, and so on—the two forms would be paired and classified under the “probable matches” category. The remaining forms that did not have partners in the other color were classified under the “unmatched” category.

The forms were then tabulated by age at death by completed years, 0, 1-4, 5-9, 10-14, 15-19, and so on. In case where the age shown in the two registers did not tally, the civil register was followed for the sake of expediency.

The results using the first classification are shown in Tables 6-1a, 6-1b, and 6-1c. As can be noticed, most of the forms were not matched perfectly. This goes to show that the civil and church registers do not tally in details most of the time.

A second classification of the forms was made—this time not as strict as the first. Under this new classification, the probable match entries were placed under the category of perfect matches unless there are serious reasons to doubt that they are not so. In other words, all entries where everything is exactly the same except for, say, cause of death or age at death, were classified under “perfect matches”; not “probable matches” as before.

The results using the second classification are found in Tables 6-2a, 6-2b and 6-2c.

Findings

This study points out that neither the civil nor the church record seems to be entirely accurate; if one wants really accurate statistics, he has to consult both records.

The following findings from the study bear out the above conclusion:

1. As far as details like cause of death, age at death, date of death, etc. are concerned, we do not know which record is better. This is pointed out by the fact that a very meager proportion of the paired entries are perfect matches (using the definition of the first classification). We have reasons to believe however that the civil register may be more accurate because there, every death is supported by a medical certificate.
2. As shown by the church register, there were: 134 deaths in 1959; 128 deaths in 1960; and 154 deaths in 1961; or 416 deaths over 1959-61. The corresponding number of deaths in the civil register: 125 in 1959; 127 in 1960; and 166 in 1961; or 418 over 1959-61.
3. The number of deaths appearing in the church register but not in the civil register are: 16 in 1959; 16 in 1960; and 5 in 1961; or 37 over the 3-year period. The number of deaths appearing in the civil register but not in the church register are: 7 in 1959; 15 in 1960; and 17 in 1961; or 39 over the 3-year period. All of these are, of course, under the “unmatched” category.

A more accurate number of deaths could be obtained by counting all entries under the “perfect matches,” “probable matches” and “unmatched” categories. This will give all recorded deaths in the parish—those which are shown in both registers, those shown in the civil register but not in the church register, and those shown in the church register but not in the civil register.

The number of deaths thus counted were:

- 141 in 1959;
- 143 in 1960; and
- 171 in 1961 or
- 455 over 1959-61.

As can be noted, the numbers of deaths given in both the civil and church records fall short of these numbers. For statistical purposes therefore, it is best to consult both records for there are entries appearing in one but not in the other.

Different Death Rates

If the civil register alone is used, the average death rate for the 3-year period would be 7.46^{17} per thousand population; if the church register alone is used, the figure would be 7.42 per thousand. Using the combination of the two, one in which the death appearing in one but not the other is accounted for, the death rate is 8.12 per thousand population. Obviously, this rate is more accurate than the first two since here, deaths that appear in one but not in the other record are accounted for.

The Chandra-Sekar-Deming Method

But what about deaths which are not recorded in either the civil or the church records? If such events exist, which most probably do, then even the third estimate above using both records is still understated.

Since there is no way of telling how many deaths over the 3-year period were not listed in either record, the Chandra-Sekar-Deming method of estimating vital rates for dual registration systems is applied here to get a more accurate estimate. This method, which estimates and takes into account deaths that do not appear in either record, requires that three important conditions be met:

¹⁷ $(418 / 3) / 18,675$ where 18,675 is the total population for 1960.

1. matches between the church and civil records be true matches—all actual matches, but only these, can be included.
2. all events in either of the systems must be relevant events—i.e., those occurring in the population under study and during the appropriate time period.
3. the two systems must be independent: for any true event, the chances of exclusion from the two systems must be unrelated.

The Chandra-Sekar-Deming method involves the construction of a 2x2 table of the following form:

	In Parish Register	Not In Parish Register	Total
In civil register	C	N_2	S
Not in civil register	N_1	X	
Total	R		N

Where:

- C = deaths recorded in both registers
- N_1 = deaths recorded only in the parish register
- N_2 = deaths recorded only in the civil register
- X = deaths not recorded in either register; the estimate (X') of X is N_2N_1/C .
- $N = C + N_1 + N_2 + X$

Applying this procedure to the San Jose information, the following results are obtained:

	In Parish Register	Not In Parish Register	Total
In civil register	379.0 ¹⁸	39.0	418.0
Not in civil register	37.0	3.8	40.8
Total	416.0	42.8	458.8

X's estimate by the Chandra-Sekar-Deming formula is $N_1N_2/C = (37 * 39)/379 = 3.8$ deaths missed by both civil and church records. Adding this to the number of deaths that appear in both registers, in the church register alone and in the civil register alone gives an estimated total deaths of 458.8 over the three-year period.

The estimated death rate is then 8.19 per thousand. This rate is 9.8 - 10.4 per cent higher than either of the single-system estimates, reflecting apparent completeness rates of 90.7 and 91.1 per cent for the parish and civil systems, respectively.

¹⁸Sum of probable matches and perfect matches for the three years. Refer to either Tables 6-1a, 6-1b and 6-1c or Tables 6-2a, 6-2b and 6-2c. For calculation, probable matches were assumed to be certain.

Table 6-1a: Number of Deaths in San Jose for the Year 1959

Age (in years)	Perfect Matches	Probable Matches	Unmatched	Total
0 - 4	3	44	6	53
5 - 9	1	2	1	4
10 - 14	0	1	0	1
15 - 19	0	0	1	1
20 - 24	0	1	0	1
25 - 29	0	0	0	0
30 - 34	1	3	0	4
35 - 39	0	0	1	1
40 - 44	1	3	1	5
45 - 49	1	4	1	6
50 - 54	3	2	0	5
55 - 59	0	1	1	2
60 - 64	1	4	1	6
65 - 69	0	2	1	3
70 - 74	0	8	3	11
75 - 79	4	7	2	13
80 - 84	3	5	1	9
85 - 89	1	7	0	8
90 - 94	0	2	1	3
95 - 99	0	3	1	4
100 - 104	0	0	1	1
Total	19	99	23	141

Table 6-1b: Number of Deaths in San Jose for the Year 1960

Age (in years)	Perfect Matches	Probable Matches	Unmatched	Total
0 - 4	1	33	12	46
5 - 9	1	3	2	6
10 - 14	1	0	1	2
15 - 19	0	0	0	0
20 - 24	0	1	0	1
25 - 29	0	1	0	1
30 - 34	0	2	1	3
35 - 39	0	1	0	1
40 - 44	0	2	1	3
45 - 49	0	2	0	2
50 - 54	0	1	1	2
55 - 59	1	1	2	4
60 - 64	2	3	3	8
65 - 69	3	6	1	10
70 - 74	1	2	2	5
75 - 79	4	9	1	14
80 - 84	2	6	1	9
85 - 89	2	6	0	8
90 - 94	2	3	1	6
95 - 99	1	5	1	7
100 - 104	2	2	0	4
Age not given	0	0	1	1
Total	23	89	31	143

Table 6-1c: Number of Deaths in San Jose for the Year 1961

Age (in years)	Perfect Matches	Probable Matches	Unmatched	Total
0 - 4	6	52	11	69
5 - 9	0	4	1	5
10 - 14	0	2	1	3
15 - 19	0	3	0	3
20 - 24	0	1	0	1
25 - 29	2	3	0	5
30 - 34	1	2	1	4
35 - 39	0	1	0	1
40 - 44	0	7	0	7
45 - 49	0	3	0	3
50 - 54	3	2	1	6
55 - 59	1	2	0	3
60 - 64	1	2	1	4
65 - 69	0	5	0	5
70 - 74	1	4	1	6
75 - 79	3	7	0	10
80 - 84	2	10	1	13
85 - 89	2	4	1	7
90 - 94	0	7	2	9
95 - 99	0	4	1	5
100 - 104	0	0	0	0
105 - 109	0	1	0	1
110 - 114	0	0	0	0
115 - 119	0	1	0	1
Total	22	127	22	171

Table 6-2a: Number of Deaths in San Jose for the Year 1959 (alternate method)

Age (in years)	Perfect Matches	Probable Matches	Unmatched	Total
0 - 4	45	2	6	53
5 - 9	3	0	1	4
10 - 14	1	0	0	1
15 - 19	0	0	1	1
20 - 24	1	0	0	1
25 - 29	0	0	0	0
30 - 34	4	0	0	4
35 - 39	0	0	1	1
40 - 44	4	0	1	5
45 - 49	5	0	1	6
50 - 54	5	0	0	5
55 - 59	1	0	1	2
60 - 64	5	0	1	6
65 - 69	2	0	1	3
70 - 74	5	3	3	11
75 - 79	11	0	2	13
80 - 84	8	0	1	9
85 - 89	7	1	0	8
90 - 94	2	0	1	3
95 - 99	3	0	1	4
100 - 104	0	0	1	1
Total	112	6	23	141

Table 6-2b: Number of Deaths in San Jose for the Year 1960 (alternate method)

Age (in years)	Perfect Matches	Probable Matches	Unmatched	Total
0 - 4	34	0	12	46
5 - 9	4	0	2	6
10 - 14	1	0	1	2
15 - 19	0	0	0	0
20 - 24	1	0	0	1
25 - 29	1	0	0	1
30 - 34	2	0	1	3
35 - 39	1	0	0	1
40 - 44	2	0	1	3
45 - 49	2	0	0	2
50 - 54	1	0	1	2
55 - 59	2	0	2	4
60 - 64	5	0	3	8
65 - 69	9	0	1	10
70 - 74	3	0	2	5
75 - 79	13	0	1	14
80 - 84	8	0	1	9
85 - 89	8	0	0	8
90 - 94	5	0	1	6
95 - 99	6	0	1	7
100 - 104	4	0	0	4
Age not given	0	0	1	1
Total	112	0	31	143

Table 6-2c: Number of Deaths in San Jose for the Year 1961 (alternate method)

Age (in years)	Perfect Matches	Probable Matches	Unmatched	Total
0 - 4	54	4	11	69
5 - 9	4	0	1	5
10 - 14	1	0	1	2
15 - 19	3	0	0	3
20 - 24	2	0	0	2
25 - 29	5	0	0	5
30 - 34	3	0	1	4
35 - 39	1	0	0	1
40 - 44	7	0	0	7
45 - 49	3	0	0	3
50 - 54	5	0	1	6
55 - 59	3	0	0	3
60 - 64	3	0	1	4
65 - 69	5	0	0	5
70 - 74	5	0	1	6
75 - 79	10	0	0	10
80 - 84	12	0	1	13
85 - 89	6	0	1	7
90 - 94	7	0	2	9
95 - 99	4	0	1	5
100 - 104	0	0	0	0
105 - 109	1	0	0	1
110 - 114	0	0	0	0
115 - 119	1	0	0	1
Total	145	4	22	171

Chapter VII: The 1887 and 1960 Populations of San Jose Compared

Our purpose here is to find out how the population of San Jose has changed over the years. We chose 1887 and 1960 because these years are the earliest and the latest census years for which we have fairly accurate data. (To date, the 1970 census is not yet published.)

Sources of Data

The data for 1960 were obtained from the census conducted by the Bureau of Census and Statistics for that year. (See Table 7-2.)

For 1887, the source of information is the *Padron General de las Almas*. This book, aside from being a census, was designed by the civil and ecclesiastical authorities of that time to keep track of each and every inhabitant of the town.

The *Padron* divided the town into “cabeceras” and the cabeceras into households. There were 64 cabeceras in all with approximately 35 to 50 households each. Each member of the household was listed in the *Padron*—by name, age, civil status, and at times, occupation. The *Padron* also gives information on whether a person had paid the taxes due from him, whether he had gone to confession and received holy communion during the census year, and how many times, and other details. While sex is not given, this is easily ascertained by looking at the names—i.e., those named Maria, Teresa, Juana, etc. are females and those named Leon, Simon, Andres, etc. are males.

A *Padron* list was used by the Spanish authorities in each town and many of these lists still survive to date. Normally, a new *Padron* list was started each year—so that if one wants to know the population and other information regarding the inhabitants of a town in a given year, all he has to do is to look at the *Padron* for that year.

In the case of San Jose however, the *Padron* was used for 3 consecutive years¹⁹—first in 1885, then updated in 1886 and 1887. Persons listed in 1885 but who died or transferred residence in 1886 or 1887 were cancelled and a brief remark was given under the column “observaciones.” Additions to a household in 1886 and 1887 by reason of births and/or marriage were inserted into the list.

Now, to make the *Padron* a realistic census of December 1887, persons who died and transferred residence/household are not included in our counting. Additions to the households by reason of birth or marriage are, for the same reason, included.

As it would be tedious to tabulate the ages, sex, etc. of the entire population (there were 10,432 inhabitants in 1886 as given in the summary of the *Padron*), we took a 10% representative sample of the population. We did this by selecting every tenth household beginning with the tenth in the list and tabulating manually by age, sex and other characteristics of interest.

The summary of findings, using the 10% sampling described above, is shown in the different tables at the end of this chapter.

How the Population Changed

By comparing Tables 7-1 and 7-2, and 7-3, we can discover many significant changes in the structure of the population.

As in 1887, the females still outnumber the males in 1960. However, as the table of the sex ratio²⁰ shows (refer to Table 7-3), the number of males per 1000 females increased from 901.7 in 1887 to 953.2 in 1960.

¹⁹While the summary information of the *Padron* gives the population of San Jose only for 1885 and 1886, the notes in the “observaciones” columns show that the same list was used in 1887.

²⁰Sex Ratio = (Males/Females) * 1000. Gives the number of males per 1000 females.

We can also see from this table that a greater proportion of the young people (aged 14 or less) in 1960 are males as against in 1887 where the females aged 14 or less outnumbered the males. Although the females outnumber the males in the 39-44, 45-64, and 65+ age groups, in both 1887 and 1960, we can see that there were proportionally more males in 1887 in these age groups than there were in 1960.

In 1887, 41.4 per cent of the inhabitants of San Jose were under 15 years of age compared to 44.8 per cent in 1960. Old people—those aged 65 or more—constituted 2.5 per cent of the population in 1887 and 5.4 per cent in 1960.

Another ratio worth looking into is the dependency ratio²¹ which is a rough measure of the number of workers (productive persons) per 1000 non-productive persons (those who are too young or too old). In 1887, the dependency ratio was 1270 while in 1960 the figure was 993. This means that over the years, the burden of dependency in San Jose is getting heavier—in 1887, 1270 persons supported 1000 children and/or aged while in 1960, only 993 persons supported the same number of dependents. The burden of dependency in 1960 approximates the national average.²²

The average household size in San Jose in 1887 was 4.8. This figure was arrived at by adding all the inhabitants in the 10% sample and dividing the sum by the number of households (258 in all) in the same 10% sample.

The mean household size in San Jose in 1887 is about the same as those in Western European countries during the same period. For instance, the mean household size in England and Wales was 4.50 in 1871 and 4.61 in 1881. In Germany, it was 4.63 in 1871; 3.7 in France in 1881, and 4.9 in the U.S.A. in 1890.²³

The trend in these Western European countries is for the mean household size to decline over time. In England and Wales, the mean household size decreased from 4.65 in 1911, to 4.14 in 1921, to 3.72 in 1931. In the United States, from 4.9 in 1890, the figure went down to 4.7 in 1900, 4.5 in 1910, 4.3 in 1920 and 4.1 in 1930. In Germany, the trend is the same—from 4.62 in 1871, the mean household size decreased to 4.49 in 1900 and finally 3.61 in 1933.

Although there is no similar data for San Jose for other years, we are certain that this trend did not occur there, and for that matter in the Philippines. The reason is that, unlike in the countries mentioned above, reduced fertility did not follow lower mortality in the Philippines. Here, the same high fertility rate was maintained despite the reduced mortality resulting in a higher mean family size.²⁴ According to the latest statistics, at present an average Filipino couple raises 7 children while American parents raise only 3.

The 1887 Households

Tables 7-4, 7-5 and 7-6 give us some important information about San Jose households in 1887. These three tables give the distribution of the 1887 households by size, type of head and type of extension, respectively.

Table 7-4 shows that the majority of households in San Jose during the late nineteenth century were small—comprising 5 or less members. And, as can be expected, most households were headed by a married male. (Refer to Table 7-5)

As can be seen from Table 7-6, about one-third of the total number of households in San Jose in 1887 were extended—i.e., they contained extra persons other than the members of the immediate nuclear family. As can be gathered from the *Padron* list, it seems that it was common practice during that time for a son and his wife to live with his parents first until they could settle on their own. But it was never a practice for a daughter and her husband to live with her parents—the newlyweds always settled with the husband's parents.

²¹Dependency Ratio = (people aged 15-64/people aged 0-14 and 65+) times 1000.

²²*Philippine Population—Profiles, Prospects, Problems*, University of the Philippines Population Institute, 1970, p. 23.

²³Peter Laslett, "Size and Structure of the Household in England over Three Centuries," *Population Studies*, XXIII, No. 2, (July 1969), p. 212.

²⁴As used here, "family" means only the nuclear family—the man, his wife and their children. "Household" includes the relatives and servants living with the family. The mean family size in San Jose in 1887 is difficult to determine because oftentimes, we cannot differentiate as to who were members of the family and who were relatives and servants.

Appendix 7-1 gives two typical entries in the *Padron* list. These two entries are both examples of an extended family.

Table 7-1: 1887 Population (10% Sample)

Age Group	Male		Female		Total	
	Number	Percent	Number	Percent	Number	Percent
Under 1 year	50	8.65	51	7.96	101	8.28
1 - 4 years	76	13.15	82	12.79	158	12.95
5 - 9 years	70	12.11	68	10.61	138	11.31
10 - 14 years	44	7.61	64	9.98	108	8.85
15 - 19 years	58	10.03	69	10.76	128	10.49
20 - 29 years	75	12.98	103	16.07	178	14.59
30 - 44 years	116	20.07	120	18.72	236	19.34
45 - 64 years	67	11.59	72	11.23	139	11.39
65 years/over	19	3.29	11	1.72	30	2.46
Age not given	3	0.52	1	0.16	4	0.33
All Ages	578	100.00	641	100.00	1,220	100.00

Note:

Sum of male and female for 15 - 19 category does not tally with the total for both sexes because in one case, sex could not be determined.

Table 7-2: 1960 Population

Age Group	Male		Female		Total	
	Number	Percent	Number	Percent	Number	Percent
Under 1 year	331	3.63	290	3.03	621	3.33
1 - 4 years	1,284	14.09	1,197	12.52	2,481	13.29
5 - 9 years	1,454	15.95	1,394	14.58	2,848	15.25
10 - 14 years	1,199	13.16	1,210	12.66	2,409	12.90
15 - 19 years	813	8.92	841	8.80	1,654	8.86
20 - 29 years	1,227	13.46	1,386	14.50	2,613	13.99
30 - 44 years	1,223	13.42	1,517	15.87	2,740	14.67
45 - 64 years	1,096	12.03	1,202	12.57	2,298	12.31
65 years/over	487	5.34	524	5.48	1,011	5.41
All Ages	9,114	100.00	9,561	100.00	18,675	100.00

Table 7-3

Age Group	Sex Ratio	
	1887	1960
Under 1 year	980.4	1,141.4
1 - 4 years	926.8	1,072.7
5 - 9 years	1,029.4	1,043.0
10 - 14 years	687.5	990.9
15 - 19 years	840.6	966.7
20 - 29 years	728.2	885.3
30 - 44 years	966.7	806.2
45 - 64 years	930.6	911.8
65 years/over	1,727.3	929.4
All Ages	901.7	953.2

Table 7-4: Distribution of 1887 Households by Size

Size of Household	Number of Households	Percentage	Cumulative Percentage
1	4	1.54	1.54
2	28	10.81	12.36
3	47	18.15	30.50
4	54	20.85	51.35
5	43	16.60	67.95
6	31	11.97	79.92
7	25	9.65	89.58
8	17	6.56	96.14
9	7	2.70	98.84
10 or more	3	1.16	100.00
Total	259	100.00	

Table 7-5: Distribution of 1887 Households by Type of Head

Type of Head	Number of Households	Percentage
Married Couple	204	79.07
Widower	9	3.49
Widow	33	12.79
Single Male	6	2.33
Single Female	5	1.94
Unspecified Male	1	0.39
Unspecified Female	0	0.00
Total	258	100.00

Table 7-6: Distribution of 1887 Households by Type of Extension

Type of Household	Number	Percentage
Nuclear	177	68.60
Extended 1	16	6.20
Extended 2	65	25.19
Total	258	100.00

Note:

Nuclear: Married couple or widow/er plus children only.

Extended 1: Contains married children, their spouses and/or children, plus the nuclear family.

Extended 2: In addition to married children and spouses, contains extra persons, e.g., servants, other relatives.

Appendix 7-1: Sample Entries from the “Padron General de las Almas”

1. Cabecera 24 (San Gabriele); Casa 14:		
Maria Nitro	53	V ^a
hijos		
Serafina Lopez	41	S ^a
Catalina Lopez	40	S ^a
Andres id	37	C
Juliana id	34	S ^a
Caciano id h ^o de Andres	7	
Primitiva id h ^a de id	5	
Antonia id h ^a de id	3	
Estevan id h ^o de id	1	
2. Cabecera 28 (Sto. Tomas); Casa 21:		
Andres Palmes	59	C
Raymunda Vilela	50	C
Eugenio Palmes	24	S ^o
Maria Lopez	18	C
Juan id	20	
Aniceto id	15	
Mariela id	11	

In the first sample, we can see that Andres, son of Maria was already married and had 4 children. Yet he and his children lived in the same household as his mother (widowed) and 3 sisters. We can also note that the mother married at a very early age—perhaps only 11 years of age. The difference between her age and that of her eldest child, Serafina, is only 12 years.

In the second entry, Eugenio married on the 14th of November, 1887 as shown in the column “observaciones.” He and his wife Maria however, still lived with his parents and brothers.

V^a is short for “viuda,” Spanish for widow; S^a and S^o are short for soltera and soltero, respectively, Spanish for single. Lastly, C is short of “casado” or “casada,” Spanish for married.

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Also see Appendix 4-1 for other references used.