FERTILITY TRANSITION IN SINGAPORE

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FOREWORD

THE world has become increasingly aware over the past several decades that infinite population growth is impossible on this finite planet. More specifically, the developing nations have come to recognize that uncontrolled fertility generating high rates of population increase serves as a major barrier to economic and social development. By 1971, 81 per cent of the population in developing regions was resident in nations with explicit or implicit policies to dampen fertility and population growth.

Family planning programs in the developing nations have had limited success to date. In Asia, apart from Japan of course, only South Korea, Taiwan, Singapore and Hong Kong have experienced significant declines in fertility. Each of these nations has an active family planning program, but in each the decline in the birth rate had begun before the official family planning program had important impact.

In the present world setting in which the developing nations may increase from 2·5 billion in 1970 to perhaps 5·0 billion by the end of the century, in little more than one human generation, it is especially important to gain an understanding of the factors associated with reductions in the birth rate and the role that a family planning program can play in fertility decline. This volume by Chen-Tung Chang constitutes a major contribution toward such an understanding in presenting the results of his research on the experience of Singapore.

This research monograph was originally prepared as a dissertion for the Ph.D. degree in the Department of Sociology at the University of Chicago. It was undertaken, however, by Dr Chang in his capacity as a Research Fellow of the Economic Research Centre of the University of Singapore and Research Demographer of the Population Research Center at the University of Chicago.

The research was conducted jointly under the aegis of the two universities. Professor You Poh Seng and Dr Stephen Yeh of the University of Singapore supervised the research activity *in situ* in Singapore. Professor Philip M. Hauser of the University of Chicago served as a consultant and Chairman of Dr Chang's dissertation committee. Dr Chang, in this revised version of his dissertation, provides ample demonstration of research competence with his skilful and innovative marshalling and analysis of the data.

This study is certain to have impact far beyond its usefulness to Singapore. It is still one of a handful of well-documented national experiences of fertility decline and may help to set a pattern for the many more such studies that are sorely needed.

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It is to my wife, Helen, who with reassuring endurance and understanding shared the strains and stresses associated with writing the thesis, that I dedicate this book with affection and gratitude.

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INTRODUCTION

I SINGAPORE

THE Republic of Singapore, comprising a total area of 225 square miles, is one of the smallest nations on earth. With a population of a little over two million (2,074,507 according to the 1970 census), Singapore has a population density of over 9,000 persons per square mile, one of the highest in the world. The major ethnic group is the Chinese, comprising just a little over three-quarters of the total population. The second largest ethnic group, the Malays, accounts for 15 per cent. Indians and Pakistanis together make up 7 per cent of the population, while the residual 2 per cent is composed of Europeans, Eurasians, and various other minor groups. With immigration under control, a crude birth rate of 23·1 per thousand, and a crude death rate of 5·4 per thousand, in 1972 the population was growing at a rate of 1·8 per cent per year.

Modern Singapore dates from 1819 when Sir Stamford Raffles landed on the island and, on behalf of the British East India Company, reached an agreement with the local Malay chief to establish a trading station there. The first forty years of the new British settlement saw a rapid increase in entrepot trade, and Singapore soon became the centre for the exchange of the products of Europe, India, China, the Malay archipelago and the neighbouring countries of Southeast Asia. The population increased rapidly as a result of the large influx of immigrants from China and the Indian sub-continent. In 1867 the Straits Settlements, which included Singapore, Penang and Malacca, were made a crown colony.

With the opening of the Suez Canal in 1869 and the coming of steamships, Singapore entered a new era of prosperity. Transit trade through Singapore increased from the 1870s onwards. The growth and development of trade greatly increased the immigration from China and India; as a consequence, the population more than doubled from 97,000 in 1871 to 227,000 by the turn of the century, and nearly re-doubled in the following two decades. When the last census in the pre-war period was taken in 1931, a population of 558,000 was enumerated.

After the war, in 1946, when Penang and Malacca joined the Malay States to form the proposed Malay Union, Singapore was retained as a crown colony on the ground that it had "economic and social interests distinct from those of the mainland (Malaya)". The political climate was different this time, the anti-colonial movement reaching a climax in 1959 when, with a new constitution coming into effect, a general election was first held in Singapore. The People's Action Party (PAP) easily won the election and the British colony became internally self-governing with a locally born head of state.

In a referendum held in September 1962, the electorate voted with the PAP Government for the merger of Singapore with Malaya, Sarawak, and Sabah to form the Federation of Malaysia. Singapore became part of the Federation on 16 September 1963 but, the relationship between Singapore and Malaysia becoming strained, there followed a separation in less than two years, and Singapore accordingly became an independent republic on 9 August 1965.

II POPULATION GROWTH AND COMPOSITION

A. Population Growth

When Sir Stamford Raffles first landed on Singapore island in early 1819, the population numbered only about a hundred and fifty; most of them were Malays, but already there were some Chinese among them.[1] The development of the new trading port attracted immediately large numbers of immigrants, both Malays

1 T. J. Newbold, *Political and Statistical Account of the British Settlements in the Straits of Malacca*, London, 1839, I, p. 2, cited in Saw Swee-Hock, *Singapore Population in Transition*, p. 23.

and Chinese, from the nearby territories. In a matter of two years the population increased to over 5,000. Immigrants soon also started to come from China and the Indian sub-continent, and by 1824, when the first population enumeration was conducted, the population was reportedly more than 10,000. The migration influx continued, and from 1824 to 1840 the rate of growth of the population averaged nearly 8 per cent per year (table 1.1). It then slowed down to over 4 per cent per year in the following two decades. There was a dip in the growth rate between 1860 and 1871, but the population was nearly 100,000 at the end of the period.[2] The growth rate soon turned upward and remained at a level of about 3 per cent per year throughout the seventy-six years from 1871 to 1947. In the first decade or so following the end of the Second World War, the annual rate of growth rose again to over 4 per cent, and the population first attained the one-million mark in 1950. There was a fall in the growth rate after 1957, which has continued up to the present. The two-million mark was reached in 1968 and, in 1970, the number of persons enumerated in the census was 2,074,507 (table 1.1).

Owing to the extreme imbalance of the sexes among the population, for a whole century after 1819 deaths had been in excess of births, and the increase of the population depended totally on the large amount of migration influx over the period (table 1.2). It was during the decade from 1921 to 1931 that Singapore first witnessed a surplus of births over deaths. The much improved sex balance by that time and the effective control of tropical diseases such as malaria were undoubtedly the major factors in this new development. The surplus was very slight, however, and net migration remained the dominant source of additions to the population. It was not until 1931-47 that natural increase began to contribute in an important way to the growth of the population. The new government policy in the thirties of encouraging female immigration had resulted in a further improvement of the sex ratio of the population, which in turn brought about a notable increase in its birth rate. There was, moreover, a break in the migration trend during the war years when the Japanese occupied Singapore. Migration was brought under

2 Saw Swee-Hock maintains that the low rate of growth in this period results from the over-enumeration of population in the 1860 census; however, he does not provide evidence in support of his assertion. Saw Swee-Hock, ibid., p. 24.

Table 1.1 POPULATION GROWTH, 1824-1970

Year	Population ('000)	Population Increase ('000)	Annual Growth Rate (per cent)
1824	10·7		
1830	16·6	6·0	7·7
1840	35·4	18·8	7·8
1849	52·9	17·5	4·6
1860	81·7	28·8	4·0
1871	97·1	15·4	1·6
1881	137·7	40·6	3·5
1891	181·6	43·9	2·8
1901	226·8	45·2	2·3
1911	303·3	76·5	2·9
1921	418·4	115·0	3·3
1931	557·7	139·4	2·9
1947	938·1	380·4	3·3
1957	1,445·9	507·8	4·4
1966	1,929·7	483·8	3·2
1970	2,074·5	144·8	1·8

NOTE: Figures for 1860 and before are taken from Saw Swee-Hock, ibid., table 3.1, p.25.

Table 1.2 COMPONENTS OF POPULATION GROWTH, 1881-1970

Period	Population Increase ('000)	Natural Increase ('000)	Net Migrational Increase* ('000)
1881-1891	43·9	−30·6	74·5
1891-1901	45·2	−42·4	87·6
1901-1911	76·5	−59·5	136·0
1911-1921	115·0	−38·0	153·0
1921-1931	139·4	15·9	123·5
1931-1947	380·4	180·1	200·3
1947-1957	507·8	403·9	103·9
1957-1970	628·6	595·1	33·5

NOTE: Figures for pre-1974 periods are taken from Saw Swee-Hock, ibid., table 3.2, p. 26.

*The balance between population increase and natural increase.