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The Impact of Industrialization on
Fertility in Hong Kong: A Demographic,
Social and Economic Analysis

C. Y. Choi and K. C. Chan

SOCIAL RESEARCH CENTRE
THE CHINESE UNIVERSITY
OF HONG KONG

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by

C.Y. Choi (SRC)

&

K.C. Chan (HKFPA)

The Chinese University of Hong Kong
Social Research Centre

The Family Planning
Association of Hong Kong

September, 1973

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Preface

This is part I of a two part Report on "The Impact of Industrialization on Fertility in Hong Kong." Part I is prepared by C.Y. Choi of the Social Research Centre and K.C. Chan of the Hong Kong Family Planning Association. This part concerns mainly with actual fertility behaviour, socio-economic differentials in fertility and, patterns of birth control practices. Part II which concerns mainly with psychological attitudes relating to fertility, is being prepared by Dr. Betty Chung and will be issued separately. Dr. Betty Chung was Research Specialist at the Social Research Centre until December 1972 and is now with the East-West Centre in Hawaii.

Acknowledgements

The idea of initiating this project was first put forward to us by a former Director of the Social Research Centre, Professor J. Nehnevajsa, and Dr. Rance Lee who is the present Director. The original proposal was first drafted by Drs. C.Y. Choi and Betty Chung. Mr. K.C. Chan of the Hong Kong Family Planning Association joined in later and helped revise it. The Asia Foundation provided funds for the survey and we are grateful for this. The Social Research Centre has provided facilities and clerical help and the Hong Kong Family Planning Association has contributed from her own funds to the payments of interviewers. We wish to thank both organizations. The project is a joint effort of the Social Research Centre and the Family Planning Association.

The Department of Census and Statistics of the Hong Kong Government drew the sample for us and this has been an invaluable help. The fieldwork was efficiently administered by Mr. Kwok Zack Kuen, Miss Betty Chan and Miss Anna Lo, all sociology graduates of the Chinese University of Hong Kong. We thank them for their help.

Many have shown interest in this project and have given us assistance: Mrs. V. Browne, Mrs. Peggy Lam, former Chairman and Executive Secretary respectively of the H.K.F.P.A., Dr. Ambrose King of the Social Research Centre, Professors R. Freedman, J.C. Caldwell, Saw Swee Hock, and James Palmore. We wish to acknowledge their help and encouragement. The Computing Centre of the Chinese University has made its facilities available to us and we are grateful.

C.Y. Choi
K.C. Chan

August 1973.

CHAPTER I

HONG KONG UNDER INDUSTRIALIZATION

Hong Kong, often described as the Pearl of the Orient, lies between latitude 22 9' and 22 37', on the south-eastern coast of China. The total area includes Hong Kong Island, Kowloon Peninsula and the New Territories. After various disputes, China ceded Hong Kong Island and Kowloon Peninsula to Britain in 1841 and 1860 respectively, in 1898, the area was extended by a 99-year lease of the New Territories, and these areas form the British Crown Colony of Hong Kong. The total area of the Colony is 398.5 square miles. Topographically, the land is rugged and the soil is thin and barren and less than 10 percent of the land is being farmed. Mineral wealth is negligible and natural resources are poor nor has Hong Kong been the recipient of international aid except for a very small assistance fund for refugees and charitable donations for social welfare. In spite of these limitations, Hong Kong has grown into a highly industrialized city.

Economic development is generally regarded as the process by which income-per-capita rises over a long period of time accompanied by urbanization, changing proportion of labour force engaged in the Primary, Secondary and Tertiary industries, changes in the production and consumption patterns and a sustained rise in the standard of living. A description of these changes in Hong Kong not only would attest its economic achievement but would help to offer at least a partial explanation for the behaviour of its population, socially and demographically. Discussion in this chapter attempts to review certain indicators of Hong Kong's industrialization and to postulate the consequences of such changes which tend to shape and modify the behaviour of the population.

The need for industrialization

Compared with other developing countries, Hong Kong's need for industrialization has been most pressing in the last two decades during which the population has doubled from slightly over 2 million in 1952 to approximately 4 million in 1972. While economic development has been upheld as the solution to poverty, unemployment, unmet aspirations or even disintegration among many countries of the world, industrialization in Hong Kong is the only means of survival. With the extreme shortage of natural resources limiting the expansion of the primary-industries, the sudden and rapid population growth is fatal to this economy with its traditional function of an entreport. This had led many people to believe that the future stability of this Colony depends almost exclusively, as in the past years, on its continued and sustained industrial growth.

Growth indicators

The general approach in classifying countries according to the various stages of industrialization is to observe a) the rural-urban distribution of the population b) the industrial composition of the labour force c) changes in the pattern of external trade and most important of all d) the income-per-capita and its rate of growth. We shall look at Hong Kong's unique situation in more detail.

Urbanization

Hong Kong is not a country with distinct urban and rural sectors. Urbanization which is achieved mainly through rural-urban migration in other countries has never operated to any significant extent in Hong Kong. The growth of the urban population has been achieved by natural increase and immigration, mainly from her huge hinterland, mainland China. In 1961, the

rural population was well below 13 percent of the total population. The 1960's have been a period of rapid urbanization in Hong Kong during which built up areas and satellite towns have occupied areas previously regarded as rural. As a result, the size of the rural population has been further reduced to an insignificant level.

Industrial distribution of the labour force

Economic growth is generally accompanied by industrialization in the sense that an increasing proportion of workers are being transferred from the primary industries to the secondary industries. In Hong Kong, being a city state, both the number and proportion engaged in the primary industries has been small. However, it is still possible to observe the decreasing trend of workers engaged in those primary industries. During the inter-censal period 1961 to 1971, the proportion of workers in these industries declined from 7.3 percent to 4 percent of the total working force. Whereas in the manufacturing industries, the proportion of workers increased from 39.9 percent to 42.8 percent and the number of industrial undertakings rose from 5,600 to 18,700 during the same period.

Table 1.1 Working population by industry, 1961 and 1971

Industry	1961		1971		% increased	
	Male	Female	Male	Female	Male	Female
Manufacturing	319,338	156,182	385,546	291,195	20.7	86.9
Construction	91,821	8,360	137,951	30,822	50.2	268.7
Commerce	109,915	21,364	157,333	51,271	43.1	139.9
Communication	78,423	8,317	105,993	8,729	35.1	4.9
Service	158,517	106,806	198,029	114,144	24.9	6.9
Others*	91,558	40,498	65,137	35,980	-28.8	-11.1
Total	849,572	341,527	1,049,989	532,860	23.6	56.0

* Including primary industries, utilities etc.

The increase in female working population has been more rapid than males. This is specially true in the manufacturing, construction and commercial sectors where female employment greatly increased during the 1961 - 1971 inter-censal period. In 1961, among a total of 475,000 employed in manufacturing industries, only 156,000 or less than 35 percent were females; in 1971, females employed in this sector increase to 292,000 to constitute 40 percent of the total. In a similar way, female employment in the construction, commerce sector also increased rapidly.

In a recent article published by the Government Department of Census and Statistics¹, the increase in economically active population (working population plus job-seekers) was mainly (86%) due to population change; changes in labour force participation rates over the 10 year period has a comparatively

¹ Hong Kong Monthly Digest of Statistics, October 1972 "Special Review: Labour Supply Projections in Hong Kong", p. 64-65.

smaller effect, i.e. 14 percent. However, it was shown clearly that there was an overall increase in female participation rates (except for the age-group 45-54) which compensated for a drop in the male participation rates. This increase was particularly important at younger ages, i.e. these aged 15-19 and 20-24. Postponed marriages and the deferment of having the first child are possible correlates of this trend, although the causes for this phenomenon must be manifold and most probably include the rapid growth of Hong Kong's industries which, for many years have created a large labour demand. Parallel to the growth of the manufacturing industries has been the rapid development of finance, insurance and business services in which the number of workers increased from 43,000 to 71,000, an increase of 65 percent during the 1961-1971 intercensal period. This is a very significant development, reflecting the maturity of Hong Kong's industrialization.

Unemployment rates have always been very low - 1.7 percent in 1961, 3.8 percent in 1966 and 4.4 percent in 1971. During recent years, the number of industrial vacancies registered with the government has been large and usually exceeded the number of job seekers. This is particularly true with jobs suitable for women workers.

Changes in the pattern of export trade and the rise in per-capita income

The development of industrialization can also be discerned by observing the changes in pattern of external trade. For a developing country, its total export would consist mainly of agricultural products. For an entreport, in the absence of a distinct rural sector, its total export would consist mainly of re-exports. This was the case in Hong Kong prior to 1960's. Prior to 1957, exports and re-exports were not separated because the former was negligible. In 1957, re-exports accounted for 60 percent of the total exports; these declined to 25 percent

in 1961 and further to 20 percent in 1971 while total exports have risen from \$HK 3,016 million in 1957 to \$HK 17,164 million in 1971, a nearly sixfold increase. It is thus evident that the decline in the relative importance of Hong Kong's entreport function is the result of its rapid industrialization which has produced an increasing volume of manufactured goods for export to other parts of the world.

The expansion of the manufacturing industries has opened up ample job-opportunities for the population. The increase in the proportion of the economically active population during the last 20 years, coupled with the rise in productivity and re-expansion of its entreport trade, have resulted in a rapid rise in income per-capita as given in Table 1.2.

Table 1.2 Hong Kong's Percapita Income 1951-1971

<u>Year</u>	<u>Per-capita income</u>	<u>Rate of increase</u>
1951	1,575	
1956	1,629	1% per annum
1961	2,114	11% per annum
1966	3,371	10% per annum
1971	5,000	10% per annum

Source: P. 155, Table 5 Hong Kong's Gross Domestic Product, Hong Kong: A Classical Growth Model by T.Y. Cheng, 1969. Per-capita income in 1971 was computed based on the real-wage rate since 1956.

Despite the fact that the above per-capita income statistics were computed from different sources using different methodology, the upward trend is very obvious. There was a very modest increase in the period 1951-1956 with less than 1 percent growth per annum on the average. In the following decade, a significant increase was observed averaging 11 percent per annum. This period

might well be taken as the take-off-stage of Hong Kong's economic growth. During the following period (i.e. 1966 and onwards) income per-capita has continued to rise representing a period of sustained growth. At present, Hong Kong's income per-capita is ranked only second to Japan and is probably the highest among all the developing countries in South-East Asia. Analysis of the time curve of Hong Kong's per-capita income is particularly relevant because of the association between economic growth and demographic transition. It has been postulated that fertility decline would be likely to take place after the population has attained substantial economic progress. The fact that the decline in Hong Kong started to become significant after 1965 tends to support this hypothesis.

Changes consequent on Hong Kong's economic growth

The prosperity of Hong Kong is reflected by the very large increase in Government revenue and the large Government expenditures, particularly on education and medical services. While Government's revenue was trebled from 1961 to 1971, expenditures on education and medical services were more than doubled though the population increased by only 25 percent during the same period. The impact of expanding investment on social overheads is tremendous. The Government's 7-year plan on primary school education in the late 1950's and subsequent expansion of secondary school education has raised the general educational standard of the population. The problem of illiteracy is now confined mainly to the rural and marine population. Improvement in general and vocational education has made available increased numbers of semi-skilled, skilled and professional workers now being absorbed in the expanding industries, especially the latter who were previously recruited abroad. Adoption of new ideas and technologies have induced changes in values and attitudes, production and consumption patterns which are indispensable in a modernizing and expanding economy.

The impact of the expansion in the Medical and Health services has been responsible in general, for the lengthening of life-expectancy through the control and reduction of mortality rates of epidemic diseases, in particular the Maternal and Child Health Programme has improved the general state of health of both mothers and children. Success of this health programme can be demonstrated by the infant, neonatal and mortality rates which have declined to levels comparable to the advanced countries of the world.

Reduction in mortality itself would have caused demographic changes, i.e. the size and age structure of the population, more important is its impact upon fertility. Many writers on population believe that fertility reduction would be impossible without a corresponding reduction in mortality. In Hong Kong significant fertility decline took place after 1965 when the crude death rate was around the level of 5 per thousand. Demographically, Hong Kong is now approaching the final stage of demographic transition in which both low birth and death rates are to be expected.

Changes in the consumption patterns

In a community with wages near the 'subsistence level', it can be expected that in order to satisfy the most pressing needs, an over-whelming proportion of income will be spent on the necessities of life. With rises in the real wage rates, an increasing proportion of income will be expended on the high priced and non-essential goods. The following table provides the weights attached to the different groups of commodities corresponding to the years when data are available.

Table 1.3 Weights of commodities by years

<u>Category</u>	<u>1963-64</u>	<u>1972*</u>
Foodstuff	46.3	40.7
Housing	15.6	17.9
Fuel & Light	3.0	3.9
Alcoholic drinks & Tobacco	3.1	3.9
Clothing & Footwear	6.4	7.9
Durable goods	2.6	2.2
Miscellaneous	4.3	4.6
Transport & Vehicles	3.4	3.4
Services	15.3	15.6
	<u>100.0</u>	<u>100.0</u>

* Weights for 1972 have been adjusted by the price index and these weights can be applied to those whose monthly expenditure falls between *\$100 to \$1,999 unpublished data obtained from the Department of Census and Statistics Hong Kong Government.

From the above table, it appears that there is a tendency for people to spend more on the less vital and more luxurious or non-essential items. The increasing amount of expenditure on fuel and light might well be the result of more extensive use of electrical appliances such as air-conditioners and heaters which are now easily available. The increasing expenditure on alcoholic drink and tobacco reflects a higher consumption of such items in night clubs, bars and restaurants following the prosperity of these industries. More weight is also attached to clothing and foot-wear suggesting that people are now paying increasing attention to their personal appearance. All these have indicated an unambiguous rising trend in the

standard of living since 1963. It is unfortunate that similar weights did not exist prior to 1963, otherwise the above trend might even be more illuminating.

Changes in the pattern of consumption might have important theoretical implications. Before the period of the "take-off", the majority of the people were content, or forced to be content, with the simple ways of life. Luxurious spending was limited to the small minority. Economic growth has brought about a large increase in the middle income group whose increased earnings have enabled them to share some of the luxurious consumption practices of the very rich. In an exposed economy like Hong Kong with easy hire-purchase terms for nearly all consumer durables, the idea of "keeping up with the Jones's" soon began to gain momentum and spread to all social and economic classes. Possession of consumer durables, such as TV, motor cars, air-conditioners are common and are enjoyed even by residents of Low Cost Housing and Resettlement Estates. Once aspiration for a higher standard of living has been aroused, it is pursued with still greater eagerness. Never before were the people in Hong Kong so prone to spending. However, to maintain and further raise the standard of living requires a still higher level of income which is normally secured by harder and/or longer hours of work. This symbolises the riddle of economic growth, i.e. economic growth has made possible a higher level of spending which, according to the Keynesian Theory, stimulates further economic growth. Thus, Hong Kong once a traditional Chinese community in which the virtue of thrift and self-denial were highly valued has now given way to a modernized, high spending community.

Eagerness for pecuniary rewards

Hong Kong from the very beginning has been a commercial city. The majority of immigrants were attracted to this Colony with one thing in common -- for trade and employment. This was at least true before the Second World War though after the War, the 'push' factors have been more political in nature. The rich or the successful businessmen have always been treated with admiration. Indeed, in a "laissez-faire" economy money does not only represent purchasing power but also fame, since social status and prestige go with wealth. In the eyes of the public, the success of an individual is assessed on his earning capacity and how his income is earned is of minor importance. With such a background, it is not difficult to understand the eager pursuit of pecuniary rewards. Overseas Chinese have been lacking in interest in the political arena. Inherited from such a tradition and torn between the two Chinese Governments, the majority of Chinese in Hong Kong are indifferent to politics as evidenced by the very small percentage of eligible citizens who vote for the election of members in the Urban Council. Ambitious men and women, realising that advancement in the political field is limited, would naturally turn their minds in pursuit of monetary rewards to gain recognition. Consequently, human behaviour is gradually dominated mainly by economic motives. People in Hong Kong are materialistic, and practical in the sense that almost every decision is carefully weighted against its economic consequence. It is not uncommon for parents to encourage their children to take up occupations which promise high economic returns, often against their interests and aptitude. Even children at their early days are taught implicitly the magic value of money and trained to seek primarily for monetary rewards when they join the labour force. Such an up-bringing is, of course detrimental to the all-round development of an individual, but such an attitude has also been proved to be a powerful means of accelerating economic growth.

More alarming is the very strong desire to reap short-term economic rewards. Hong Kong is a Colony that exists under very special circumstances. Many feel the pressure of 'borrowed time and borrowed space'. To enjoy the pleasure that wealth can bring does not only require a high level of income but the ability to attain it soon enough. However, a large income cannot normally be secured by most wage or salary earners. The desire to become rich 'overnight' has led to excessive gambling in the past and heavy speculation in the Stock Exchange Market at present. Speculation in the stock market used to be confined to professionals but has now extended to almost all sectors of the community, including housewives and manual workers. The prosperity in the stock market, of course, reflects the advancement of industrialization and commerce and the rise of income which enable those in the middle-income bracket to participate in its activities. High-risk taking in the hope to reap short-term profit certainly plays a very important role and is, in fact, an outstanding feature of the population under industrialization.

Development of competitive attitude

Hong Kong has been well-known as a free port. In the absence of monetary or fiscal policies and protective general tariff, the economy is oriented to keen competition. Starting from the early days of industrialization, local industries have never been protected as they would have in other countries, their survival and development largely depend on the flexibility of the economic system. Under excellent entrepreneurship, the factors of production are being constantly channelled to the type of productions that have higher relative efficiency over their foreign competitors. To stand out triumphant in the midst of intensive competition, both local and abroad, requires a highly competitive labour force trained in their early school days. In Hong Kong, school children are being trained to compete

among themselves. They have to sit for a series of competitive examinations either to be promoted to a higher grade or to gain admission into secondary schools or universities. In many schools, there are rapidly decreasing number of classes for students in the higher grades. To be promoted to a higher grade, students must not only prove they are qualified but also better than their fellow-students. This pyramidic set-up in the education system has been severely criticised by many sociologists and educators, nevertheless, the need for competitive examination still prevails. Nor does keen competition end after school days, it exists among workers of all trades either for promotion or for higher wages. Equally keen competition might also prevail for the same motives in other countries. However, in Hong Kong, it has been intensified by the overwhelming drive for monetary rewards.

Rising status of women

Industrialization has enhanced the female participation rate particularly those in their late teens or early twenties. In the textile, toy, wig and electronic industries which require delicate touch and supple fingers, the need for women workers has grown by leaps and bounds. Of the 564,000 workers in the manufacturing industries, 51 percent are women, but there is still an acute shortage of women workers in industries and domestic service. Never before have women been so much in demand nor have they had such a good chance of finding occupations to suit their personal abilities and interests. With the expansion in the education programme, women nowadays are better educated and they begin to realise their rights and responsibilities. This has led to the passing of the Marriage Reform Bill followed by the Inheritance Bill, the former abolishes concubinage once and for all and the latter provides the Chinese women the right to inheritance. Conditions of service and pay though still unequal now in the Civil Service will be made equal by 1975.

All these have raised the status of women in general. Married women are no longer the helpless dependents of their husbands, who used to be the sole decision maker in the Chinese traditional family. Previously, the role between husband and wife was very distinct, the principal functions of a traditional women were limited to cooking, educating and taking care of the children at home. Now, they are beginning to participate in economic activities and to help support their families; they earn and spend and indeed have become a major economic force.

Demographically, since it is increasingly possible to attain economic independence through employment in factories or elsewhere, the desire to get married at relatively younger ages as a means of economic security has been correspondingly discouraged. Some girls at least no longer consider ultimately getting married as an inevitable 'must'. This probably explains the rising age at first marriage in the last 1 or 2 decades. For the last ten years the rising age at first marriage has been a very important factor in the reduction of fertility rates especially in the younger age groups.

The rising cost of raising children

The rising status of the female population is accompanied by the increasing cost of raising children. In Hong Kong, where salary scales are largely dependent on academic qualifications, the need to provide their children with the highest possible education is readily recognised. This alone is a source of both financial and emotional strain especially for those who take pride in their children's academic achievements. The causes for their anxieties are many. Parents start to worry when the children fail in any one of the school examinations nor will their minds be eased if the children work or study too hard at the expense of their health which often is a necessity at the current education system.

For those who are less fortunate in the competitive examinations and subsequently denied the opportunities to go for higher education, the situation is even worst if the children have not come to working ages. The fear that their children will become juvenile delinquents upon falling into bad companies has exerted a constant emotional strain upon the parents. In fact, future prospects in terms of education and job-opportunities for their children have been the main concern of the parents in the last two decades and they have never been so acute.

Young children are to be carefully looked after. The increasing shortage of domestic servants has prevented many women from participating in economic activities which rapid industrialization has opened up for them. To the more career-minded women, nursing homes have been their possible alternatives as evidenced by the prosperity of this 'industry' in recent years. However, the price of entrusting the care of their children to these commercial set-ups is exorbitant. Consequently, out of the average income of a working wife, not much will be left after this and other marginal charges have been met. In addition to providing the children with the basic necessities of life, the additional cost expended on taking proper care of them is tremendous. Hence, decision will have to be made by many women whether having or not having additional children and subsequently whether working or not working. Assuming these decisions are rational, rising costs, either mental or financial, is bound to affect adversely the attitude towards having additional children. The desire to become economic independent, if women prefer that way, coupled with the rising costs of raising children have probably led to the wide-spread use of contraceptive methods which undoubtedly has depressed fertility to the current level.

Problems of industrialization

Hong Kong is committed to industrialization and expansion of trade and is inevitably accompanied by urbanization demographically defined as agglomeration of population living in the highly urbanized place. Urbanization has been regarded as being both a necessary condition for and a consequence of development. However, urbanization is believed to be a problem and there is no exception for Hong Kong. The growth of the already over-crowded metropolitan region presents a scale of problems which specially manifest themselves in housing shortage, traffic congestions and deterioration of human relationship.

To house a rapidly growing population, the Government has long been aware that the traditional approaches of leaving housing development largely to market forces are inadequate. The establishment of both Resettlement and Low Cost Housing Estates though have successfully accommodated about 1/3 of the total population, has still left much of the demand unmet. Rent in the private sector has risen rapidly since 1967 and forced the Government to put up rent-control in 1970. Even then the prevailing chronic poor housing standard is not comparable with the rapidly rising living standard and the very large proportion of income going for rental payments.

Equally acute is the problem of transportation. With rising income, the inadequacy of the development in public transportation has pushed up the demand for private vehicles which are now afforded by the majority of the middle income bracket. It appears that a vicious circle has been formed, i.e. excessive number of privately owned vehicles has hindered the development of public transportation given the limitation of land for road construction and this, in turn, has made the possession of private vehicles a necessity. The opening of the Cross-Harbour Tunnel in 1972 has mitigated the problem to a certain extent. However, the problem is in no way solved in

the absence of a practical long-term transportation policy. Bottle necks and congestions are still frequent and become unbearable during rush hours. Recently, plans for the Sub-Way Transportation System have been made and approved by the Legislative Council but the whole System will not be operated in full swing until early 1980's. Until then, traffic conditions will probably remain chaotic.

Many believe that there is a complex association between human relationship and economic growth. As long as people are too keen in pursuit of pecuniary rewards, they tend to overlook other aspects of human life such as courtesy, brotherhood and love. Indeed, in a highly commercialized city like Hong Kong, the traditional stronghold among neighbourhood has been fundamentally shaken; People in Hong Kong are criticized as being indifferent to surroundings and occurrences that are not their direct concern. The former is evidenced by the pollution of public places as roads, parks and pavements while personal cleanliness and tidiness are generally observed. The latter is exemplified by the reluctance to render help in cases of emergencies, like fire and robbery. On the other hand, being tempted by a variety of luxurious spending of those who are more successful in life, many resort to violence, theft and robbery. In general, the increasing incidences of violence and crimes in the last decade might serve as a reflection of the deterioration of human relationship and could have been attributed by rapid industrialization in Hong Kong.

CHAPTER II

POPULATION AND FERTILITY

Hong Kong's population

Very much alike that of economic and social development, the population trend in Hong Kong since the War has been one of rapid growth. This growth was initially the result of large scale refugee migration from China since the War until around 1952 and then the additions through the excess of births over deaths associated with relatively high fertility and low mortality in the mid-1950's and 1960's. At the same time, the population of Hong Kong has gradually become more settled.

Before the War, Hong Kong's population had been characterized by its transitional nature. The greater part of the population came to Hong Kong mainly for trade and employment without the aim of settling permanently. This included both the Chinese and Westerners. Many of those who came from China did not bring their wives and families, but commuted to and from their places of origin. Before the quota system of migration control was strictly enforced in the early 1960's (although established in 1950), there was little restriction of movements between China and Hong Kong¹. This, together with the often turbulent conditions in China and the greater job opportunities in Hong Kong, resulted in a constant flow of migrants from China. Hong Kong before and immediately after the War has been essentially a "migrant metropolis".

¹ The Treaty of Bogue, 1843, stipulated free movement of Chinese into Hong Kong. Eudocott and A. Hinton, Fragrant Harbour, Oxford University Press, 1962, p. 95.

Pre-War censuses showed extremely high sex-ratios, a characteristic of most migrant-receiving populations, indicating that there had been many more males than females. This had been particularly acute within working ages. For example, for those aged 15-29, there were more than two times males than females in 1911 and 1921. Even to-day in 1971, for those aged 30 to 44, the sex-ratio was still high -- 1,142 males to 1,000 females.

Table 2.1 Numbers, sex-ratios and places of birth of Hong Kong's population, 1911-1971

Census Years	Population	Sex-ratio*	Percentage Hong Kong Born
1911	456,740	1844	33.0
1921	625,170	1580	27.2
1931	840,470	1348	32.8
1961	3,133,130	1056	47.7
1966**	3,716,400	1029	53.8
1971	3,948,180	1033	56.0

* Number of Males per 1,000 females

** One percent Sample-Census

The proportion of population born in Hong Kong was also low and remained so even after the War. The 1971 census counted only 55 percent of the population locally born, although it is clear from Table 2.1 that the migrant features have become less distinct and the sex-ratio dropped from a high of 1,844 in 1911 to the more normal 1,033 in 1971. The proportion Hong Kong born also increased, though very gradually, from around 30 percent to the present 56 percent.

The 30 year period between 1931 and 1961 was one of political and economic turmoil for both China and Hong Kong -- the Second World War which began in 1937 for China, and the 1949 Communist Victory over the Nationalists. Both incidents brought large numbers of refugees into Hong Kong. The population in 1941 was estimated to be 1,640,000. This estimate was made by the Hong Kong Air Raid wardens. Late in 1941, Japan invaded Hong Kong and subsequently occupied both Kowloon and Hong Kong Island. The Japanese occupation caused difficulties in trade and commerce and eventually made food supplies to Hong Kong erratic. Large numbers of people went voluntarily or were deported by the Japanese Authority to China or to near-by Macao; the population estimated at the end of the War in 1945 was around 500,000, less than one-third the population in 1941.

The post-War period saw tremendous influx of migrants initially consisting mainly of returnees who went to China during the War, and later of refugees who fled the Communist-Nationalist War since 1947. The number of refugee-immigrants cannot be exactly determined; but that it was over a million and a half is very probable. A United Nations Report by E. Hambro¹ estimated a number of 1,285,000 refugees between 1945 and 1949; and E. Szccepanik estimated a further 130,000 for 1950 and 70,000 fro 1951². In 1951, Hong Kong's population was estimated to be 2.0 million, and in 1956, it was estimated at 2.6 million³ an increase of more than 2 million since the end of the Second World War.

¹ E. Hambro, The Problems of Chinese Refugees in Hong Kong (Leyden, 1955) p. 148.

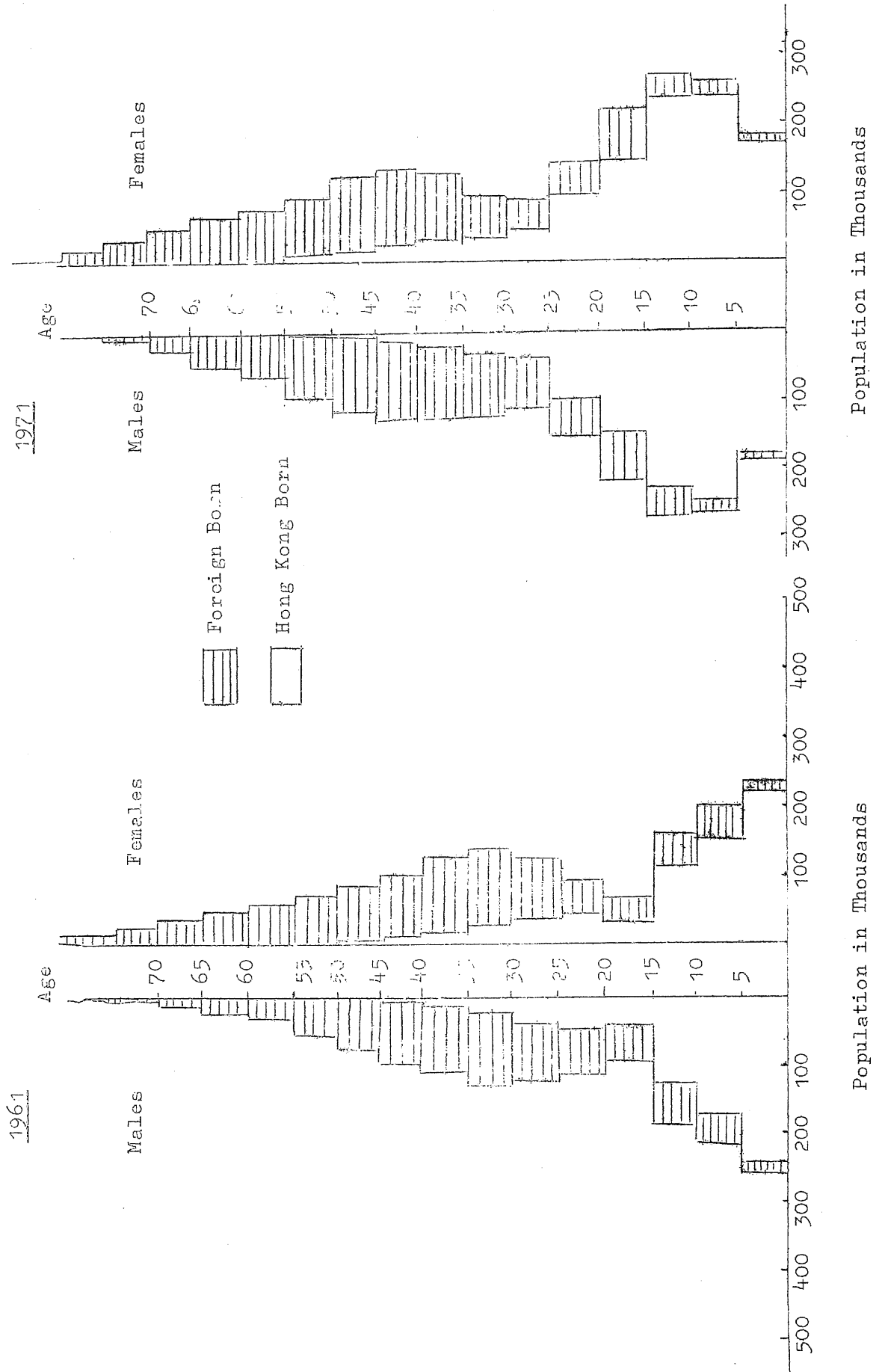
² E. Szccepanik, The Economic Growth of Hong Kong, (London, 1958), p. 154.

³ Hong Kong Government Annual Report, 1956.

The major difference between pre-War immigrants and post-War immigrants is that the later have come to settle and have not commuted to and from China as did the pre-War immigrants. The political surroundings had become inducive to settling permanently in Hong Kong.

Partly because of the migration history and partly because of a high level of fertility experienced during the 1950s, the first post-War census in 1961 showed a very irregular age structure.

Figure 1: Age Structure of Hong Kong's Population



In 1961, Hong Kong's population was 3.1 million, 40.7 percent of whom were under 15 years of age. This is partly the result of the relatively large number of births in the 1950s and partly the additions through immigration of whole families which included children. The yearly number of births during the 1950's had been rather large; and this was attained in spite of the difficult economic situation at that time. Almost all of those aged 5 and under (95%) were born in Hong Kong, and a large percentage of those over 5 years old but under 15 were born locally. The main feature of Hong Kong's population age-structure is of course the shortage of youths aged 15 - 24 in 1961 who became 25 - 34 in 1971. In 1971, the size of the 25 - 34 age-group was 406,000 which was 10.3 percent of the total population. The age-groups adjacent to this were much larger in size, as shown in the age pyramids above. This structure is neither representative of a developing country of consistently high fertility and mortality, nor representative of a developed industrialized country of low fertility and mortality. It is difficult to pin-point exactly the causes which contributed to this irregularity, but several factors were clearly of concern. Firstly, the Second World War almost certainly caused a sharp decline of births and a rise in infant mortality both in Hong Kong and in China. Secondly, the children of those who settled in Hong Kong after the War had not grown to these ages, and thirdly, migration might have been selective and the bulk of the migrants were of higher ages. Whatever the causes, the irregularity in the age-structure of Hong Kong's population has important and far reaching consequences, socially, economically as well as demographically. The demographic consequence will be discussed at a later section.

In 1971, the basic age-structure of the population is similar to the 1961 structure, except that the indented part of the age pyramid has now moved up by 10 years, and the population size has grown to nearly 4 million, a 25.8 percent increase over 1961. But the population is much more settled than before; 56

percent of the total population was born in Hong Kong. Among those born outside, 67 percent are in the age-group 35 and above. The sex-ratio has declined and although there are still considerable migration from China. These are mainly illegal and have been estimated to be around 10,000 a year¹.

Following the post-War period of rapid modernization, the educational level of the Hong Kong population has considerably risen.

Primary school education is now provided free in government schools since 1971, and the maximum use of school buildings -- separately for morning and afternoon schools -- enables the provision of enough school places for the children. Almost all children between the ages 6 and 12 are in schools and the proportion of population aged 10-14 who has received no or less than primary school education is only 1.9 percent. Illiteracy can be expected to vanish when these children grow to adulthood.

Secondary education has also been expanded. The 1971 census shows that 19.8 percent of population over 15 years of age had at least some secondary school education as against 13.1 percent in 1961. If only the age group 20-24 is taken into consideration, the difference is even sharper, 53.6 percent in 1971 against 40.8 percent in 1961, showing that there had been a considerable rise in the level of education.

At present, there are 349 secondary schools in Hong Kong and there is also a government plan to greatly accelerate the expansion of secondary education in the next ten years so that every child of suitable age can be accommodated in junior secondary schools. Consequently, the level of literacy rose from 74.6 percent in 1961, to 78.3 percent in 1966. The percentage of persons who could speak English also increased from less than 10 percent in 1961 to 20 percent in 1966 and to 25.4 percent in 1971.

Fertility patterns and trends

Most writings on Hong Kong's population trends have noted two important characteristics: firstly, the rapidly declining crude birth rate and secondly, the very irregular age-structure which contributed partly to this decline. To a varying degree, both of these characteristics can be found in the populations of many industrializing nations in Asia -- Singapore, S. Korea, Taiwan, Malaysia. But the rapidity of fertility decline and the degree of irregularity of the population structure are perhaps rather exceptional.

Hong Kong's birth rate was high between 35 and 40 per thousand of population before 1960. The highest was 37 per thousand in 1956 and 1958. Thereafter it declined to 35 in 1960, 28.1 in 1965 and 20.0 in 1970. In 1972, it was 19.7. The total number of births each year was usually over 10,000 in 1950's and early sixties but declining rapidly to about 70,000 per year during the last few years. From 1961 to 1971, the crude birth rate declined 43 percent. Of this decline, the Hong Kong Government Statistician estimated that 21 percent was due to changes in the age distribution and in the proportion of women who were married.¹ In a series of important articles, R. Freedman, K.C. Chan and others have shown that real change in fertility for the period 1961 to 1965 accounted for only 10 percent of the decline in the crude birth rate while for the period 1965 to 1968, around 90 percent of the decline in the crude rate was true decline in fertility.²

¹ Hong Kong Government, Monthly Digest of Statistics (July, 1972), p. 64.

² "Recent Fertility Declines in Hong Kong - the Role of the Changing Age Structure", Population Studies, July 1968; "Hong Kong: The Continuing Fertility Decline, 1967", Studies in Family Planning, August 1969; "Hong Kong's Fertility Decline, 1961-1968", Population Index, January-March, 1970.

It is certainly true that the total number of females at child-bearing ages actually declined between 1961 and 1966. In 1961, the number of married females aged 19-39 was 361,074, and 1966 this number was 347,730. For the most fertile ages, i.e. 25-29, the decline in numbers is even more noticeable — from 97,433 in 1961 to 80,200 in 1966.

Mainly because of this fluctuation in the proportion of females in these child-bearing age-groups, the value of the crude birth rate as an indicator of true fertility is rather limited. A better indicator is the age-specific fertility rates.

Table 2.2 Age-specific fertility rates for Hong Kong 1961, 1966 and 1968-1971*, and Japan 1970**

Age groups	1961	1966	1968	1969	1970	1971	Japan 1970
15 - 19	47	29	27	17.4	18.2	17.0	4.5
20 - 24	238	213	158	172.1	155.1	145.6	96.6
25 - 29	313	291	234	242.8	233.1	243.8	210.2
30 - 34	231	203	170	178.2	168.6	162.5	85.8
35 - 39	139	111	102	92.8	87.0	83.6	19.8
40 - 44	57	42	36	37.4	30.9	28.4	2.7
45 - 49	9	3	2	5.9	4.7	3.6	0.2

* Source: "Special Review" Hong Kong Monthly Digest of Statistics, July 1972. 1961 and 1966 and 1968 figures are R. Freedman's and HKFPA estimates.

** Country Statement: Japan, presented to 2nd Asian Population Conference (ECAFE) in Tokyo, November 1972.

It can be seen from Table 2.2 that there was a rather general fertility decline in all age groups for the 10 year period. The decline in the younger ages (i.e. those aged 15-19, and 20-24) and in the older ages (i.e. those aged 35 and above) was particularly important. The fertility of those aged 15-19 declined 63.9 percent and that of those aged 45-49 declined 60.0 percent. The age group which had the smallest decline was those aged 25-29. This is particularly interesting because there had been in fact, a slight increase in the rate for this group between 1968 and 1971, from 234 per 1,000 to 243.8 per thousand. This exception to an otherwise general decline is significant because the group aged 25-29 is the most fertile age group in Hong Kong.

Comparing the Hong Kong rates with Japan's experience in 1970 shows that Hong Kong's rates at the older ages were rather high — for those aged 30-34, Hong Kong's rate of 168.6 is almost two times Japan's 85.8, and the rates for the groups over 34 years of ages were also much higher for Hong Kong.

The Net Reproduction Rate for Hong Kong in 1971 was high, at 1.63, and that for Japan in 1970 was low at 1.01. This comparison with Japan is meaningful because Japan is the only Asian country which has attained and sustained for a long period since the late 1950s a net reproduction rate (NRR) of near replacement level, i.e. 1.0. Her fertility experience, including such factors as delay in marriages and abortion etc., differs very much from those of Western nations and therefore may serve as a reference for Asian countries.

Statistics obtained from Government sources on live births by birth order also reveal the pattern that the large family continues to be a reality.

Table 2.3 Percentage distribution of live births by birth order 1969-1971

Birth Order	1969	1970	1971
1st	25.2	26.5	26.4
2nd	21.2	22.3	23.5
3rd	15.6	16.1	17.2
4th	12.1	11.9	11.7
5th	9.0	8.2	8.0
6th & over	16.9	15.0	13.2
Total Births	79,329	77,465	76,818

Sources: Hong Kong Government Department of Census and Statistics, in Hong Kong Monthly Digest of Statistics, July 1972, Special Review, page 65.

Although declining, the proportions of births of the fifth order and above have been continuously high compared to most developed countries. It can be expected that most of these high-order births would be contributed by mothers of older age groups. An analysis of the age of mother by birth order for 1970 births showed that women aged between 30 and 39 were responsible for a substantial number of births and, in particular, that a large number of these births were of a fourth child and above.¹

¹ Analysis done by Hong Kong Government Department of Census and Statistics in Hong Kong Monthly Digest of Statistics, July 1971 p. 65.

The 1971 census throws further light on the age-pattern of child-bearing. Table 2.3 below shows that the proportion of ever-married women who had 5 or more children born increased as age increased. This is necessary so for the younger ones who still have to pass their child-bearing ages, but if those who have more or less completed their child-bearing span were compared, it becomes clear that older women are still bearing relatively large number of births.

Table 2.4 Proportion of ever-married women who had more than 5 children born by age groups, 1971

Age group	% who had more than 5 children born
25 - 29	1.2
30 - 34	8.0
35 - 39	19.8
40 - 44	29.9
45 - 49	29.4
50 - 54	22.6

Source: 1971 Census, Basic Tables, p. 9, Table 4

Judging from the fertility pattern described above, it is clear that although significant decline occurred since the 1960s, fertility level of the older women is still comparatively high. This means that there is still inherent in this fertility pattern a potential for rapid growth until these high fertility groups complete their child-bearing ages.

Social change and fertility decline

Several important questions will naturally be raised relating to the above described fertility decline. What are the factors, be they social, economic or political, which many account for this decline? Why have the older age groups responded to a lesser degree to the changing social and economic environment? What are the intervening variables between fertility patterns and socio-economic changes which should be considered in this connection?

Several scholars have attempted to tackle the above problems. Freedman and his associates have indicated, though implicitly, that apart from the demographic factors relating to the age structure, there are 2 other major factors which might have caused this decline. First is the rapid industrialization and modernization of Hong Kong which creates an environment inducive to the planning of families -- this includes the deferment of marriages, the acceptance of contraception and sterilization, and possibly also abortion. The second important factor is the activities of the Hong Kong Family Planning Association which has promoted the idea of family planning and in providing the necessary medical and clinical help to families who desired to practice birth control.

It is almost certain that modernization is an important factor favouring fertility decline. The problem is to identify the specific aspects in this modernization process which contributed significantly to the fertility decline experienced in Hong Kong. A survey called Urban Family Life Survey which contained some relevant information was done in 1967 by the then Social Survey Research Centre of the Chinese University of Hong Kong (Director: Robert E. Mitchell) and the survey showed that the rise in education level had some effect on age at marriage, the type of marriages and the willingness to accept contraception. It was suggested but not shown in the survey that changes

in family structure was probably also significant in contributing to the fertility decline.¹

Important as it is, the survey was done under an extremely difficult situation. The timing was the autumn of 1967 when large scale riots and disturbances occurred in Hong Kong.² Nevertheless, the survey confirmed the Freedman study that the fertility decline was real and that it was very likely that this would continue.³

The effect of modernization on fertility is very complex. The Mitchell survey has shown many contradictory and counter trends which need further study and analysis.⁴ Several important studies have already shown that the Hong Kong family has moved towards the nuclear type and that the pattern of power relations between husband and wife has also changed from that of paternalistic to become more equalitarian.⁵ Presumably, the social and economic foundations of traditional paternalistic Chinese family has so changed that a new type of family structure is emerging. We have noted earlier the rapid increase of female employment and the rise in education of Hong Kong's population. Both of these factors would have some impact, causing

¹ R.S. Mitchell, "Changes in Fertility Rates and Family Size in Response to Changes in Age at Marriage, the Trend Away from Arranged Marriages, and Increasing Urbanization", *Population Studies*, Vol. 25, No. 3, Nov. 1971, pp. 481-489.

² R.E. Mitchell, Family Life in Urban Hong Kong, (2 volumes), Vol. 1, The Orient Cultural Service, Taipei, 1972. p. 8.

³ Ibid., p. 268.

⁴ R.E. Mitchell, "Changes in Fertility Rates and Family Size etc." op. cit. p. 489.

⁵ F.M. Wong, "Modern Ideology, Industrialization, and Conjugalism: The Hong Kong Case", International Journal of Sociology of the Family, Vol. 2, No. 2, Sept. 1972, pp. 139-150. Also, F.M. Wong, Maternal Employment and Family Task-Power Differentiation among Lower Income Chinese Families, Social Research Centre, Chinese University of Hong Kong, 1972. p.15-18.

changes in the traditional family. Just exactly how this change of family structure affects the decision concerning family planning is not yet clear; it is hoped that our survey would throw some light onto the problem.

The second of Freedman's problems concerns the role of the Family Planning Association. That the Association played an important role in the promotion of family planning seem to be beyond doubt, but the question of how important this role was became the local point of a controversy presented in a recent article.¹ The authors of this article felt that it was quite possible for fertility to decline as it did without the Family Planning Association because in the absence of the facilities provided by the Association, those very same couples probably would have found acceptable alternative methods of contraception.² Wat and Hodge may probably be correct in claiming that for a rapidly developing society and economy such as Hong Kong, it is likely that fertility will eventually decline; indeed, the success of any organized family planning program depends on a favourable environment which firstly permits its very existence and secondly responds positively to its promotion. Given such favourable environment, a well-planned, well-organized promotion campaign may have profound effects in the timing and the speed of an incipient decline in fertility.

¹ Sui-Ying Wat and R.W. Hodge, "Social and Economic Factors in Hong Kong's Fertility Decline", Population Studies, Vol. 26, No. 3, November 1972, pp. 455-464.

² Ibid, p. 464.

CHAPTER III

THE RESEARCH PROBLEM

This is a study of fertility in Hong Kong. The emphasis will be placed upon the possible effects of rapid industrialization on those aspects of Hong Kong society which have direct bearing on marriage and family planning — namely, family organization and decision-making in the family, values and orientation in relation to child birth and marriage, and the cost and benefits of bringing up children.

The study of fertility is important because rapid fertility decline occurred almost immediately after Hong Kong experienced a most spectacular industrial growth during the last two decades. It is almost certain that much of the fertility decline has been a result of this rapid industrialization. In view of this industrial growth, it is likely that certain aspects of Hong Kong society and subsequently, certain attitudes, values, and perceptions of people of Hong Kong have been influenced. These possible effects of rapid industrialization may have direct implication on people's decision regarding having children, and the adoption of family planning. While it is almost impossible to assess the effect of industrialization on fertility behaviour directly, it may be possible to do so indirectly by focussing on the relationships between values, attitudes and perceptions and fertility behaviour. It is, therefore, opportune to examine more deeply the intervening factors of the relationship between industrialization and fertility decline to show how different family systems, attitudes, and values resulted from the differential effect of industrialization, influence attitudes toward having children and decisions to control birth.

The reason for suspecting a differential effect of industrialization on the fertility behaviour of women in Hong Kong is the presence of a seeming contradiction between the low birth rate of Hong Kong and the high percentage of high parity births.

This seeming contradiction, however, can be explained if we consider Hong Kong as a highly fertile society being suddenly exposed to the influence of industrialization, urbanization and the spread of education. This quick and sudden exposure elicited a reaction from part of the population, and this reaction was reflected in a sudden drop of fertility in Hong Kong. However, the same exposure elicited almost no reaction from a different sector of the population which continued having high parity births. The part of the population which reacted positively consists mainly of younger people, newly married, whereas the sector which did not react consists mainly of older people, the less educated, and possibly from the poorer section of the Hong Kong population. The fact that younger women have low fertility can be demonstrated by statistics from the Hong Kong Family Planning Association which showed that, since 1967, a large proportion of their clients have belonged to the younger age groups which have low parity. In other words, it is contended in this study, that the impact of industrialization has not been equally felt by the totality of Hong Kong society. It is the purpose of this study to examine attitudes, values, and perceptions resulting from industrialization and how they are related to fertility behaviour.

Hong Kong's birth rate is at present 19.7 per 1,000 population; if this level is to be maintained or lowered in the future, special efforts have to be made in the family planning programme to recruit more acceptors, and to educate and motivate people to have fewer children. However, such an effort requires knowledge and understanding of people's motivation for having and not having children. It is therefore one of the aims of this study to discover these motivation and other factors which determine the adoption or rejection of family planning.

Definition of major variables

Three categories of variables will be studied in this project, namely: psychological variables, socio-economic background variables, and fertility variables.

1. Fertility variables

Two types of variables are used to measure fertility behaviour. The first is the variables concerning the adoption of birth control methods. The second is variables related to actual fertility which is affected by the first type of variables.

a) Fertility measures

Since the current contraceptive behaviour depends in part on past fertility experiences, it is important to have some knowledge of the respondents' fertility history. The main measures of past fertility used in this study are number of pregnancies, number of children ever-born or live births, and number of living children. Since these measures are dependent upon age and duration of marriage, these are also included and taken into consideration.

b) Adoption of contraceptive measure

2. Psychological variables¹

Broadly speaking, four groups of psychological variables are identified in the study and are examined to determine the extent to which they affect birth control and fertility behaviour. The four groups of psychological variables are:

- a) Husband-wife interaction
- b) Perceived costs and satisfactions of children
- c) Attitude towards having children
- d) Attitude towards fatalism

Husband-wife interaction refers to two aspects of the process of interaction between the spouses. Firstly, it refers to the communication flow between a husband and a wife, i.e., the extent to which a husband and a wife discuss various matters which concern the wife or the husband or the whole family. Respondents are divided into three groups, high communicators

¹ The variables and the relationships between them are dealt with in Part II of this study, B. Chung's forthcoming report.

who discuss frequently most matters with their husbands, medium communicators who discuss certain matters with their husbands, and low communicators who seldom discuss anything with their husbands.

Secondly, it refers to the decision-making power structure in the family. It is concerned with whether it is the husband or the wife or both who make decisions regarding individual and family matters. Again, respondents are divided into three groups, those whose husbands make almost all of the decisions, those who make most of the decisions, and those who make little or joint decisions with their wives. The fertility and family planning behaviour of these various groups were compared and contrasted.

Assuming the decision to have a certain number of children and the decision to adopt contraceptive practices is a rational one, it is probable that such a decision is determined and affected by the individual's perception of the costs and benefits of having children rather than the actual costs and benefits. Therefore, in this study, only the perceived costs and satisfactions of children were identified.

The perceived costs and satisfactions of children are further divided into two broad categories, emotional and economic. Emotional costs and satisfactions of children are identified separately as the perceived utility and emotional satisfactions of having children and the perceived emotional sacrifices made for children. Similarly, economic benefits and costs of children are identified as the perceived financial help from children before and during old age and the perceived economic costs of raising children.

The last two groups of psychological variables are attitudes related to fertility and family planning behaviour directly or indirectly. It is assumed in this study that a person's attitudes determine hers or his readiness and disposi-

tions to act in a certain way. It is believed that certain attitudes of a woman influences and affects her dispositions to birth control behaviour and thus her fertility. The two groups of attitudes are identified as attitudes towards family planning, the towards having children and attitudes towards fatalism.

Attitudes towards family planning can be defined as dispositions to fertility limitation. These attitudes would certainly influence or affect birth control practice and fertility behaviour. Direct indicators of these attitudes used in the present study are approval or disapproval of both contraception and abortion.

Attitudes towards having children involve those towards different ideals of having children such as the traditional Chinese ideal of a big family, the importance of sons, the notion of children as security at old age and the experience of bearing children. It is assumed that agreement or disagreement with statements expressing such attitudes would reflect upon the respondent's disposition towards having children.

Attitudes towards fatalism are defined as psychological orientations towards the possibility of planning for the future. Negative orientations would imply a fatalistic attitude whereas positive orientations would imply a disposition towards planning behaviour. It is believed that a disposition towards planning behaviour in general would also entail a disposition to planning a family. It can thus be hypothesized that this attitude towards fatalism would affect birth control practices.

3. Socio-economic background variables

It is also the purpose of this study to examine the influence of background variables on the dispositions to family limitation. Background variables such as the following are relevant: age, educational level, place of origin, religion, place of growth, structure of family, age at marriage, income, occupation, exposure to mass media, modern pattern of consumption and so forth.

Conceptual framework and major hypotheses

In the previous section the major variables of this study were presented. The aim of this study is to examine the interrelationships among the variables. It is the general assumption of this study that fertility and family planning behaviour is determined by the psychological variables, socio-economic background variables, and the interactions of these variables.

Under the three major headings, some selected variables were conceptualized: individual social background such as age, educational level, and religion are categorized under the heading of socio-economic background variables: husband-wife interaction, perceived costs and satisfactions of children, attitudes re-family planning, attitudes re-having children, and attitudes re-fatalism constitute the psychological variables; and fertility variables include birth control behaviour and actual fertility. Figure 3.1 presents a schematic diagram of the variables conceived in this study. Arrows connecting boxes indicate possible causal relationships among variables hypothesized in the study. These relationships will be elaborated on and discussed in the following sections.

1. Psychological variables and fertility variables

The study is designed to test the hypotheses that attitudes favourable toward a small sized family, attitudes favourable toward family planning, non-fatalism, high perceived costs and low perceived satisfactions of children, frequent husband-wife communication and egalitarianism would be positively correlated with birth control behaviour. Since it is easily conceivable that birth control behaviour influences actual fertility, it can also be hypothesized that the above mentioned psychological variables would be positively correlated with actual fertility.

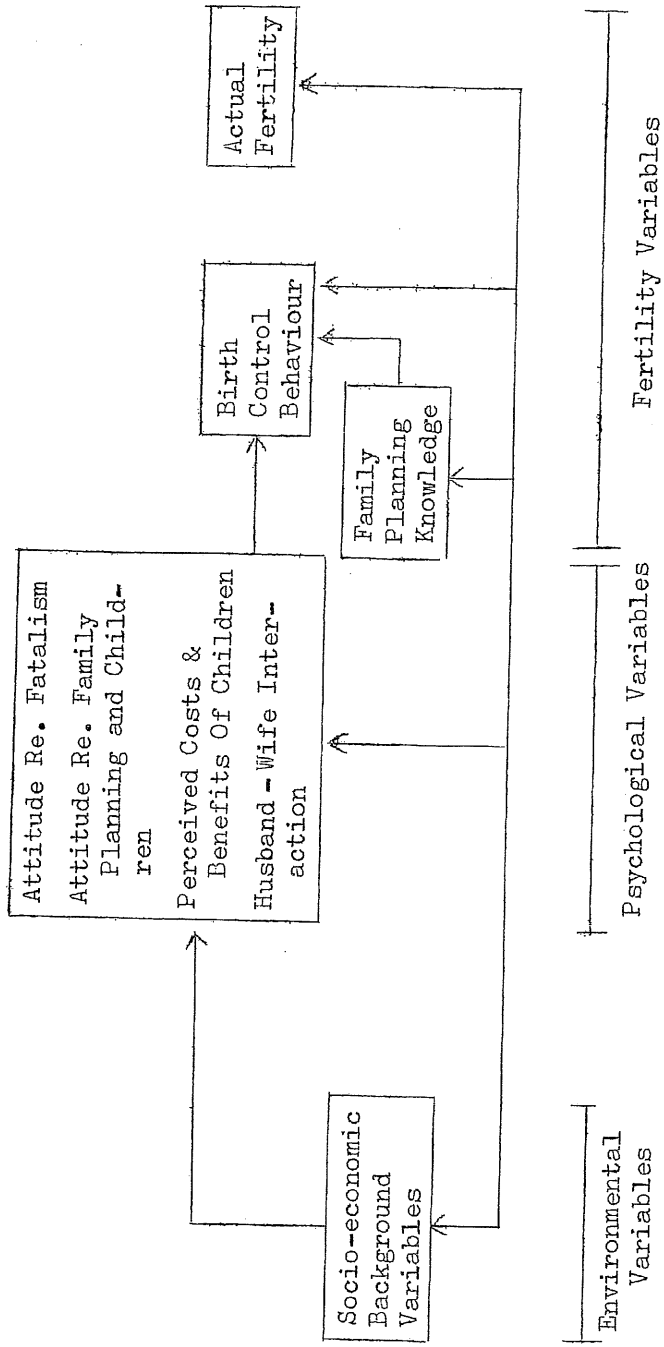


Figure 3.1
Schematic Diagram of Background and Psychological Variables Affecting Fertility Behaviour

2. Socio-economic variables and fertility and family planning variables

It is also the interest of this study to examine how socio-economic variables affect fertility behaviour directly or indirectly through intervening psychological variables. Past studies elsewhere have repeatedly shown that there is a strong relationship between socio-economic variables and fertility behaviour. It is the convention of this study that this relationship also holds true for women in Hong Kong.

It is hypothesized that urban background, high socio-economic status, modern consumption practices, and exposure to mass media are positively correlated with family limitation. Also, it is contended that women who believe in a religion with which supports a small family norm, who are younger, and who live in a nuclear family would be more likely to practise birth control and to have a small number of children.

3. Socio-economic background variables and psychological variables

A woman's psychological characteristics are determined to a large extent by her socio-economic background. Since one of the aims of this study is to increase our understanding of the determinants of fertility, an examination of the relationships between socio-economic variables and psychological variables will certainly reveal how psychological orientations act as intervening factors linking socio-economic background and birth control behaviour.

CHAPTER IV

METHODOLOGY (INCLUDING A
DESCRIPTION OF THE SAMPLE)The questionnaire

Having formulated the hypotheses explaining the observed fertility decline, experimental questionnaires were developed based on our conceptional framework among the 3 investigators of this project. (Research problems were dealt with in the previous chapter) They were designed to collect data on

- a. Household composition
- b. Background characteristics of husband and wife
- c. Marriage and pregnancy history
- d. Breastfeeding practices
- e. Fecundability
- f. Knowledge, attitude and practice towards birth control
- g. Husband and wife interaction
- h. Employment status of husband and wife
- i. Cost and benefit of having children
- j. Housing condition, consumption and saving practices
- k. Time horizon
- l. Attitude towards having children
- m. Knowledge and attitude towards the Hong Kong Family Planning Association and the adequacy of mass-communication channels.

It can be observed that the content of the questionnaire was designed to collect data to meet not only the requirement of the study but to furnish valuable information for the formulation and implementation of the birth-control programme as being administered by the Family Planning Association of Hong Kong. The questions were further adjusted, whenever possible, to make them internationally comparable and their sequence were arranged to ensure a smooth flow of the field interview and to avoid bias arising from answering certain sections of the questionnaire before the others.

Consequently, the drafting of the questionnaire took several months starting from November, 1971. Standard formats produced by the United Nations, the Population Council of the United States and the I.U.S.S.P. were taken as references. Advice was sought from experts in the field of fertility, population and family planning through discussions, seminars and correspondence.

The sample and its coverage

The selection of respondents was done with the help of the Department of Census and Statistics of the Hong Kong Government. The aim was to interview a probability sample of about 3,000 married women of reproductive ages 15-49, defined under this context, as eligible women. Since it was not possible to construct a sampling list of all these women from which the sample could be drawn, it was decided to select 3,000 addresses from the whole of Hong Kong and to interview all eligible women residing in these addresses. Fortunately, the 1971 Census has made available a 'not too out-dated list' of all dwelling units in the Colony. In the selection process, all addresses in the Colony were first stratified by 4 areas, i.e. Hong Kong Island, Kowloon, New Kowloon and the New Territories and then by housing types i.e. Resettlement, Low Cost Estates, Private Housing and squatters, giving altogether 16 strata. It was hoped that the above stratification would ensure proper representation in each of these area-housing-type categories and thereby reduce sampling errors. In view of the fact that each address might not contain any suitable women (some might contain more than one) it was decided to select about 3,300 addresses i.e. about 10 percent in excess of our target. Finally, a sample of 3,388 addresses was drawn by selecting systematically every 250th with a random start for each of the 16 strata. The distribution of the sampled addresses is shown below.

Table 4.1 Distribution of sampled address
by areas and housing types

Area	<u>Housing types</u>				Total
	Resettlement	Low Cost	Private	Squatter	
Hong Kong	77	70	685	57	889
Kowloon	9	35	702	2	748
New Kowloon	600	182	326	107	1,211
New Territories	112	46	262	120	540
Total	798	333	1,975	282	3,388

Coverage

All domestic households in Hong Kong except marine households and special enumerations formed the universe from which the stratified sample is to be drawn. Special enumerations include Hospitals, Institutions, staff quarters of factories etc.

Pretests

Since it was the first time that certain information were collected in such details among the Hong Kong married women, it was important to conform the suitability of the questionnaire, the wording and sequence of the questions and to prepare for the problems pertaining to the fieldwork and its administration. For these, two pretests were carried out. In January, 1972, first pretest was carried out in which 12 female sociology students of the Chinese University of Hong Kong participated. Some of them had had previous survey experience. They were offered a 2-days' training course consisting of

- a) description of the nature of the study
- b) interviewing techniques
- c) explanations of the content and sequence of the questionnaire, the purpose they serve and the importance that wording and sequence were to be strictly adhered to
- d) role playing in which workers from the Family Planning Association were invited to act as respondents.

In the first pretest, interviews were confined to Kowloon and the New Territories. Residents from the 4 housing-types were interviewed in proportion to the number of addresses selected in the sample. Interviewers were only assigned to interview a given number of households in a given district without having the addresses assigned to them. The purpose for so doing is to give the least possible contamination to the potential respondents selected in the sample. A total of 120 successful interviews were completed. It was found that the refusal rate was unexpectedly high especially among the private housing residents. Refusal, under the present context, included those households refusing to give admittance or to render the necessary co-operation. Later experience revealed that the causes of high refusal rate were:-

- a) Interviewers approaching households without advance notice are generally regarded as intruders or salesmen least welcomed by the public
- b) Without pre-determined addresses interviewers tend to pick only those addresses or households which are easily approached, while giving up easily those households which show some sign of reluctance.

This is a matter of serious concern. Following this pretest, a seminar was held in which actual problems relating to the interviews and the questionnaire as well as their solutions were discussed.

In late April, 1972, the second pretest using a revised version of the questionnaire was carried out. This time, another 14 female sociology students participated. These student-interviewers were offered the same training as in the first pretest. Interviews were confined to residents of the Hong Kong Island and were in proportion to the number of addresses selected in each of the housing-type categories. Based on the experience of the first pretest, interviewers were assigned to interview residents in pre-listed addresses to which letters specifying the purpose of the survey and soliciting co-operation of the household heads were sent about 3 days before the actual interview. This strategy proved to be effective and the refusal rate was thus cut down to be within tolerable limits. Hence it was decided that this strategy should be adopted in the main survey. Discussions on the problems of these interviews followed. Modifications in the sequence and wording of the questionnaire gave rise to the present form used in the main survey.

The main survey

The main survey started in Mid June and last through August 1972. Only student interviewers were employed to minimize the bias arising from interviewers' differentials. 40 female sociology students of the Chinese University of Hong Kong formed the initial group. Most of these students had not participated in the previous pretest. They were given a period of 3 days' training similar to the previous pretests. In addition, they were instructed to complete a limited number of interviews during the first two days and to return to the Social Research Centre, the only field station, for intensive supervision. This was considered necessary to correct and rectify any mistakes in the administration of the questionnaire lest they should develop into a habit. Because of the lack of experience of the interviewers and the complexity of the questionnaire, certain important details might be overlooked. In fact, such precautions were found to be extremely worthwhile.

Throughout the interviewing period, the two editors (acting as supervisors) had daily contact with the interviewers. Interviews completed during the day or the day before were scrutinized. Possible errors and omissions were checked. If discrepancy was found and could not be reconciled, re-interviews were required.

Problems connected with the field work

Actual interviews were carried out district by district. This method was adopted to enable the interviewers to become familiar with the geographical location of sampled addresses within the district and to facilitate the recording and other office administration. The field work spreaded over 2½ months and was longer than expected. However, consideration should be given to the following facts:-

- a) A maximum of 40 interviews could be employed as the workload connected with checking, supervision and co-ordination undertaken by only two full-time supervisors given a fairly tight budget. In the middle of July 1972 a number of interviewers resigned and a second group of sociology students from other post-secondary colleges had to be trained to replace them. Even then, the average number of interviewers in the field was substantially below 30.
- b) There were problems connected with locating the sampled addresses. Cases such as wrong or non-existing addresses, non-dwelling or empty addresses were abundant. As shown in Table 4.2, these addresses accounted for 20% of the total sampled addresses. All these created considerable delays and problems. Particularly in the Resettlement Estates and Low Cost Housing Estates, there was a large number of empty addresses or addresses without eligible women. This, perhaps, is the characteristics of Hong Kong particularly in the public housing estates. Whereas in the Private Tenancy Category, refusals were not infrequent. Consequently, much of the interviewers' effort was spent on merely listing members of these households which did not lead to actual administration of the questionnaires. But the major cause of the delay was attributed to the intensive follow-up effort expended on those women who were not at home during the previous calls.

Table 4.2 Distribution of problematic addresses by housing types

<u>Housing Types</u>	<u>Addresses in the sample</u>	<u>Non-existing addresses</u>	<u>Empty addresses</u>	<u>Non-dwelling addresses</u>	<u>Inaccessible addresses</u>	<u>Addresses called</u>
Resettlement Estate	798	27	36	7	0	728
Low-Cost Housing	333	6	9	1	0	317
Private Tenancy	1,975	87	236	88	49	1,515
Squatters	282	78	1	7	56	140
Total	3,388	198	282	103	105	2,700

Treatment of not-at-homes and refusals

From past experience as well as results of the two pre-tests, the problems of not-at-homes and refusals had been anticipated. Since women who refused or not at home were expected to differ markedly from those who were at home and offered the required co-operation, special effort were made to cut down losses from these sources. In addition to sending advance notices explaining the purpose of the visit and soliciting the co-operation of the households, not-at-homes are followed up to a maximum of 8 calls. In each of the unsuccessful calls, information on the time the respondents were likely to be at home was secured from other members of the household and recorded and follow-up calls were made at such times accordingly. If such information was not obtainable, follow-up visits were made at different times of the day including early morning visits. (Late hours were considered to be unsafe for college girls unless they go in pairs) For those who refused to be interviewed more experienced interviewers were assigned and in many cases resulting in the successful completion of the interview which would otherwise have lost.

Response rate

The selection of the respondents for the probability survey was carried out in two-stages which, very often, were completed in one single visit. The interviewer was first assigned on address within which the number of households were recorded. The interviewer was to interview all those eligible women available then and there. Since a contacted address might contain more than one household and one household might contain none or more than one eligible woman, the numbers of addresses, households and eligible women are in no way equal. Hence, the total number of eligible women was taken as the denominator for the calculation of response rates. According to Table 4.3, the response rate defined as the proportion of completed interview to total contacted eligible women was about 90 percent a rate much higher than previously anticipated.

Table 4.3 Response rates of currently married women ages 15-49 (Eligible Respondent) by housing types

	Eligible Women Recorded	Non-Response			Eligible Women not interviewed	Eligible Women interviewed	
		Not-at-home	Language Problems	Refusals			
Reset- tlement Estates	496	8 (1.6)	0	7 (1.4)	15 (3.1)	481	
Low-Cost Housing	265	6 (2.3)	0	3 (1.1)	9 (3.4)	256	
Private Housing	1637	173 (10.6)	3	58 (3.5)	234 (14.3)	1403	
Squatter Huts	140	8 (5.7)	0	2 (1.4)	10 (7.1)	130	
Total	N	2538	195	3	70	268	2270
	%		7.68	0.12	2.76	10.56	89.44

* The percentages in brackets are differential non-response rates of the different housing types.

However, calculation of response rate is rather complex in the absence of a pre-determined sample size which depended on the extent interviewers were successful in securing the co-operation of households as well as on the accuracy in their reporting on the number of households and/or the number of eligible women within each household. It was believed that an unknown number of sampled eligible women had not been contacted and recorded in certain addresses when the interviewers failed either in gaining admittance to or securing the necessary information in each of the households. This must have inflated the response rate substantially. An independent method of calculating the response rate could make use of the following information

- a) Number of women successfully interviewed and registered is 2,270
- b) Estimated number of eligible women that should have been included in this probability sample, projected to be 2,800.*

From these two pieces of information, the response rate worked out was $2,270/2,800 = 81\%$. This response rate, though far from being ideal, is realistic and would not have been possible without the untiring effort of the interviewers in the absence of legal obligations to respond to these interviews.

A non-response rate of 19% was, perhaps, the main source of bias that affect the accuracy of the sample estimates. This bias had probably come from the following causes:-

- a) Incompleteness of the sampling frame

Sampling frame of dwelling units prepared in early 1971 was used to select households in 1972. During this interval, substantial changes, e.g. erection of new buildings and demolition of old ones, as reflected by the prevalence of empty and non-dwelling units, must have caused the sampling frame a little out-dated.

* The number of eligible women included in the sample was derived from the following arithmetic statement i.e. $3,388/65,410 \times 555,960 = 2,800$ where 3,388 and 65,410 were the number of sampled dwelling units and total dwelling units respectively and 555,960 was the estimated total eligible women in Mid 1972.

b) Contamination through clustering

All eligible women within the same dwelling address could not possibly be interviewed in one single visit. Discussions among the eligible women after an interview would make some of them aware of the length and content of the interview. This would not only prevent respondents making independent responses but often lead to refusals when interviewers called back to the same address. It was later found that some of the not-at-homes were, in fact, refusals.

c) Differences in response rates in various strata

Certain strata tend to be under-represented because of relatively lower response rate due perhaps to inaccessibility e.g. in the rural areas, resulting in bias of sample estimates in the collapsed data. Weighting would not be much since the exact response rate could not be worked out.

Payment system and interviewers' integrity

To reduce the workload on supervision and to act as an incentive to hard work, payment by piece rate was adopted. Initial payment to interviewers were \$6.00 per completed interview but was later increased to \$8.00 after taking into consideration of the frequencies of empty and/or wrong addresses. On the average, interviewers were able to complete an interview in an hour. For cases in the Urban areas, they were able to complete a maximum of 5 interviews a day. The only method used to check the reliability of the interviewers was to call onto the respondents again after an interview to see if the reported interview had actually taken place. 5% of the total reported interviews were checked and none of our interviews was found to have been dishonest.

Through selecting a proportionate stratified sample, we were able to by-pass the necessity and complexity of applying appropriate weights to different strata in order to arrive at unbiased sample estimates since our sample values within each

stratum as well as the collapsed data are self weighting.* However, this proportionate stratified sample had inevitably produced certain 'under-sized' subsamples. For instance, there were only 18 married women under the age of 20 included in the sample. Hence, estimated based on 'under-sized' subsamples should be treated with great care.

Validity of the sample

To check the reliability of the sample, attempts were made to compare certain crucial distributions of the sample with that of the population as provided by the 1971 Census. Since such distributions must be controlled by age, sex and marital status comparable data available from the census could permit us to compare the age and the distribution by education attainment.

Table 4.4 Percentage distribution by age

<u>Sources</u>	<u>Age Groups</u>						
	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30-34</u>	<u>35-39</u>	<u>40-44</u>	<u>45-49</u>
1972 population*	1.17	10.37	14.91	15.33	19.53	20.84	17.55
Sample	0.79	9.88	12.89	16.78	20.67	21.28	17.66

Table 4.5 Percentage distribution by education attainment

<u>Source</u>	<u>Education attainment</u>			
	<u>No formal schooling</u>	<u>Primary</u>	<u>Secondary</u>	<u>Post-Secondary</u>
1971 population	26.62	46.99	23.09	3.30
Sample	29.69	45.27	22.60	2.43

* As mentioned previously, certain under-sized sub-samples might be the consequence of relatively low response rate which might in term have introduced bias in their aggregate sample estimates.

On the whole, women included in this sample is representative of all married women 15-49 of the total land population residing in the colony as at June 1972. About ½ of them were residing in the highly urbanised areas of Hong Kong Island and Kowloon Peninsula; 35 percent were residing in New Kowloon consisting mainly of Resettlement and Low Cost Housing Estates; the majority of the remaining 15 percent were residing in the satellite towns of the New Territories.

Table 4.6 Percentage distribution of sampled women by area and by housing types

Area \ Housing type	Resettlement Estate	Low Cost Housing	Private	Squat-ter	Total
Hong Kong	2.4	2.4	19.6	0.8	25.2
Kowloon	0.2	1.2	22.9	-	24.3
New Kowloon	15.2	6.1	11.1	2.4	34.8
New Territories	3.3	1.6	8.2	2.5	15.6
Total	21.1	11.3	61.8	5.7	100.0

Although public housing has provided accommodation for 32 percent of the total families in Hong Kong, still 6 percent of the households had to seek shelter in the squatters. In Hong Kong the development of housing has been considered slow relative to its housing needs and economic development; supply of adequate housing always fell far short of demand. On the average, 3.1 persons occupied one room. About 22 percent of the households were dissatisfied with current living conditions and another 7 percent were extremely dissatisfied while rental payments had certainly out proportioned their income. According to Table 4.7, the proportion of rental payments to family income declined with rise in income level.

Table 4.7 Percentage of households paying monthly rentals greater than 1/6 and 1/4 of their income by income groups

Rental	Income Groups		
	Below 800	800-1,400	1,400-2,200
Over 1/6 of income	35.2	24.9	23.7
Over 1/4 of their income	19.8	15.6	11.5

Ethnic composition

The greatest majority of the women (91%) were of Kwong Tung origin. Those whose places of origin were Canton, Sze Yep and Chiu Chow accounted for 82 percent of all women. Foreigners whose places of origin were outside Hong Kong and China were less than 1 percent giving an almost homogenous Chinese community. Although marriages across places of origin were common, over 1/2 of the women tended to marry husbands of the same origin particularly for women of Chiu Chow and Fukienese origin. Perhaps, their conservativeness and the linguistic differences have prevented them from mixing well with other ethnic groups. In fact, over 55 percent of them were brought up with a rural background and another 14 percent in small townships compared with 34 percent and 8 percent respectively having the same characteristics taking all sampled women as a whole.

Table 4.8 Percentage distribution by places of origin and by where brought up

Where brought up	<u>Places of origin</u>				
	<u>Hong Kong</u>	<u>Canton</u>	<u>Sze Yep</u>	<u>Chiu Chow & Fukein</u>	<u>All ethnic groups</u>
Village	7.11	41.00	63.23	55.56	34.32
Township	2.57	12.32	9.97	10.61	8.41
A small city	1.06	22.63	13.06	14.65	15.64
Metropolitan	89.26	22.96	12.37	18.69	40.57
Unknown	-	1.18	1.37	0.51	1.06
	100.00	100.00	100.00	100.00	100.00

From the very beginning, Hong Kong has been exposed to spasmodic streams of immigration from its huge hinterland. The majority of the population above 30 were immigrants. Putting aside the 29 percent of the local-borns, and another 21 percent of immigrants who settled down in Hong Kong during their childhood i.e. before age 15, some 17 percent arrived at Hong Kong when they were 15-19. It could be expected that many of them would get married soon after their arrival. Problem would then arise in connection with the analysis of previous fertility of the group, who first arrived at Hong Kong during their womanhood, the majority of them had been married or had come to Hong Kong with their children. The fertility level of this group would have little relationship with Hong Kong's social and economic development.

Household composition

In a traditional Chinese family, a son's marriage was regarded as the taking into the household a bride while a daughter's marriage was regarded as a 'loss'. Such an attitude must have given rise to the prevalence of extended families in the past. However, the existence of this type of families had to satisfy two major criteria, i.e. the supreme authority of the household head usually the grandfather or the eldest member of the household whose decisions must be respected and obeyed and the sufficiency of living space to accommodate the increasing household size through marriage and reproduction. These conditions no longer exist in Hong Kong today. The decline in paternal authority as a result of economic independence and the development of individualism had shaken the intrinsic structure of a traditional household, i.e. the relationship among children and parents, daughters, sisters and parent-inlaws, and their respective rights and responsibilities. The shortage of living space imposed a physical limit to the growth of extended families and over 50 percent of the families expressed their worries over providing living space for an additional child. Thus current conditions are inevitably in favour of nuclear-type families.

Table 4.9 Percentage distribution of households by types of families

<u>Families</u>	<u>%</u>
Couples only, without children	7
Couples and unmarried children with or without unmarried relatives	67
Extended	24
Joint only	1
Unknown (unidentifiable)	1
	<hr/> 100

Currently about $\frac{1}{4}$ of the women were living with their own parents or parent-in-laws. Nuclear type families defined as one couple per family accounted for 74%. They were formed partly through the incidence of deceased parents or parent-in-laws. For instance, 36 percent reported to have lived with their parent-in-laws at the time of marriage but only 16 percent were currently living with them. However, the percentage of both parents and parent-in-laws having been deceased had increased from 8 to 41 during the same interval. It was therefore not possible to ascertain the proportion of these "involuntary" nuclear families since an unknown number had probably lived away from their parents before they were deceased.

Common belief that young couples tend to live away from their in-laws is in no way conclusive. In fact, there was a greater likelihood for those now aged under 25 than those 25 and over to live with their parents or parent-in-laws both at time of marriage and at present. Part of this is because the parents and parents-in-laws of older women might have deceased. Again, there was a greater likelihood for working wives than non-working wives to live with either

their parents or parent-in-laws. For those working wives having children to look after at home, parents or parent-in-laws have become an invaluable source of help. About 50 percent of the working wives had their children left behind to be looked after by parents or parent-in-laws. It seems that the existence of extended families has thus an economic footing, but the roles of the inlaws must have completely changed. At least they were no longer the ones who gave orders. Of the various big or small decisions to be made in the family well less than 1 percent were determined by the parent-in-laws. It was, thus apparent, that even among extended families, the influence of inlaws were practically non-existent. The couples, themselves were almost the only decision-makers within the family regardless of its type.

Education

So far as our sampled population is concerned, the success of the education programme for the last decade was mainly confined to the provision of primary school education to a larger proportion of the population. Women without formal education had declined from 52.4 to 39.5 by 1971. This decrease was almost completely made up by increases in the proportion of women having primary school education while increase in the proportion of women with secondary school education was less than 2 percent. Since primary school education has to be undergone before adolescence, women currently aged 30 and over would thus remain relatively unaffected. Of course, it would be unrealistic to assume that the expansion in the education programme in the late 1950's would not have exerted its influence on women above 30. But the effect was largely indirect. The importance of education for their children or their younger generation must have been readily realised by many despite the fact that they themselves had not secured the opportunity to go for higher education. Such a recognition would also induce changes in their attitude towards child bearing.

One interesting point to be observed in Table 4.10 is that the female participation did not seem to relate positively with education attainment since the lowest participation rates were found to correspond to women of median education level. Explanation lies on the fact that the increase in job-opportunities was brought about by the expansion of the manufacturing industries which require women with minimal education to act as semi or unskilled workers. These job positions were not too attractive to the better educated women but whose education had not enabled them to take up positions of higher remunerations. Although many might have acted as office or sales workers prior to their marriages or before having children, only a few would have considered such positions as permanent except under strong financial pressure. Since they were better educated, there must have been better opportunities for them to marry men with better means. Being housewives to take care of husbands and children at home appeared to be their best alternatives.

Table 4.10 Education attainment and their participation rates

<u>Education attainment</u>	<u>Percent of women</u>	<u>Percent working</u>
No formal schooling	31	50
Private tutor	12	52
Primary	21	45
Completed primary	17	36
Secondary	9	35
Completed secondary	8	48
Post-secondary	2	49
	<u>100</u>	<u>100</u>

Man has usually been regarded as the sole-supporter of the family. With increasing job opportunities for the female population the burden of supporting the family is gradually shared by the wives whose income is increasingly relied on to eke out the family expenditure as evidenced by 64 percent and 23 percent of the working wives contributing all and part of their incomes respectively to support the family. Only 13 percent of the working wives regarded their income as additional and subsequently treated as their "own saving". The rise in the female participation was believed to be an important factor which had raised the standard of living of the family considerably in the last two decades. Although the difficulties of making international comparisons on standard of living are fully recognized, attempt is made to show the extent the Hong Kong population is living beyond the level of subsistence through the possession of consumer durables given in Table 4.11.

Table 4.11 Proportion possessing the various consumer durables, Survey 1972

<u>Items</u>	<u>%</u>	<u>Items</u>	<u>%</u>
Television	75.8	Motor car	7.1
Colour television	1.4	Air-conditioner	4.4
Refrigerators	70.7	Dish washing machine	0.7
Own telephone	63.3	Vacuum cleaner	2.0
Transistor radio	31.5	Domestic servant	2.8
Washing machine	23.3		

Examination of Table 4.11 suggests that items which could yield satisfactions on daily or regular basis and were not easily substitutable such as refrigerators, television and telephone were in wide possession whereas possession of vacuum cleaner, dish-washing machine, air conditioner was not common because of the absence of the above criteria and they were probably considered

as luxuries of life. Having domestic servants, the supply of which is rapidly on the decline, could only be afforded either by the very rich or by those nuclear families in which both couples were working leaving children at home to be taken care of. The increasing number of nursing homes was mainly the consequence of their shortage in supply as a result of rapid industrialization. Taking into consideration of the climatic, cultural and environmental factors, we are of the opinion that the fairly wide possession of consumer durables was more of a reflection of the relative shortage of labor. Generally speaking, although the standard of living in Hong Kong is one of the highest in Asia, it has certainly a long way to go to reach a stage of automation and mass consumption.

Awareness of population pressure

That Hong Kong is over-populated was unanimously agreed. Only 6 percent of the women did not think this was the case, but they were those women who were generally less educated and were of older age. The awareness of the population pressure among the remaining women could be shown to vary in intensity with their education attainment. Variations with age and parity order were not as significant.

Table 4.12 Intensity scores* by education attainment, Survey 1972

<u>Education</u>	<u>Scores</u>
No schooling	2.8
Private tutor	2.2
Primary	2.3
Secondary not graduated	3.6
Secondary graduated	5.1
Post secondary	9.8

* Defined as the ratios between the number of women who thought the population size was alarmingly large and the number of women who thought the population size was just large in each of the education categories.

It was also a consensus opinion that the population size ought to be controlled. However, resorting to abortion as a means of population control would certainly encounter opposition since less than 10 percent of the women agreed to use abortion to achieve this end. This applied even to women who exerted very strongly that the current population was already over-sized. On the other hand, contraception was readily approved and was opposed by less than 4 percent of the population. The very strong opposition against abortion was partly associated with the concept of its being illegal and unsafe, since there was 40 percent of the respondents approving the legalization of abortion the legalization of abortion if the operations were performed under medically sound conditions. The remaining 60 percent were, of course, women who opposed abortion other than on medical grounds. Table 4.13 in which those approving abortion were excluded, provides an overall view of the public's attitude towards abortion.

Table 4.13 Percentage approved abortion under specific conditions, Survey 1972

<u>Conditions</u>	<u>Percent</u>
Continuation of pregnancy would endanger mother's life	69.6
Possibility of pregnancy resulting in deformed child	63.4
Pregnancy due to rape	37.8
Premarital pregnancy, boy friend denies responsibility	23.6
When family can't afford to have another child	16.2
Premarital pregnancy, boy friend accepts responsibility	4.5

Examination of table 4.13 indicated that abortions performed other than on medical grounds were considered to be immoral and not acceptable. In general, the attitude against abortion was very strong. For instance, only 38 percent approved aborting a pregnancy as a result of rape, and there were 30 percent of the women who would be against abortion under any circumstances assuming that medical grounds are the strongest reason for abortion.

Planning for the future

The fact that Hong Kong is a British Colony whose future depends almost exclusively on the decision of her gigantic neighbour has exerted constant pressure on a large segment of the population. As a result, majority of the population (92%) considered Hong Kong's future unpredictable. Such a pressure might have influenced people's planning or more specifically the attitude towards saving and provisions for old age. About 82 percent of the women recognized the importance of saving, but the major reasons for so doing were confined to making provisions for unforeseen contingencies, and for education of their children. Only 5.5 percent reported provisions for old age as the main reason for saving. Hong Kong people, in general, did not seem to have given too much thought over the sources of support at old age. Forty-eight percent said that they had no plan at all or the thought of retirement had never occurred to them. The establishment of pension or provident fund schemes which were limited mainly to Government employees or employees of big organizations could only be relied on by approximately 2.3 percent of the families. Thirteen percent of the families could live on their accumulated savings and the remaining 34 percent declared that they had to rely on their grown up children despite the fact that the decline in economic value of children in terms of willingness to support the family or to contribute to family expenditure had been generally recognized.

This could be a serious problem reflecting that social development, so far as provision for old age is concerned, has not been able to keep pace with Hong Kong's economic development.

It is often claimed that the attitude towards fatalism would affect fertility behaviour on the belief that a disposition towards planning behaviour in general would also entail a disposition to planning a family.

Taking as indices the large proportion of families having made no provision for old age and the overwhelming proportion thinking the future of Hong Kong unpredictable, the lack of long-term planning among the majority of the population is very obvious. However, it does not follow that short or medium-term planning is equally deficient since most (82%) of the interviewed considered that saving was important to provide for unforeseen contingencies and for children's education. We argue that fertility behaviour would usually involve both short and long term planning depending on the relative weights attached to the cost and expectation of raising children. The focus of contention appears to be whether the deficiency of long-term planning would affect fertility behaviour. We consider that this subject is too complicated to be discussed at this stage and that any conclusions made are risky.

CHAPTER V

DEMOGRAPHIC TRANSITION IN HONG KONG

Introduction

It has been commonly observed that in many countries which have experienced economic advance from industrialization and urbanization, mortality falls rapidly and is then followed by less rapid but steady fall in fertility. A country or area initially having high mortality and fertility has a slow growth rate simply because the number of deaths may be almost equal to the number of birth in a period of time. Industrialization, at least at its initial stages, often leads to the improvement of the quality of life, the betterment of living conditions and environment, and the improvement of medical facilities. All this contributes to the prevention and curing of many communicable diseases and causes a sharp decline in mortality. Fertility however, is not affected to the same degree in a short period of time, and often remains in a comparatively high level well after mortality has fallen. During this period, population growth is very rapid. As industrialization and modernization proceeds, it is likely that fertility will eventually fall, although the timing of such decline varies from places to places and also from culture to culture. Many developing countries are at one stage or another in this transition towards low mortality and fertility. Hong Kong's death rate has been very low since the mid-1950; at present it is 5 per 1,000 population per year. The main causes of death are no longer related to infectious diseases but are cancers and diseases related to blood circulation. Although the youthfulness of Hong Kong's population contributed to this low death rate, it is clear that the control of death has been relatively successful. The expectancy of life for females is high -- 75 years in 1971 and

for males at 67 years. On the fertility side, it has been noted in a previous chapter, that there was a substantial decline since 1965. But the birth rate at present is 19.7 per 1,000, still high relative to many developed countries. The annual natural growth rate is around 1.5 percent.

Cohort Fertility

The birth rates quoted so far are derived from annual registration data and population statistics. Such data usually refer to annual occurrence of births or deaths to the total population at some point in time. The age-specific birth rates for any one year (quoted in Chapter II) refer to the experience of many age groups in that year and is not the experience of any one of these groups (a cohort) during its life time, and as such, they are not sufficient to trace the fertility history of an actual cohort of women. Analysis of cohorts however, is important to compare the actual fertility experience of two or more age-cohorts. The survey provides the basic data necessary for this comparison.

Table 5.1 Cohort fertility in Hong Kong for married women, Survey 1972*

Age at Birth of Child	Year of Birth of Women						
	1922-27 (45-49)	1927-32 (40-44)	1932-37 (35-39)	1937-42 (30-34)	1942-47 (25-29)	1947-52 (20-24)	1952-57 (15-19)
Under 15	.0005	.0005	.0029	.0000	.0000	.0008	.0000
15 - 19	.0289	.0353	.0936	.0303	.0248	.0470	(.0111)
20 - 24	.1721	.2460	.2075	.1981	.2054	(.1757)	
25 - 29	.2693	.2856	.2607	.2786	(.1649)		
30 - 34	.2509	.2428	.1838	(.1034)			
35 - 39	.1661	.1037	(.0578)				
40 - 44	.0504	(.0193)					
45 - 49	(.0055)						
Average No. of children born per woman	4.72	4.67	4.0	3.1	1.9	1.1	
1971 Census estimate	(4.11)	(4.27)	(3.87)	(3.10)	(2.05)	(1.20)	

* Total number of married women interviewed = 2270
The content of the table shows the number of birth per married woman per year.

Table 5.1 shows the retrospective fertility experience of 5 year age-cohorts. Retrospective data always suffer from several possible errors. Among these, two sources are of special concern here. First is the lapse of memory. A woman might easily give a wrong date of birth of her child. The more remote the event, the easier it is to mis-report. The second major fault lies in the fact that data from only those who survived until the present are available, and it is often not justifiable to assume that those who survived and those who died have had similar experience. Interpretation of these data needs to be done with great care.

The figures in brackets on the diagonal line are incomplete. For example, some of the 1922-27 cohort had not passed the ages 45-49; and some of the 1927-32 cohort had not passed the ages 40-44, etc.

It can be easily observed from Table 5.1 that the age range within which maximum fertility occur is 25 to 29. In fact the rate for this age range has not declined. The 1937-42 birth cohort, i.e. those who at present aged 30 to 34, had a rate of 0.2786 which is a little higher than 0.2693 for the 1922-27 birth-cohort. However fertility at older age ranges has substantially declined. For example, at ages 30-34, the 1922-27 cohort had a substantially higher rate than both the 1927-32 and the 1932-37 cohorts. It seems likely that later cohorts may have still lower rates when they pass through these ages. Among those of younger ages, there does not seem to be much difference between the earlier generation and the more recent generation of married women. This is in agreement with the findings of Freedman and his colleagues that changes in marriage and age structure were responsible for a great part of the fertility decline prior to 1965, and true decline occurred only recently. Recent declines in fertility will not be reflected in our cohort data.

The average number of children born per women for the 1922-27 cohort was 4.7, and for 1927-32 cohort, it was 4.6. These are not figures representing "completed" family size, simply because the women had not completed their child bearing life span. However, the figure for the 1922-27 cohort is very close to the completed family size. A figure of 4.7 is relatively low.¹

¹ Average figures of over 7.0 children are not rare, for example in Taiwan. C.H. Yuan, "Reproductive history of Chinese women in rural Taiwan", Population Studies, Vol. 12, July 1958, p.3

It is possible to present the data concerning reproductive history in a different way, that is to classify women by the number of children ever-born to them. With this table, proportions of the women at each stage who went on to have at least one additional child can be calculated.

Table 5.2 Proportion (%) of married women proceeding to a higher birth order by age, Survey 1972

Number of Children	<u>Age-group of Women</u>					
	45-49	40-44	35-39	30-34	25-29	20-24
0	90.9	91.8	92.5	90.1	67.5	78.5
1	93.1	93.1	92.8	89.7	64.7	43.3
2	94.9	88.8	88.4	76.2	63.9	28.6
3	81.2	80.2	78.1	64.8	45.1	25.0
4	78.8	78.8	66.3	54.2	45.3	-
5	80.4	77.0	64.0	42.8	48.3	-
6	68.9	60.7	57.9	30.0	-	-
7	58.4	51.8	45.7	33.3	-	-
8	48.5	53.6	40.7	-	-	-
9	31.2	40.0	38.5	-	-	-
Total No. of Women	397	428	481	323	370	247

Naturally, figures for the younger mothers are less meaningful than those for the older ones because the younger ones have not completed their child-bearing. However, given that comparisons are made within an age group, it is still interesting to trace the proportions of women who proceed to have another child.

Figures for the 45-49 age group (i.e. those mothers born between 1922-1927) show that about 9 percent of these mothers did not have a child at all. But for these who had one child, the chance that they would have an additional one is high, 93.1 percent. This is true also for those who had two children. After the third child, however, the likelihood of having a further one reduces to 81.2%. For those aged 40-44, and 35-39, the substantial reduction begins earlier, after the second child where the chance of having an addition child falls to 88.8 and 88.4 percent. However, the declines in this proportions are gradual, and even after a high-order birth (e.g. the 6th or 7th birth), the chances of having an addition child are still high. For example, for those aged 45-49, the chance of having the 8th child after having the seventh was 58.4 percent, while for those aged 40-44, this was 51.8 percent, and for those age 35-39, this was 45.7 percent.

This is in agreement with a suggestion indicated in a previous chapter that although experiencing a reduction in fertility, there is still a substantial group of women, mainly of older ages, who are not practicing contraception and who are giving birth to children of high parity.

Completed Fertility and Family Size

The various indices of fertility level of the population have been elaborated in Chapter II. Emphasis is now made to observe the changes in fertility since 1967 when similar data were made available through the Urban Family Life Survey conducted by R. Mitchell. Comparable statistics are given in Table 5.3.

Decline in actual fertility measured in terms of number of children ever-born (live births) or number of living children was observed for almost all age groups. In other words, women were having fewer numbers of births in 1972, compared with women of the same age in 1967. This is particularly so for women now aged 30-34 who, on the average, had 0.3 births less or had a 10 percent reduction in their fertility for the last 5 years. This was probably a genuine fertility decline through voluntary birth control efforts. Assuming that women 45-49 years of age had completed their child-bearing span, the 4.8 live births to these women in 1972 can be regarded as their complete fertility compared with 5.2 who were born 5 years earlier.

Table 5.3 Average number of children ever-born (live births) and living children (Family Size) by age group, 1967 & 1972

<u>Age</u>	<u>Average No. of children ever-born</u>		<u>Average No. of living children</u>		<u>Sample Size</u>	
	<u>1967</u>	<u>1972</u>	<u>1967</u>	<u>1972</u>	<u>1967</u>	<u>1972</u>
Under 25	1.3	1.1	1.2	1.0	168	265
25 - 29	2.1	2.1	2.1	2.0	251	369
30 - 34	3.4	3.1	3.3	3.0	359	323
35 - 39	4.7	4.1	4.3	3.8	362	481
40 - 44	5.3	4.7	4.8	4.4	359	430
45 - 49	5.2	4.8	4.7	4.2	46	400
15 - 49	3.8	3.5	3.5	3.3	1,546	2,268

The difference between number of live births and number of living children reflects the influence of mortality of the children born to these women. Since mortality level had already reached fairly low levels by 1967, the differences between average number of children ever-born and living children tended to be slight. The decrease in the average family size from 3.5 in 1967 to 3.3 in 1972 was mainly attributed to fertility decline during this interval. In fact, the decrease in the average family size would have been greater had proper weights been attached to the 1967 sample in which women in the younger age groups had been over-represented through disproportionate sampling.

Fecundity and pregnancy wastages

The main factors which affect fertility are of course the biological ability to conceive, the social factors influencing the desire to become pregnant, and after conception the chances to have the child born alive.

The first of these factors is fecundity. For various reasons, not every married women can give birth to a child. Those of older ages have passed their child-bearing period, some others may be born infecund, while yet others may choose to limit their births by sterilization.

The survey shows that 24.8 percent of all married women were infecund in 1972, and a further 6.3 percent did not know exactly whether they were fecund or not. Of those who were infecund, the major reason is voluntary sterilization of the women. This is 43.4 percent of all those who could no longer bear children. Most of the self-sterilized women are over 30 years of age, but there are a few who are under 25. The age range within which these women received their sterilization operation is very wide. The mode however was at the ages 30 and 31. This is the age at which about 3 children would have

been born to an average married women. However the wide range indicates that there is no one stage after which most sterilization occur. In contrast to women sterilization, the number of husbands who received sterilization is very small, in total 16 or 2.8 percent of all infecund women.

Menopause is 25.9 percent of all infecund women, and these occur almost entirely at ages over 40. In our sample, the majority occurred between the ages 45 to 49. There are also many women, 70 in fall, who reported they were sub-fertile; this is 12.4 percent of all infecund women.

Analysis by the ages of the respondents shows that the proportion infecund increases rapidly after 30 years of age. For the age group 40-44, 35 percent reported infecund; and for those aged 45-49, 57 percent were infecund. These percentages will become higher if those who were uncertain of their fecundity are included.

The social and economic factors which influences the desire to become pregnant will be discussed in a later chapter, but assuming that conception has occurred, it is necessary to know the chances that the child is born alive or which the proportion of pregnancies which results in live births.

The concept of "pregnancy wastage" includes both induced and non-induced spontaneous abortions. In countries where abortion is legal, figures are available for those abortions reported to government authorities, although these figures are not necessarily the sum-total of all abortions. In countries where abortion is prohibited, these figures are naturally unavailable. However, the practice of abortion has existed in almost all countries whether or not these countries permit legalized abortion. It is also generally noticed that the number of abortions reaches a high level (i.e. a substantial proportion of all pregnancies) in countries which permit abortion either on demand or basing on social or psychological indications. Example of these are the United Kingdom, Japan, Russia and many Eastern European countries.

Table 5.4 Distribution of married women by reasons for infecundity by present age, Survey 1972

Age	Meno- pause	Accidents, Injuries	Self- sterilized	Husband sterilized	Sub- fertile*	No reason given	Total	% infecund among married women	Don't know whether or not fecund
Under 25	-	1	2	-	-	-	3	1.1	4
25-29	-	1	18	1	-	-	20	5.4	15
30-34	-	2	45	4	4	2	57	17.6	19
35-39	3	9	71	4	9	9	105	21.8	39
40-44	18	18	71	6	25	13	151	35.1	36
45-49	125	14	38	1	32	18	228	56.9	31
	146	45	245	16	70	42	564	24.8	144

* Including primary and secondary sterility.

In Hong Kong, abortion had been strictly prohibited until October 1972 when there was a slight change in the laws. Since then, abortion is permitted in designated hospitals if two physicians agree that the pregnancy is harmful to the physical or mental health of the pregnant women.¹ This does not mean the legalization of abortion; the relaxation is meant to be for therapeutic purposes only. To ensure that there is no misinterpretation, there is a special trial period of two years, after which the result will be examined. The number of abortions performed during 1971-72 under this law was 109, a very small number indeed.

The 1972 survey contains data pertaining to abortions. Admittedly, to enquire into abortions, whether induced or not, is to intrude into very sensitive areas. There is no claim that the figures to be presented below are accurate figures on abortion in Hong Kong. It is very likely that there was an under-reporting, especially of induced abortion.

Table 5.5 Pregnancy wastage by age of mother, Survey 1972

	<u>Age</u>							Total
	15-19	20-24	25-29	30-34	35-39	40-44	45-49	
Total Pregnancy	21	356	889	1095	2148	2252	2087	8848
Abortion:								
Induced	0	1	10	10	42	39	26	128
Non-induced	0	20	59	67	171	201	182	700
Total Abortions	0	21	69	77	213	240	208	828
% wastage	0	5.89	7.76	7.03	9.91	10.66	9.96	9.36

¹ Laws of Hong Kong, Vol. II, Chapter 212.

It can be seen from table 5.5 that, apart from the age group 45-49, the proportion of pregnancy wastage increases as age increases. This is partly necessarily so because the older mothers had more chances (i.e. experienced more pregnancies) to have unsuccessful or aborted pregnancies, but the figures must also be the result of an improvement in maternal health and pre-natal care.

Induced abortion is only 1.4 percent of all pregnancies and 15.5 percent of all pregnancy wastages. This is most probably under-reported. The total pregnancy wastage is 9.36 percent. In many countries where induced abortion is illegal or restricted, abortion rates of over 20 percent have often been recorded. In Chile, a survey of Santiago reported about 25 to 30 percent of all pregnancies interrupted by induced abortion.¹ Estimates made for urban North Carolina in the United States, are around 22 to 24 per 100 conceptions.² It seems very likely that in our survey a large number of induced abortions were reported as non-induced abortion or not reported at all. It is not possible to estimate from our survey the margin of error. A more careful study of abortion in Hong Kong is necessary.

Marriages in Hong Kong

One of the major reasons for a fertility decline, at least in the short run, is the postponement of marriage. This is specially true in industrializing societies. In almost all cases, industrialization is accompanied by a rise in educational level, an improved status of women and an increased chance of employment especially for women. All this contributes to the postponement of marriage.

¹ Mariano Requena, "Social and Economic Correlates of Induced Abortion in Santiago, Chile", Demography, May 1965, Vol. II, pp. 33-49.

² J.R. Abernathy, B.G. Greenberg, and D.G. Horvitz, "Estimates of Induced Abortion in Urban North Carolina", Demography, Feb. 1970, Vol. I, pp. 19-30.

In Hong Kong, industrialization is generally believed to have caused a postponement of marriage. Age at first marriage has been rising for both men and women. According to the 1971 census which relied on retrospective data, it was shown that the age at first marriage among women has been rising from about 19.5 for those who married before 1941 to 22.7 for those who married during 1970-71.¹ Our survey of currently married females also showed a similar trend.

However, age at marriage computed from both census and survey data is affected by factors such as mortality differentials as well as the changing age-structure of the never-married population during the last 3 decades. To show the affects of Hong Kong's postponement of marriage, the proportions never-married by age groups are presented below in Table 5.6.²

Table 5.6 Proportions of women never married by age group and by census years

Age groups	<u>Census Years</u>			
	1931	1961	1966	1971
15 - 19	-	93.6	95.2	97.1
20 - 24	-	48.6	57.0	67.6
25 - 29	-	15.5	13.6	20.1
15 - 24	50.2	68.9	82.4	84.1

¹ Corresponding figures for men also rose from 22.7 for marriage before 1941 to 28.0 for marriages during 1966-70. Main Census Report, p. 37.

² Apart from government censuses and our survey, there is yet a third source of data concerning age at marriage. Marriage records are kept by the government Registrar-General and data pertaining to age at marriage are published in annual reports. However, before 1971 when the new Marriage Reform Ordinance came into effect, marriages whose rites were conducted according to local customs were not required to be registered. The number of these marriages are unknown; but the Registrar-General estimated that during 1970-71, there were about 3 such marriages to every 7 marriages registered. During 1968-69, there were as many as half of all marriages unregistered.

The figures in the above Table 5.5 suggests that the postponement of marriage may well have started since 1931 or even earlier long before the period of Hong Kong's industrialization. The proportion never married among women aged 15-24 declined by 18.7% in 30 years, averaging 0.6% per annum. In the following decade 1961-71, a period of rapid industrialization, the corresponding proportion had declined by 15.2 percent a year. It is, therefore, plausible to suppose that the postponement of marriage in the earlier 1931-61 period was the result of modernization which alone could only induce very slow changes whereas rapid industrialization in the following decade must have tremendously accelerated the already declining trend.

Several hypotheses explaining the postponement of marriage among women can be postulated. One of these relates to economic value of unmarried girls. In a traditional society, girls in their maidenhood probably had little economic value apart from helping in the house. It was both the desire and the responsibility of the parents to encourage their daughters to marry as soon as they were in marriagable ages. With the rise in the education level of the female population and the increased employment opportunities, girls began to participate more fully and directly in economic activities. Economic independence not only resulted in the rise of their social status and therefore the realization of their independent rights to make decisions concerning their marriages, but also in a situation in which they might have to partly support their families of origin. In our survey, we found that 89 percent of those aged under 30 worked before their marriage compared with only 65 percent of those age 30 and over. The economic value of adolescent girls have increased. This factor probably operated strongly in the postponement of marriages for women. Study of women marrying late, i.e. at ages over 25, has shown that not being able to find the right husband, not willing to marry early and the need to support the family were major causes. These causes accounted for over 60 percent of those marrying after 25.

Another factor which might have contributed to the postponement of marriage among women is the late marriage of men. A highly industrialized city like Hong Kong in which the salary scales vary with academic qualification, experience and the degree of specialization, it is much easier for a skilled worker to provide his family with a reasonable standard of living. Such specialized skills could normally be acquired by long periods of general, vocational or on-the-top training which are being lengthened in the process of industrialization. A responsible young men would normally think of establishing himself in a society before getting married. Moreover, the present acute housing shortage has led to very high rents, and this must have also influenced men to marry late. Age at first marriage for men who married between 1966 and 1970 was reported to be 28 years in the 1971 census. On average, in this period, men were marrying women five years younger than themselves. Assuming that women desire to marry men who are not too much older than themselves, the late marriage for men appears to have also influenced the age at marriage for women.

It is not possible to verify the above hypotheses directly. but some indications are provided from our survey. An analysis of age at marriage by educational level indicates that education and age at marriage are negatively related.

Table 5.7 Percentage distribution of married women by age and first marriage and by education, Survey 1972

Age at First Marriage	Education			
	No education	Private Tutor and Primary	Secondary	Post-secondary
Under 20	46.7%	35.0%	24.4%	14.0%
20 - 24	39.8	49.2	53.7	53.5
25 - 29	10.9	13.5	18.8	30.2
30+	2.6	2.3	3.1	2.3
				y
Total cases	100% 699	100% 1130	100% 393	100% 43

The proportion married before the age of 20 declined consistently from 46.7 percent for those without formal education, to 24.4 percent for those with secondary education, and to 14.0 percent for those who had a post-secondary training. In contrast, the proportions married at the age 25 to 29 have a reversed trend. It appears from the above the age at marriage is directly connected with educational attainment, although it must be pointed out that the confounding factor of the present age of those women has not been controlled. It can be expected that older women had less education than younger women. Since it is apparent from previous analysis that women who married recently (most of whom are younger ones) had married rather later than those who married some time ago, the difference in age at marriage between educational categories may be partly due to the differences in age itself. However, it can be postulated that education is a vital intervening variable explaining the tendency for late marriage for younger women.

Similarly, information gathered in the survey concerning employment before marriage provides another indication that industrialization is related to late marriage through the provision of employment opportunities.

Table 5.8 Percentage distribution of married women by age at first marriage and by whether employed before marriage, Survey 1972

Age at First Marriage	Full-time	Part-time	Not employed
Under 20	29.9%	37.3%	51.4%
20 - 24	49.8	51.6	40.2
25 - 29	17.1	9.5	7.5
30 and over	3.2	1.6	0.9
	100%	100%	100%
Total cases	1492	126	630

Table 5.8 shows a direct relationship between employment before marriage and age at marriage. The proportion who married under the age of 20 was highest for those who were not employed before marriage and lowest for those who had a full-time job. The difference is 21.5 percent. Late marriage (i.e. those who married after 25 years of age) are found more commonly among those who had a full-time occupation before marriage. Again the present age of the women under analysis need to be controlled to give a more precise picture; however it is almost certain that employment before marriage is another important factor contributing to late marriages.

Almost all births are within wedlock in Hong Kong, marrying at a late age will shorten the period of reproduction. Many have claimed that late marriage affect the fertility mainly in the short run. However, in Hong Kong, we have reasons to believe that late marriage would also affect fertility in the long run as well. Firstly, late marriage would act as a discouraging factor for those who wish to have additional children for the fear that they might not be able to take full care of their children until their adulthood. This is because of the lack of relatively under-developed social security schemes. The second cause is related to the fecundity of the women. For those marrying late, it is expected that their fecundity would decline appreciably after having the first few children even in the absence of contraception.

In summary, the above analysis of fertility and marriage trends shows that Hong Kong is probably at the beginning of the final stage of demographic transition. Fertility in the older age groups, has begun to fall, and late marriage will contribute to a further decline in fertility among the younger women. The lack of decline among the most fertile 25-29 age group is perhaps due to the births born to those who postponed their marriages or pregnancies to these ages. It is impossible to know whether age at marriage in Hong Kong has arrived at a peak, but many

industrialized countries in the West have recently experienced a decline in age at marriage after they have attained substantial economic growth. But one thing is apparent -- with the help of modern contraceptive techniques and rapid economic growth, Hong Kong's demographic transition may take a much shorter time than in many Western countries.

CHAPTER VI

SOCIO-ECONOMIC DIFFERENTIALS IN FERTILITY

One of the major immediate factor which affects the desire to practice birth control and consequently fertility is the desired family size. We have discussed earlier that the most popular number of children desired is between 2 and 4, and that there is a slight preference for boys. However, from data on number of live births, it can be seen that there is a large proportion (35%) of mothers who had more than 4 children. The proportion of mothers who desire more than 4 children is much lower, only six percent. It is rather clear that women in Hong Kong desire generally fewer children than they actually have. This is specially true for women who had high order births. The survey showed that the proportion of women who thought that they either had adequate number of children or had too few dropped rapidly after their third child was born. After the sixth child was born, 83.3 percent of these mothers considered themselves having too many children.

Table 6.1 Proportion of mother who desire more or fewer children by parity, Survey 1972

Parity	% want more children	% consider adequate	% want fewer children
0	95.6	4.4	-
1	90.1	9.1	0.8
2	48.1	51.0	0.9
3	30.7	46.3	23.0
4	5.0	58.0	37.0
5	4.8	16.1	79.0
6	8.3	8.3	83.3
7	3.4	3.4	93.1
8	2.3	4.7	93.0
9	6.3	-	93.7

One of the theories or propositions relating fertility and mortality trends explains that in high mortality areas, the high probability of dying, especially among infants, makes it necessary for the parents to have many children to ensure that some would survive until adulthood. Children in these society are often economically valuable, and very often can help in the household at an early age. This might have been quite true in traditional agricultural societies where mechanization have not taken place to any substantial extent. As long as we examine the concomitant variation between mortality and fertility, this positive relationship between mortality and fertility often exists.

Hong Kong has also had a similar experience. Infant mortality (deaths of infants aged under 1) has fallen from around 60 oer 1,000 live births during the mid-1950s to 38 in the early 1960s and further to around 20 in 1970. Neo-natal mortality rate has also fallen from 21 per 1,000 live births in 1961 to around 13 in 1970. Much of the decline in infant and neo-natal mortality was mainly from preventable diseases, and further decline from this source would be small in the future. But congenital malformation are more intracable and deaths arising from these have not greatly decreased. This is the pattern of many developed countries.

As we have noted earlier, fertility decline took place later during this period, accompanying the mortality decline. In spite of this, a causal relationship between mortality and fertility trends cannot be easily established. The survey, however, provide some indications that the value of the child in the family has almost ceased to be economic, and has become more oriented to social and emotional aspects. Only 12 percent of our respondents thought that children were necessary as security against old ages. Another 12.9 percent felt that children, especially sons, were valuable as they must perpetuate the family line. But the majority, 55.2 percent feels that

children provided emotional satisfaction and added fun and happiness to the household. The decreasing importance of children's economic value is further reflected in the mothers' expectation from their children -- only 12 percent of all mothers thought that they would live with their children when the children were married, and 23 percent felt that their children would support them regularly at their old ages. This implies that, in spite of the lack of a pension or social security system, Hong Kong's parents are aware that when their children grow up they will become fully independent, separated from the parents' household and often will not contribute economically to their parents' livelihood. Assuming that this feeling is general among Hong Kong's population, and given the fact that, in Hong Kong, children of ages under 16 are not allowed to work, the immediate economic value of children in Hong Kong has obviously declined. It is very possible that this factor is more important in influencing the desire for children than the fact that infant mortality has declined, although theoretically, they both should contribute to a desire for fewer children.

Work experience and fertility

The tendency for children to leave their parents' home when they marry is partly the consequence of the general change towards the nuclear type of family. This in turn is facilitated by industrialization. But industrialization affects the structure of the Hong Kong family in many other ways. One of these is the employment of females in the workforce.

Table 6.2 Average number of children born by age of mother by whether worked before marriage and by whether working at time of interview, Survey 1972

Employment	<u>Age of Mother</u>			
	15-24	25-34	35-39	40+
<u>Before Marriage</u>				
No Work	1.36	2.83	4.43	4.89
Part-time	1.19	3.12	4.22	5.10
Full-time	1.17	2.41	3.77	4.43
<u>Time of Survey</u>				
No Work	1.46	2.69	4.13	4.83
Part-time	1.25	3.32	4.18	4.79
Full-time	0.71	2.13	3.92	4.65

The difference in average number of children born between those employed part-time and those who had no work is rather slight, but those who work full-time either before marriage or at the time of interview have significantly smaller average number of children. This is true for all ages.

The most direct explanation of this is simply that the women with fewer children are relatively free from household work and they can take up full-time job. Another plausible reason is that those who wish to work will find it necessary to have fewer children so that they do not have to spend their daytime at home. For these women, there is a necessity for conscientious efforts in birth control and in spacing their children. These two explanations are in no way mutually-exclusive. As will be shown later, both contribute significantly to the desire to work.

The survey contains data which permit us to explain more precisely the motives behind mothers deciding to work or not to work.

Table 6.3 Reasons for working and not working after marriage and at time of interview, Survey 1972

<u>Immediately After Marriage</u>		<u>At Time of Interview</u>			
Reasons for Working	Reasons for not Working	Reasons for Working	Reasons for not Working	Reasons for Working	Reasons for not Working
1. Need money 50.2%	Housework 45.1%	Need money for children 32.3%	Housework 45.4%		
2. Nothing else to do too much time 34.5%	Pregnant 13.6%	Need money for self 31.6%	Caring for children 35.4%		
3. Enjoy work 4.2%	Husband objects 12.0%	Nothing else to do, too much time 24.0%	Not healthy enough 8.0%		
4. Habit 4.2%	No money needs 7.0%	Helping out relatives 4.1%	Husband objects 3.1%		
5. Independence 2.0%	Not healthy enough 3.1%	Enjoy work 3.5%	No money needs 1.2%		
Total Cases 1236	919	1027	1225		

Several important points can be noted in Table 6.3. The need for money, initially to set up a family and later for the children constitutes by far the most important reason for women working. This is 50.2 percent when they were just married and 64 percent at the time they were interviewed. Factors such as the hope that work may bring enjoyment and independence do not appear to be important reasons for work. They constitute less than 10 percent of the cases. Indeed, the feeling of an obligation to help out relatives, presumably in their shops or factories is more significant than the enjoyment of work as a factor attracting mother to work.

An important category of working wives are those who felt they had too much time and nothing else to do. This is 34.5% when they were just married and 24.0% when they were interviewed.

These are women who were not pregnant immediately after marriage and did not have many children so that they were relatively free. Since the proportion of all working wives in this category is so large, it seems that the direct explanation proposed above relating mothers' employment and number of children born is supported. However, the need for money becomes more and more important as the duration of marriage becomes longer and as children need to be brought up.

The proposition that in a modernized, and industrialized society, women who wish to attain equal status with men often tend to become career-oriented is not supported by the data presented so far. This may yet to become a reality in the future but at present, Hong Kong women who are employed work mainly for necessity and secondly to occupy their time.

A survey of the reasons for not working shows that housework is very important. Forty-five percent of all wives who did not work after marriage felt that their work in the house kept them fully occupied. This increased slightly to 45.4 percent at the time of interview. Many of these wives now have children and another 35.4 percent felt that they had to take care of their children and could not work. Even if help is available, a large proportion of mothers (67%) felt that it is not economical to employ a help so that they themselves can go out to work.

Another significant reason for not working is the objection from the husband, although the proportion of women reporting this as the main reason declines from 12 percent after marriage to 3 percent at the time of interview. But the continuous existence of husband's objections indicates that the paternal authority is still felt in the family and that some husbands consider working wives undesirable for themselves and/or for their children.

The burden of children is strongly felt. On the one hand, to care for a large number of children, a family need a large income. In Hong Kong, this income may have to be earned by both parents working. However, having a large number of children would make it difficult for the wife to free herself to work outside the family. The only work they can do would have to be done at home -- for example, the assembly of plastic flowers and garment making etc. This type of work is usually lowly paid.

Evidence considered so far indicates that there are varied reasons behind the decision to take up employment after marriage but the major reason is the need for money to provide adequately for the family. This does not mean that Hong Kong families are at the bare subsistent level of living; this indicates that the general prosperity in Hong Kong has resulted in a rise in both the standard and the cost of living, and mothers who wish to see their families enjoying this prosperity often have to work.

It is quite possible that the desire to limit their family size begin to be crystallized after they found that employment is rewarding, or when they realize, after observing their 'working-mother' friends, that to have many children prevents them from work. In this way, by providing employment opportunities, industrialization contributes significantly to fertility decline.

Education, educational expectations and fertility

Much more indirectly than was described in the previous section is the influence of industrialization on education which in term affects the attitudes and behaviour relating to fertility. We have shown in an earlier chapter that age at marriage is most certainly affected by the level of education. It can be shown here that fertility measured in terms of number of children ever born is also intimately related to education.

Table 6.4 Average number of children born by age and by education of mother, Survey 1972

Mother's Education	<u>Mothers' Age</u>			
	Under 25	25-35	35-40	40 and above
No education	1.6	3.4	4.5	4.4
Private Tutor and Primary	1.3	2.8	4.0	4.8
Secondary	1.1	2.1	3.0	3.9
Post-Secondary	1.0	1.7	2.3	3.9

It is very clear that the higher the educational level of the mother, the smaller is the number of children born to her. This is true for all ages except those aged 40 and above and had primary or private tutoring education. One of the reasons is of course the difference in age at marriage which gives those with lesser education a longer duration of married life. The other reasons relate to the impact of education on their outlook towards life, especially that of planning their future, and on their knowledge of family planning. These topics are covered in separate sections and are not analysed here.

However, what is important is that educational level in Hong Kong has been rising rapidly in recent years and is likely to continue to rise. Government is already providing free primary education in government schools and is planning a massive programme to provide enough places for all in the first three years of secondary education. Moreover, the educational expectation for children among the population has always been high, perhaps partly reflecting the Chinese traditional emphasis on education and partly reflecting the social and economic need for educated youth in the Hong Kong employment market.

Our survey shows that a large proportion of the mothers or potential mothers expect their children to have a university education, both for sons and daughters and a sizable proportion expect them to proceed to advanced training abroad. Thirty-nine percent of all interviewed expect their sons and 36 percent expect their daughters to be university educated, although most of them realize that this will be a heavy burden on the family. Some (26%) were quite determined to see that their children would be given the chance even if their economic situations may not be able to afford this.

Given these circumstances, and assuming that the relationship between education and fertility remains the same, it is very likely that the rise of educational level alone would cause a further decline in fertility in the near future.

Occupation and Fertility

The relationship between occupation (of fathers) and fertility is not as clear as that between education and fertility, although the highest occupational group - the professionals - had, in general, the smallest number of children ever born to them.

Table 6.5 Average number of children born by age of mother and by occupation of father, Survey 1972

Fathers' Occupation	Mothers Age			
	15-24	25-34	35-39	40 and above
Professional	0.8	1.8	3.6	4.2
Administrative & supervisions	1.1	2.6	3.9	4.5
White Collar	1.3	2.1	3.7	4.7
Sales	1.5	2.9	4.1	4.6
Skilled and semi-skilled	1.3	3.2	4.0	4.7
Others (fisher folks, farmers etc.)	1.4	2.5	4.7	5.9

It can be expected that professionals are the most educated and it is "natural" therefore that they have fewer children. But the average number of children born to administrators and supervisory staff is more or less the same as the number of those born to white collar workers. There is no clear pattern distinguishing them from each other. But these two groups can be easily distinguished from those employed in sales and in skilled or semi-skilled jobs who have slightly larger number of children. The unskilled and the fisher folks and farmers have the largest number of children. At ages over 25, these groups have an average of over 1 child more than the professionals.

If we consider the fertility of all those aged 40 and over as completed (total) fertility, it can be easily seen that the lower down the occupational scale, the larger is their number of children ever born. However, an average of over 4 for the professionals and the administrative-supervisories is rather high. But, the above description refers to the past performance of these groups whose fertility history dates back to periods when contraceptive methods were not as well developed as the present. It is likely that high figures as these probably would not be repeated.

In Hong Kong where many of the residents are refugees from China, it is very possible that their present occupation is not one of the same level as their original occupation before emigration. In this special case of rapid occupational mobility, to correlate present occupations of fathers with past fertility performance may not show the true intrinsic relationship between these two factors. This is perhaps a reason why the above analysis of occupational differentials in fertility in Hong Kong has not been illuminating.

Type of housing and fertility

As was briefly described in the chapter on methodology, type of housing in Hong Kong is related, to a certain degree, to the urban social structure of Hong Kong. In general, the squatters are mainly those who live in temporary structure (which may be sheds built of cardboards or tinfolids or sometimes of bricks) along the hill sides. They are mainly the poorer sections of the community. The 1971 census showed that the median monthly income of those living in temporary structures (mainly squatters) was lower (\$522) in comparison to the whole population (\$708).¹ Resettlement Estates and Low Cost Housing are occupied by lower income families and these estates are mainly, though not all, located in city fringes. The private sector includes a variety of housing types, some high class houses and flats, others of the same quality as that of the public sector (Resettlement and Low Cost Estate) while yet others are of the nature of shared accommodation. However, because rents at the private sector are usually a great deal higher than public housing and the squatters, the median income of those residing in the private sector is higher (\$788 per month compared to the public sectors' \$655).

¹ Main Report for 1971 census, p. 171 and p. 179.

Table 6.6 Average number of children born and average desired number of children by type of housing and by age of mother

Type of Housing		<u>Age of Mother</u>			
		15-24	25-34	35-39	40 and above
Private	Actual	1.2	2.4	3.7	4.4
	Desired	2.8	2.8	3.1	3.3
Low Cost ¹	Actual	1.6	3.1	3.8	5.2
	Desired	2.7	3.1	3.2	3.5
Squatter	Actual	1.7	3.1	4.6	5.2
	Desired	2.9	3.4	3.7	3.5
Resettle- ment	Actual	2.4	3.5	4.8	5.1
	Desired	2.9	3.5	3.7	3.6

Let us first consider the difference between actual number of children born and the desired number of children.

In all types of housing, the desired number of children is less than the actual number at the age 35 to 39. The difference is the smallest for the private sector, and the low cost housing estates, but becomes larger exceeding 1 child on average for those who live in resettlement estates. At ages 40 and above, the differences is well over 1 child for all sectors and reached 1.7 for those in low cost housing estates and the squatters. This implies that for the poorer population, either there was less planning of the family size or they have come to realize the disadvantages of a large family after they have given birth to their children. A more subtle implication is that, regardless of their residence, all those aged 35 and over, would have attempted to have fewer children if they could have

¹ Complicated by the fact that the household size must reach a certain level before it is qualified for settlement.

started forming their family all over again, and this is specially true with the poorer ones who now live in squatter huts and resettlement estates. Considering the actual number of children born and the desired number of children separately, it is not difficult to see that a clear pattern emerges. For practically all ages, the actual number of children born to those in the private sector is smallest, followed by those in the low cost estates and then by the squatters. The largest number of children was born to those residing in the resettlement estates. A similar pattern exists in relation to the desired number of children.

It is not certain whether or not the type of housing itself has an independent influence on the fertility performance or expectation of the residents. This is because the residents of each of these type of housing have their own particular population characteristics (for example, income, education and occupation), and it is quite possible, and in fact very likely, that it is these characteristics rather than the type of housing which influence their fertility behaviour and attitude. Unfortunately, we do not have data concerning the length of residence in these housing types and cannot ascertain their fertility performance after they have moved into these housing types. This is an area where further research can and should be done.

Summary remarks

Evidence considered so far has shown that there is a complex of social and economic factors which influence to a varying degree the fertility behaviour and attitude of Hong Kong's population. These factors can be conceptualized as an aggregate which might be conveniently called the "socio-economic status". They include occupation, education, income and work experience. The general relationship between socio-economic status and fertility in Hong Kong is similar to that of many other countries -- that is, the higher their socio-economic status, the lower their fertility.

But it would be an over-simplification to take the above as an implication that a person's occupation or income or education are themselves the direct determining factors of his fertility. This is because from a common sense point of view -- we can expect that it is the wealthier families of high social class who can better afford to have children than a poorer one. The economic as well as emotional burden of children can be more easily carried by families of better means. To imply that wealth and high class-ness directly caused a couple to restrict their births is contrary to the above common sense view. It is rather that the efforts spent to attain high levels of education and achievement are instrumental in inducing a sense of planning, a disbelief of the traditional views towards children, and a break from conventional family norms. These new attitudes together with the appreciation of the modern contraceptive techniques are probably behind the low fertility behaviour of the more well-to-do.

CHAPTER VII

BIRTH CONTROL IN HONG KONG

Over the last 2 decades, the importance and urgency of population control have been increasingly recognized. Increasing number of Government and national planners are sharing the common belief that uncontrolled population growth would nullify the efforts expended on economic and social development. Birth control began to be viewed from a different angle and its emphasis has been shifted from its concern over maternal and child health to a matter of economic and social policy. This is at least true in many Asian countries e.g. Taiwan, Korea and Singapore where birth control has become government programmes integrated into their respective population policies. Targets have been set in terms of numbers of acceptors recruited or reduction of birth rates to a certain level within a given period while success of their birth control programmes is invariably measured by the extent such targets are achieved. In Hong Kong, the initial organized effort in birth control could date back as early as 1936. The most distinguished feature of the programme is that it is medically oriented and is operating in the absence of population policies. The attitude of the Hong Kong Government has been neither pro-natalistic nor anti-natalistic and that family planning has always been regarded as something best left to the individual couples. In the last two decades, subventions and premises for family planning clinics have been provided through the Department of Medical and Health Services to voluntary agencies such as The Family Planning Association of Hong Kong and the Catholic Marriage Council but such assistance has been offered largely as part of the social-welfare programme to cater for the demand for birth-control services. Her tax, housing and abortion policies though revised on several occasions have never been designed to create the

demand. In the case of the Family Planning Association of Hong Kong which, though for many years, has assumed the role of fertility reduction, the offering of better services to the clients is receiving more attention than recruiting more clients and the ideal to promote "happy families" prevails over the rest of her other objectives. Thus, similar to the experience of the many Western countries, fertility decline in Hong Kong can largely be regarded as the outcome of demographic and social pressure brought about by rapid industrialization.

Given the size and age structure of the fertile population, the fertility depends mainly on the efforts of the couples to space or to limit the number of births. These efforts are reflected by the extensive use of contraception to prevent conception or of abortion to terminate a pregnancy before maturity.

Data available from this survey indicated that only 3.7 percent of the women reported to have aborted their pregnancies some time before, and that the tendency to abort was positively related to the age and parity of the women but negatively related to their education attainment. It is the author's subjective opinion that this figure has been under-reported to such an extent that meaningful analysis cannot possibly be taken and that the extent abortion was resorted to as a method of birth control remains to be a guess-work.

However, data on contraception was quite different. Contraception is now regarded almost as an essential part of life among friends and relatives of an average woman in Hong Kong. At least, it is the subject that can be discussed without causing embarrassment, and data obtained through the Survey should be considered reliable.

The extent contraception is used depends on three main aspects a) the desire to control family size b) the knowledge and availability of contraceptive methods and c) the attitude towards contraception. Each of these will be elaborated under the Hong Kong setting.

A) The desire to control family size

We start our analysis with Hong Kong's ideal family size. When women in their quinquennial age-groups were classified according to their number of children desired, a bimodal distribution with modes corresponding to 2 and 4 was observed. This bimodal distribution indicated that the whole population was actually composed of two distinct groups. One group responded to the process of economic and social development and were much more aware of or currently experiencing the increasing cost and the decreasing benefits of having children. Consequently they were more in favour of small-sized families. They were the younger women, women currently under 35 to whom the burden of raising children was most strongly felt. The mode thus invariably corresponded to 2. Another group of women were less responsive to the same impact. These were the older women, women above 35. To them the cost of raising children was comparatively low or more remote and many were probably enjoying the benefits of having grown-up children. This largely explains the desire for larger families giving a modal value of 4. The mode of the whole distribution was also 4 because of the age structure of the population in which greater weights were attached to the latter group of women.

Table 7.1 Percentage distribution of women by number of children desired by age-groups, Survey 1972

<u>Age</u> <u>Age</u>	<u>No. of children desired</u>									
	N.A.	1	2	3	4	5	6	7	8 & over	N.I.
Under 25	0.4	2.6	<u>32.1</u>	30.2	23.4	-	0.8	-	0.8	9.8
25 - 29	0.3	1.9	<u>33.0</u>	28.9	25.7	0.5	0.5	-	0.8	8.4
30 - 34	0.6	2.5	<u>30.3</u>	25.4	21.4	2.2	0.9	-	2.2	14.6
35 - 39	1.5	1.0	21.8	17.3	<u>31.0</u>	2.3	1.3	0.2	1.9	21.8
40 - 44	1.2	1.4	15.6	17.4	<u>25.8</u>	2.1	2.3	0.5	3.2	30.5
45 - 49	3.5	1.5	16.0	12.7	<u>26.2</u>	3.5	2.2	0.3	4.0	30.2
All women	1.3	1.7	23.8	21.1	<u>26.0</u>	1.9	1.4	0.2	2.3	20.3

N.A. Those born infecund

N.I. No information

Examination of the same table shows that having 4 children as the ideal family size was just a temporary phenomenon. It would certainly be shifted to 2 if we excluded women above 44 over half of them had already passed their reproductive span of life. Ideal family size having a modal value of 2 may be established in the very near future. It is also noticed that women were more inclined to prefer even numbers as their ideal family size. Since the distribution was very much positively skewed, the average ideal family size would still be 3 even when women above 44 were not considered.

Comparison of ideal family size with actual size shows that women in Hong Kong were not too successful in planning the size of the families. Many had their family size larger than their ideal size despite the fact that ideal family size was often over-reported.

Table 7.2 Percentage distribution of women by no. of living children and by whether or not they had exceeded their ideal size, Survey 1972

<u>No. of children living</u>	<u>Those not reached ideal size</u>	<u>Those just reached ideal size</u>	<u>Those exceeded their ideal size</u>	<u>No. of women</u>
0	100.0	-	-	166
1	91.9	8.1	-	285
2	49.0	50.7	0.3	345
3	32.2	48.7	19.1	314
4	5.3	63.4	31.3	268
5	6.5	18.4	75.1	185
6 & more	8.1	8.0	83.9	224
All women	43.7	32.1	24.2	1,787

Note: women failing to give response or born infecund had been excluded.

As expected, the proportion of women having exceeded their ideal family size increased with parity order. This demonstrates poor or inefficient planning among the more fertile women. To many, although the burden of having too many children was felt, they were either unable to control or the decision to control came too late. It was further observed that among the high parity women, there was an increasing tendency for them not having been satisfied with the current number of children. These were probably those women who remained unaffected by Hong Kong's economic and social development. To them, children were more regarded as assets rather than liabilities.

The failure to control family size was at least partly attributed by the desire to obtain a given sex pattern of the children, or to achieve a given number of male children to carry on the family lineage. In fact, preference for male children could still be observed. For instance, although the majority (68%) preferred equal number of boys and girls, 25 percent preferred more boys than girls compared with 5 percent who preferred the otherwise. Additional indices for male preference are given in Table 7.3 which provides conclusive evidence of a greater eagerness for male children. Such eagerness, though must have been much weakened, still exists in present day Hong Kong.

Table 7.3 Male preference, Survey 1972

	<u>Number</u>	<u>Percentage</u>
No. of women expecting another child	567	100
No. of women preferred a male child	243	42.9
No. of women preferred a female child	139	24.5
No. of women who would continue to try for a boy if the coming child be female	31	$31/243 = 12.8$
No. of women who would continue to try for a girl if the coming child be male	7	$7/139 = 5.0$

Not only the currently married women were in favour of sons to daughters, higher education attainment were also expected of sons rather than of daughters. For instance, while 33 percent of the mothers hoped their daughter to have at least gone through secondary school education, only 42 percent expected their daughters to receive university or higher education; corresponding figures for sons were 31 percent and 46 percent respectively. The slightly higher education expectation of sons is believed to be associated with the general concept that males are still the

sole supporters of families and that higher education attainment is taken to mean greater economic independence. The achievement of sons is still relied on as a more reliable source of economic security at old age.

While ideal family size reflects the general attitude of having children but conditions in actual life are never ideal. Thus, whether a woman wants additional children or not depends on a multiplicity of social, economic and biological factor prevailing at a given period of time. It would be still consistent that a woman should decide to limit family growth although she had not attained her ideal family size. Study of the proportion of women desiring no more children is important for two reasons. Firstly, the desire to limit family growth at the existing level is the prerequisite for a substantial fertility decline in Hong Kong in which the proportion of high order births was too high in relation to its low birth rate. Secondly, the proportion of women desiring no more children pinpoints the potential demand for contraceptive appliances, in particular, the applicability of permanent contraceptive methods. We believe that the most crucial variables determining whether a woman desires more children or not are her age and the number of children she has had.

Table 7.4 Percentage of woman desiring no more children by age and by parity order, Survey 1972

<u>Age</u>	A		<u>Parity</u>	B	
	<u>% Fertile women</u>	<u>% All women</u>		<u>% Fertile women</u>	<u>% All women</u>
Under 25	19.4	20.0	0	10.5	24.1
25 - 29	36.8	40.4	1	25.2	37.6
30 - 34	65.2	71.7	2	56.5	65.1
35 - 39	85.1	88.5	3	78.5	83.8
40 - 44	95.2	96.9	4	91.9	94.4
45 & 49	97.1	98.8	5 & over	94.1	96.1
All women	65.0	74.0	All women	65.0	74.0

From Table 7.4 A and B, it was observed that the idea and advantages of a small sized family were generally appreciated. For instance, over $\frac{1}{2}$ of the fertile women with two children would not want any more and over 85% of those with more than two children had been satisfied with the current number of children they were having. At relatively young ages say 25-29, about 40 percent of the women expressed they would not like additional children. This applied to over 80 percent of those 30 and over and 65 percent of all fertile women in the community.

B) Knowledge and availability of contraceptive methods

Informational and educational activities aiming to motivate couples to contraceptive practices have been mainly the responsibilities of the Family Planning Association of Hong Kong. Prior to 1966, the most effective channels of mass communication such as the radio and television were used on a very limited scale. Even radio interviews were not frequent except on very special occasions while emphasis was placed on posters, pamphlets and newspaper advertisements mainly on clinic hours and locations. Personal motivations were carried out by field workers in the Resettlement and Low Cost Housing Estates. The main publicity campaign on family planning were the Chinese Manufacturer's Association Exhibition and the Fisheries Exhibition. Since 1966, not only the then existing channels of communications were intensified, new approaches in the form of film shows, contests, and telephone enquiries were developed. Family planning messages began to be broadcast through the radio and the television on an increasing scale. But the most important changes were the motivational activities of the field-workers who began to be stationed in the Maternal and Child Health Centres. Success in persuading mothers to adopt family planning methods in these Centres had led to the intensification of efforts to motivate potential mothers in certain big Government and Government-assisted hospitals, which later developed

into the Post-partum Programme. Since late 1960's, family planning messages have also been disseminated through the 'community approach' through talks, seminars, film shows and discussions among community leaders, factory workers, villagers, social workers and students. Division of labor to disseminate the idea of family planning into the different strata of the population has developed into specific programmes such as the Rural Project, Industrial Project and the Family Life Education project. Such projects are being carried out in full swing.

After so many years of publicity campaign, contraception was nothing new to the married population in Hong Kong. And this term was readily understood without much explanation except for less than half percent of the women who knew nothing about contraception. According to Table 7.5, modern methods of contraception were much more readily recognized especially the pills and the IUD which had been heard by over 80 percent of the women. Among the traditional methods, condom and diaphragm were most popular. Over 3/4 of the women knew the existence of sterilization and 11.5 percent had been sterilized. The folk methods on the whole were not widely known and even few know how to practice them. In fact, the most well-known methods seem to resemble those recommended by the Family Planning Association of Hong Kong which for the last 5 years has given special emphasis on the use of pills, injectable and sterilization. Increasing knowledge on these methods might have been the result of its publicity campaign.

Table 7.5 Knowledge of contraceptive methods,
Survey, 1972

<u>Methods</u>	<u>Self-mentioned</u>	<u>Heard of</u>	<u>Knew how to use</u>
Pills	70.4	88.9	62.6
IUD	49.6	82.1	32.4
Injectable	28.5	67.2	25.9
Sterilization	20.6	77.2	41.4
Vasectomy	14.6	62.3	-
Condom	16.3	49.6	21.6
Diaphragm	28.4	70.5	23.4
Tablets	7.4	22.1	10.4
Jelly	6.3	24.8	-
Rhythm	9.9	39.6	16.3
Withdrawal	1.5	10.4	4.2
Douche	1.9	11.8	4.4
Abstinence	20.6	77.2	41.4

In Hong Kong, not only contraceptive appliances were widely known, most of the methods were easily obtainable and are afforded by practically all women resorting to contraception. For instance, contraceptive pills are freely available with or without doctors' prescription in drug stores which supplied other contraceptive appliances that require no special skill in their operation, e.g. tablets, condom and jelly. To the more well-off couples, the pills, IUDs and injectables were supplied by private medical practitioners. Those wishing to be sterilized could also make their own arrangements with their doctors in some private doctors at their own will.

Provision of contraceptive services have been facilitated by the wide spread network of family planning clinics which are located in practically all Maternal and Child Health Centres and in many of the Resettlement and Low Cost Housing Estates. In these clinics, all reversible contraceptive methods were offered for the choice of clients after consultation with the doctors whose services were rendered free while contraceptive appliances were charged at about $\frac{1}{4}$ of the market prices. Even such could be waived in case of difficulties. Women applying for sterilization through these clinics were usually referred to Government or Government Assisted hospitals for the operation. Normally, these operations were confined to women above 30 with two or more living children. But this rule may be relaxed under special circumstances at the discretion of the doctors in charge of the operating theatres.

To meet their demand, women resorting to contraception could at least secure the required services from 3 main sources, the drug store, the family planning clinics and the private medical practitioners according to their own requirements. Except for sterilizations the cost of the operation may be prohibitive if performed in private hospitals, reversible contraceptive appliances are being supplied both conveniently and cheaply. Barriers such as the problems of transportation, distribution and cost existing in other developing countries were not found in Hong Kong. Thus, the extent contraception was used depended almost exclusively on the determination of the couples, their attitude towards contraception and the acceptability of the methods used.

C) Attitude towards contraception

Despite the fact that small-sized families were much more appreciated and the desire for male children much weaker compared with her neighbouring countries, approval of contraception was not as high as expected. In 1972, the current rate of disapproval was 7 percent and had not exhibited any obvious improvement since 1967.

Study of the correlates between attitudes towards contraception and other social characteristics did not help much in the absence of obvious trends related to such variables. Table 7.6 outlines the characteristics of those women who were more prone to approve or to disapprove contraception.

Table 7.6 Disapproval rates, Survey 1972

<u>Characteristics</u>	<u>Rate</u>	<u>No. of women</u>
A) <u>Women more in favour of contraception</u>		
Women aged 25-29	5.95	370
Budhists & women without religion	6.10	852
Women with Secondary Education	6.11	393
Women wanting no more children	4.50	1,066
Women of Shanghai origin	4.65	43
B) <u>Women more in disfavour of contraception</u>		
Women aged 45-49	8.73	401
Women without formal schooling	8.37	968
Christian	12.07	116
Women desiring more children	10.43	575
Women of Chiu Chow or Fukinese origin	11.25	240
All women	7.44	2,270

It would appear that women disapproving contraception could be found in all social classes. They bear only very poor relationship with the education attainment, religion and age. The absence of close relationship between social characteristics and attitude towards contraception demonstrated also the absence or organized opposition against contraception. For example, the catholics who were supposedly against artificial contraception were not found to hold different ideas from women of other beliefs.

On the other hand, christians or protestants who were regarded as advocates of family planning gave an exceptionally high disapproval rate. Of the 169 women who disapproved contraception, 57 or 34 percent had practiced some form of it at some time. Assuming that only those who approved contraception would put it into practice, the fact that they expressed their disapproval after having practiced contraception hinted the operation of the side-effects or unpleasant experience of birth-control methods. In a large number of studies, side effects of contraceptive methods have been the major cause of discontinuation. Change in attitude towards contraception because of side effects was not unrealistic. We could then argue that the attitude towards contraception was mainly determined by individual differences, perhaps by the personal need of the women since it was observed that women desiring more children showed a very high disapproval rate, whereas the lowest disapproval rate was found in women desiring no more children. Perhaps, to many women, the decision to approve or to disapprove was linked up with their personal requirements and consequently this matter was not viewed in its proper perspective.

Understanding the nature of disapproval of contraception, it would not be surprising to find the co-existence of high disapproval rate and high practice rate* as demonstrated by the Christians whose practice rate and disapproval rate were both the highest.

The practice of contraception

With easy communication channels and convenient access to supply sources, the population is committed to wide-spread use of contraception. Sixty-five percent of the women had practiced birth control sometime in the past. The proportion of these ever users increased with the age of women up to 40 since older

* Defined as the number of current users of contraception per 100 women.

Table 7.7 Percent starting contraception by pregnancy levels and by age, and percent, ever practiced by age, Survey 1972

When started to practice	Current Age						All Women
	Under 25	25-29	30-34	35-39	40-44	45-49	
Before the 1st preg.	17	8	7	2	4	2	6
After the 1st	47	39	24	11	9	8	20
2nd	28	30	24	18	16	10	20
3rd	6	16	19	21	15	18	17
4th	x	5	15	23	15	13	14
5th	x	1	8	12	15	14	10
6th	x	x	3	6	13	11	6
7th or more	x	x	x	7	13	21	7
forgotton	x	x	x	x	x	1	x
Those ever practiced	49	69	75	78	67	47	65

x less than ½ percent

women had experienced a longer period of married life. The proportion of ever-users in age group 45-49 was 47 percent compared with 78 percent in age group 35-39. If the former was taken as the contraceptive experience of married women in the previous generation, then very obviously the likelihood that married women will have practiced contraception before they complete their reproductive cycle would probably be more than double. The proportion of ever users also increased with parity up to the 4th order and for similar reasons declined after having four living children.

The increase in the likelihood of younger women ever practiced contraception was partly the result of education differentials between the younger and the older population. Increasing education opportunities for the female population could date back as early as mid 1950's when the emphasis of the Government education programme was placed in the provision of primary school education. Since primary school education must be undergone before adolescence, the fact that younger women were more responsive to this rising educational opportunities by virtue of their age had given rise to the negative relationship between age and education attainment. According to Table 7.8, women's education attainment had exerted a positive effect on the use of contraception even after the age effect had been brought under control. Education differentials should be regarded as the most significant factor explaining the increasing proportions of ever users among the younger women.

Table 7.8 Percent ever-users by age and by education attainment, Survey 1972

Education attainment	Under 25	25-29	30-34	35-39	40-44	45-49	Total
No formal schooling	31	59	69	76	64	45	61
Primary	44	68	76	81	70	50	66
Secondary	60	75	77	81	78	53	72
Post-Secondary*	x	x	x	x	x	x	84
All women	49	69	75	78	67	47	65

* There were only 46 women with Post-Secondary education in the sample.

One striking fact to be observed was that Hong Kong women started to practice contraception at very low pregnancy levels, and such a tendency was most acute for those before 30 years of age. Among those who chose to plan their families before 30, 11 percent and 42 percent started before and after their first pregnancy respectively. Corresponding percentages declined notably with increase in age of the women. This was to be expected in a community where contraception began to be practiced on a large-scale some time in 1964 as evidenced by the beginning of a significant and genuine fertility decline in 1965. Women 30 and over in 1972 were then 23 and over. Many of them had been married and probably had become pregnant more than once. It was but natural that the majority of the women could not start contraceptive practices at the same pregnancy levels as their younger counter-parts who were just in time to receive the impact of an expanding family planning programme. This was consistent with the fact that the older women were found to be inefficient planners of their family size. According to the statistics of the Family Planning Association of Hong Kong, less than 15 percent of the clients were registered for spacing births before 1965 compared with 75 percent in 1972.

But the most important explanation was associated with change in the attitude towards having children. For those under 30, not only did they prefer number of children, they also preferred fewer number of sons. Young women who chose to practice contraception, were selective and presumably more alert to such changes and they were able to take positive action before their ideal family size had been attained.

Current practice of contraception

In a community where abortion, being regarded as both immoral and illegal, cannot be practiced on a large-scale as a measure of birth control, fertility rates are directly related to the prevailing use of contraception which depends, in turn, on the level of acceptance and the continuation of use. Table 7.9 might then be considered as a summary measure of the achievement of the birth-control programme in Hong Kong by 1972.

Table 7.9 Percent, ever practiced and practicing by age, Survey 1972

Age	Steri- lized	Using reversible methods	Total current users	Ever users	Discon- tinued*
Under 25	0.7	35.1	35.8	49	27
25-29	5.1	43.5	48.6	69	30
30-34	15.2	46.1	61.3	75	18
35-39	15.6	48.0	63.6	78	18
40-44	17.9	36.3	54.2	67	19
45-49	9.7	18.5	28.2	47	40
All 15-49	11.5	38.1	49.6	65	23
15-44	12.2	42.0	54.2	69	21

* Computed using the numbers of ever users as denominators.

It was readily observed that the 'practice rate', parallel to the ever-practice rate, increased with the age of the women before 40. After 40, it declined partly because of the increasing proportion of infecund women to whom contraception was unnecessary and partly because of the low level of acceptance among women

above 40 as given by the sharp drop in the proportion of ever users corresponding to these age groups. The overall practice rate were 49.6 percent and 54.2 percent for age group 15-49 and 15-44 respectively.

Comparing the proportion of ever-users to that of current users demonstrated that high level of discontinuation was found in women before 30. To these women, the rates of discontinuation for planning pregnancies were the highest with very large proportion of these women using contraception for spacing purposes. The very high proportion of discontinued users for women above 44 was obviously due to the increasing proportion of women passing out of the reproductive age.

In addition to the increasing desire for small-sized families the use of contraception for spacing was extensive for women under 30.

Table 7.10 Percent of spacers by age, Survey 1972

<u>Age</u>	<u>Among those wanting more children</u>	<u>Among those currently practicing</u>
Under 25	28	62
25-29	33	43
30-34	22	13
35-39	13	2
15-49	27	18

The fact that a greater proportion of spacers among those wanting more children in age group 25-29 compared with those under 25 was related to the pattern of family growth. For women under 25, there bound to be a greater proportion of zero parity women and consequently the practice of contraception at this stage was considered relatively too early. According to Table 7.7, women generally would start contraception after having the first child.

On the other hand, it is expected that there should be an increasing proportion of women of the first parity order in age group 25-29. Since one child was generally not enough, women would tend to practice spacing if the thought of regulating family size or the timing of their births should occur to them. For very obvious reasons, proportions of spacers among those wanting more children or among those practicing declined with increase in age.

The increasing use of contraception for spacing purposes was partly attributed by the presence of the Maternal and Child Health Programme and the Post-partum Programme. In practically all Maternal and Child Health Centres and in most of the big Government or Government Assisted hospitals, motivational efforts rendered by the field-workers of the Family Planning Association of Hong Kong have been greatly intensified since late 1960's. An overwhelming proportion of mothers had been persuaded to accept family planning soon after deliveries while they were attending the post-natal sessions or bringing their newly-borns to the Maternal and Child Health Centres for vaccination or health examination. Published data of the Family Planning Association of Hong Kong revealed that acceptors recruited from these settings were much younger and of low parity order than those recruited elsewhere.

Current practice rate classified by parity order of the sampled women also throws light on the prevailing large proportion of high parity births in Hong Kong. According to the birth statistics of the Hong Kong Registrar General, births of the 5th and above order accounted for 21.4 percent of total births in 1971. This proportion is too large in relation to the relatively low birth rate. Explanation lies on the fact that women of high parity order were not efficient planners of their family size. According to Table 7.11 the practice rate among the fertile women increased with parity order up to the 4th order and declined after reaching this level. Among those not wanting more

Table 7.11 Percent practicing by number of living children, Survey 1972

<u>No. of living children</u>	<u>Among those not* wanting more children</u>	<u>Among those fertile women</u>	<u>Among all women</u>
0	139	14	12
1	152	37	31
2	105	56	45
3	78	58	44
4	73	65	45
5 & over	62	61	37
All parity	81	51	38

* Women infecund had been excluded

children, the decline in the practice rate started even sooner. Decreases in the proportions practicing contraception corresponding to the high parity women suggest that unplanned pregnancies were more likely for these women. Whereas for women of low parity order, the number practicing was found to be greater than those wanting no more children suggesting the very extensive use of contraception for spacing purposes. Similar to the analysis based on the age of the women, the whole population is composed of two distinct groups, the low and high parity groups. The former is more able to make use of contraception to regulate not only the number but the timing of their births, whereas the latter group is reluctant or has not yet been motivated to take positive actions. To many of them, the occurrence of an unplanned birth is still left to chance.

Differentials in the use of contraception

There were, of course, differences in the current use of contraception among women of different strata. Table 7.12 summarizes the highest and the lowest practice rates corresponding to women of different characteristics. It could readily be observed that women in the 'Low Practicing Category' were generally more conservative or under-privileged. Consequently they were less responsive to the impact of industrialization and modernization. For instance, women residing in the New Territories, though rapidly being urbanized, have, nevertheless, retained a certain amount of rural characteristics. Moreover, the less convenient communication and supply channels of contraception had not been inducive to the wide acceptance of contraception. On the other hand, women residing in New Kowloon especially those accommodated in the Low Cost Housing Estates demonstrated an extra-ordinary high practice rate. Explanations could be many fold. Possibly, over-crowdedness in these Estates has acted as a disincentive for family growth since the majority expressed their worries over providing living space for an additional child. Moreover, Public Housing Estates have long been regarded as a convenient source of labour supply and a large proportion of women were working wives who were either employed as factory workers in the same Estates or in the nearby satellite towns. The desire to remain in the labour force has boosted the use of contraception. Again, the motivation effort of the Family Planning Association of Hong Kong has been for many years expended on such localities. The establishment of Maternal and Child Health Centres accompanied by family planning clinics in the same Estates has encourage the use of contraception in making the supply of contraceptive appliances readily available.

Table 7.12 Women with the highest and the lowest practice rates,* Survey 1972

<u>'Low' Categories</u>	<u>Practice Rate</u>
Women residing in the New Territories	34
Women residing in the squatters	34
Women without formal education	32
Women with ancestor worship	35
 <u>'High' Categories</u>	
Women residing in the Low Cost Housing Estates	44
Women residing in New Kowloon	41
Women located in New Kowloon residing in Low Cost Housing Estates	50
Christian	47
Women with Post-Secondary Education	51
All women	38

* Only reversible contraceptive methods

The impact of education upon the use of contraception could hardly be over-emphasized. So far it has been the strongest determinant affecting the practice rate which ranged from 32 percent to 51 percent corresponding to women without formal schooling to women with Post-Secondary education. The cause for such observation was not exactly known. However, certain hypothesis pending confirmation, can be postulated. Better educated women in general had a higher expectation of their children and that future success of their children vary according to the inputs in terms of emotional strain and financial resources were much more recognized by the better educated women. Such a recognition could have acted as a strong incentive to depress fertility through the adoption of contraception.

The practice rate varies among women of different religious beliefs. In Hong Kong, many women were converted to christians after they had gone through their primary or secondary schools run by the missionary. The fact that the highest practice rate was found in the christians was believed to have been mainly due to the close relationship between education and religion, since christians were much better educated than women of other beliefs. The effect of religion on the practice of contraception would have been slight had the education effect been controlled.

Popularity of methods used

Of the methods currently employed, the most popular ones were the pills followed by sterilization and these two methods accounted for 36 percent and 23 percent of all current users respectively. The former was mainly employed by the younger women ranging from 71 percent for those under 25 to 21 percent for those 40-44. The pill has been one of the most effective methods of contraception, the fact that it can be discontinued easily has made it increasingly favoured by young women who wish to space their births. Sterilizations, being irreversible, must be operated on women determined to have no more children and were therefore adopted by the older women.

Table 7.13 Percentage distribution of current users by methods used, Survey 1972

<u>Methods</u>	<u>Under 25</u>	<u>25-29</u>	<u>30-34</u>	<u>35-39</u>	<u>40-44</u>	<u>45-49</u>	<u>15-49</u>
Condom	10	9	7	5	8	4	7
Pill	71	53	38	30	21	25	36
Tablets & Jelly	3	2	5	5	4	3	5
Diaphragm	1	2	3	3	5	2	3
Rhythm	6	8	6	7	3	4	6
IUD	5	8	8	13	12	13	10
Injectable	-	2	5	4	4	4	3
Folk methods	2	5	4	8	9	12	7
Sterilization	1	11	25	25	34	34	23
	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>

Note: Because of rounding errors, the sums of the percentages are not necessarily 100.

Changes in the popularity of methods was largely the result of changes in the availability of new and/or improved products introduced at different times and such trends could be discerned by observing the different periods in which women started their methods of contraception.

Table 7.14 Proportion of current and ever users by methods used at selected periods, Survey 1972

<u>Methods</u>	<u>Before 1960's</u>	<u>1960- 1964</u>	<u>1965- 1969</u>	<u>1970- 1972</u>	<u>Current users</u>
Condom	13	6	5	6	7
Pill	19*	35	52	67	36
Tablets & Jelly	6	7	5	2	5
Diaphragm	22	17	3	1	3
Rhythm	10	6	2	6	6
Withdrawal	2	1	1	-	1
IUD	7*	13	19	6	10
Injectable	1*	1	3	4	3
Abstinence	12	5	5	2	6
Sterilization	9	10	6	6	23
	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
No. of acceptors	187	309	518	370	854

* The relative high percentage of acceptors using these methods might have been due to memory failure.

Before 1960, traditional methods such as the diaphragm, condom and tablets were in great demand. Folk methods such as withdrawal and abstinence were not infrequently used. In the early 1960's IUD and the oral pills which were commonly referred to as the modern methods began to be used on an increasing scale, at the expense of both the traditional and folk methods. Since then, the popularity of the oral pills has continued whereas the decline in the popularity of IUDs has been appreciable in the late 1960's during which removals of devices were frequent owing to the side effects and had publicity. The very large proportion

of women having been sterilized as at 1972 should not be taken as the result of its increasing popularity. Sterilization, because of its irreversible nature, had registered an additive figure and should not be compared with other reversible methods which could be changed or abandoned at the discretion of the users.

Acceptability of methods

While the proportion of current users of specific method indicates the popularity of the method, the proportion continuing with a given method should be a better measure of its acceptability, which is dependent upon the effectiveness, side effects, convenience and the duration of use. Unfortunately it is not possible to take into consideration the duration of use since women started to practice their respective methods at different times and at different ages. Hence acceptability could only be perceived through the degree of satisfaction experienced and revealed by women using the methods. Table 7.15 shows the proportions of satisfied current users of specific methods.

Table 7.15 Proportions of satisfied current users by methods used, Survey 1972

<u>Methods</u>	<u>% satisfied</u>	<u>Percent continuing</u>	<u>No. of users</u>
Oral pills	94	50	404
IUD	96	39	116
Injectable	76	53	37
Condom	84	44	76
Diaphragm	89	19	28
Tablets	86		29
Jelly	80	15	20
Rhythm	94	53	65
Withdrawal/Douche	100	61	10
Abstinence	<u>90</u>		<u>69</u>
All methods	91	<u>854</u>	45

Using the proportions of satisfied users as a measure of acceptability is also biased as those who had abandoned the use of the given methods owing to side effects had not been taken into account. However, data available from the same table could nevertheless be used to indicate the likelihood that certain method would be continued or discontinued. For instance, high satisfaction rates with the IUD, oral pill and the folk methods suggest that there will be greater persistence in the continuation of use of these methods whereas low satisfaction rates among the current users of injectables and other traditional methods suggest greater likelihood of discontinuation in the near future.

Sources of information of contraceptive methods

Study on the sources through which methods used for the first time because known revealed that 48 percent of those ever-users of contraception came to learn their respective methods from the Family Planning Association of Hong Kong and her associated hospitals and clinics. The methods most recommended through these sources were the IUDs before 1966 and pills and sterilizations at present. The second most important source has been friends and relatives, most probably satisfied users indicating the importance of mouth-to-mouth communication. This source has provided information to 25 percent of the ever-users. Ten percent of the users obtained the information from private doctors whose emphasis has been mainly on the pills. Another 10 percent were self-learnt and they relied heavily on the folk method e.g. abstinence and also the rhythm while pills were practiced on a very limited scale compared with women who obtained similar information from other sources. Welfare agencies did not contribute much in recommending specific birth control methods; their roles were limited to referring patients to the family planning clinics when considered necessary. Equally limited was the function of mass-communication channels such as

television and radio which had not been adequately utilized until 1972. Similar to those of the welfare agencies, family planning messages broadcast through these channels were generally motivational and only rarely were specific methods recommended or even mentioned. Some women might have learnt their respective contraception methods through their own reading or advertisement of drug-companies. But according to Table 7.15, the effects of these sources were slight.

Table 7.16 Percent distribution of ever-users of contraception by sources of information on methods first used and by methods used for the first time, Survey 1972

Ever-users	Sources of Information							Total
	FPA & associated hospitals & clinics	Friends and relatives	Private doctors	Self-learnt husband or wife	Welfare Agencies	Others	Forgotten	
Condom	2	1	x	2	x	x	x	6
Pill	22	15	6	1	1	1	x	47
Tabs. & Jelly	1	2	x	1	x	x	x	5
Cap.	6	1	1	x	x	x	x	8
Rhythm	1	1	x	2	x	1	x	5
Folk methods	x	1	x	4	x	x	1	7
IUD	10	1	1	x	x	x	x	12
Injectables	1	x	x	x	x	x	x	2
Sterilization	5	1	1	x	x	x	1	8
Total	48	24	10	10	1	3	4	100

x Less than ½ percent,
All percentages were worked out by using all ever-users (1,472) as the denominator.

The supply of contraceptive appliances

In addition to being the main source disseminating family planning messages, the Family Planning Association was also the most important supplier of reversible contraceptive appliances catering for the demand of 35 to 50 percent of all current users (Table 7.17). We argue that over 40 percent of the current users were taking advantages of her cheap and specialized services. First of all, in many of the instances, women obtaining supplies from clinics located within the Maternal and Child Health Centres or hospitals failed to recognize that they were the family planning clinics of the Association. In fact, the majority of the current users of IUD and Injectables classified under "Other and Unknown Sources" should have been included under this very source. In the case of the IUDs, the Association was almost the monopoly of this method of contraception except for a small number of devices having been issued to private medical practitioners and an equally small but unknown number having been inserted outside Hong Kong. As for injectables, not only was the cost prohibitive, the fact that this method should be offered on a highly selective basis must have prevented it from being practiced on any significant scale outside the clinics of the Association.

Through providing quick and convenient services, the drug stores were able to compete rather successfully and were sharing 28 percent of the contraceptive market. The main merchandise distributed through this source were the pills, followed by the condom and the tablets in descending order. Private doctors were not too active in the distribution of contraceptives and they were providing such services to only 6 percent of the current users who probably could afford and/or require special attention. The supplies prescribed through them were mainly pills, although IUDs and injectables were also supplied on a very limited scale.

Besides the three main sources just mentioned, the rest were current users of folk methods and rhythm method, and the supply of contraceptives was therefore unnecessary.

Table 7.17 Percent distribution of women by sources of supply of contraceptive appliances and by methods used, Survey 1972

<u>Methods currently used</u>	Sources of Supply					
	FPA	Drug stores	Private doctors	No need of appliances	Other & unknown sources	All sources
Condom	36	55	1	1	7	100
Pills	39	39	8	x	15	100
Tablets & Jelly	12	71	2	x	14	100
Diaphragm	75	4	x	x	21	100
Rhythm	8	9	x	78	55	100
Folk methods	x	x	x	100	0	100
IUD	60	x	12	0	28	100
Injectables	49	3	11	0	38	100
	35	28	6	15	15	100

Note: Because of rounding errors, the sums of percentages are not necessary 100.

The decision to practice or not to practice

It could be recalled that with changes in the roles and relationships between in-laws, Hong Kong wives have become the real mistress within the household. Of the many decisions made in the family, practically all were determined by the wife or the husband or more frequently by both. Of course, the weights vary depending on the convenience in the execution of the decision by either one of the couples.

Since contraception is a matter which concerns more of the wife, the husband was rather passive. Of the 1,124 current users of contraception, only 2 percent of the decisions to practice was initiated by the husbands alone compared with 22 percent initiated by the wives. Although 69 percent of these decisions were reported to have been precipitated by both, it would appear that the role of the husbands was largely confined to giving support or approval. The influence of in-laws or parents was non-existent indicating little motivation or encouragement was to be expected from them.

Among those who were not practicing contraception, increasing influence of the husbands was observed. While joint decisions accounted for 57 percent, decisions not to practice contraception coming separately from husbands and wives had changed to 6 percent and 9 percent respectively. The negative influence of husbands was believed to be related to the fact that to some couples at least, contraception had adversely affected their normal sexual relationship and it had become a matter of mutual concern.

Surprisingly, the negative influence coming from the in-laws was found to affect only couples in the young age groups i.e. before 25. Four percent of those not practicing was reported to have been the decision of their parent-in-laws. Explanation was difficult but it was logical to suppose that

since these women (only 4 of them) were young and probably had not attained their ideal family size, they would have given up or postponed the practice of contraception to plan for additional children by themselves, the persuasion of their in-laws had, by chance, put their implicit decision into effect. On the whole, influence of the in-laws, whether positive or negative, being similar to many other decisions made within the household, were practically non-existent. The decision to practice or not to practice rests almost entirely on the women to a lesser extent on the couple. Age variations were not substantial.

Reasons for not producing

To family planning administrators, the knowledge on the causes for not practicing contraception was crucial for programme implementation. Table 7.17 was constructed to uncover the reasons that tend to act as obstacles for future expansion of the programme.

Table 7.18 Percent distribution of women not practicing by age and by reasons, Survey 1972

<u>Reasons</u>	<u>Under 25</u>	<u>25-29</u>	<u>30-34</u>	<u>35-39</u>	<u>40-44</u>	<u>45-49</u>	<u>Total</u>
Wanting more children	91	81	59	37	10	8	51
Believe to be infecund	-	1	5	25	56	65	24
Against nature	3	2	6	9	9	10	6
Against religion	-	1	-	-	2	0	1
Side effects	5	10	9	16	10	5	9
Inconvenient	1	2	1	-	1	1	1
Objections from some body	1	2	5	2	0	1	2
Absentee husbands	-	-	13	11	13	9	7
	100	100	100	100	100	100	100

Note: Because of rounding errors, the sum of percentages are not necessary 100.

Among those not practicing, 51 percent were found to be planning pregnancies which constituted the main reasons for not practicing contraception. The significance of this factor, as expected, declined with increase in the age and parity order of the women ranging from 91 percent to 8 percent for women under 25 and women 45-49 respectively. The figure 8 percent corresponding to the latter group of women was alarmingly high and probably reflected the traces of a gradually passing fertile generation. But the proportions desiring additional children as a reason for not practicing was still too large especially for those in their late thirties. The solution rests upon the change of attitude towards raising children. This requires constant motivational efforts since social pressure generated through industrialization has had little effect upon them. Twenty-four percent hoped or believed themselves to be infecund but many of them were still exposed to the risk of accidental pregnancies as evidenced by the fairly large proportion of high-parity births in Hong Kong. In fact, in a large number of cases especially those between 35 to 44, their infecundity had not been ascertained. Educational information directed to this group would appear to be a sound strategy. Fear of side effects was also prohibitive and they seemed to operate most strongly upon women in their late thirties who had demonstrated the highest practice rate. Sixteen percent of the non-current users of this age group had either been told or had personal experience with side effects compared with an average of 9 percent. The majority of them were supposedly dissatisfied users of contraception. Needless to say, the urgency calling for improved methods of contraceptions could hardly be over-emphasized. Meanwhile, greater flexibilities to facilitate change of methods and the adoption of sterilization should be of considerable help in the short-run. In addition, 7 percent of the non-current users were temporarily infecund because of absentee husbands and thereby contraception was unnecessary. The above reasons for not practicing accounted for 91 percent of all causes.

The rest were more related to their attitude towards contraception which was considered either against nature or against religious belief. Non-current users because of interventions from members of households were few.

Classification of the reasons for not practicing contraception is meant to give an overall view of the relative importance of the reported causes. Difficulties arise because the reasons reported were not mutually exclusive. For instance, the desire for an additional child might have been the outcome of objections from husbands against contraception and the adverse attitude toward contraception might have stemmed from her personal experience of side effects of contraceptive methods. It is the authors' opinion that each of the above mentioned causes should be considered not individually but in conjunction with the rest.

Compared with the neighbouring countries, Taiwan, Korea and Singapore the family planning in Hong Kong has a relatively longer history. Appreciable increases in the number of acceptors could date back in the mid 1960's with the introduction of the IUDs and the pills coupled with the intensification of motivational and publicity campaigns. It is now timely to evaluate the achievement of the programme (inclusive of programme and non-programme effects) in terms of proportions practicing contraception. In addition to giving a summary measure of the cumulative efforts of the programme Table 7.19 together with the reasons for not practicing (Table 7.18) attempts to focus the attention on the main requirements for future planning.

Table 7.19 Proportions infecund, practicing and not practicing by age, Survey 1972

<u>Age</u>	Women in- fecund including those sterilized	<u>Practicing</u>			<u>Not Practicing</u>			<u>Total</u>
		<u>Spa- cers</u>	<u>Limi- ters</u>	<u>Un- known</u>	<u>Wanting children</u>	<u>Wanting no children</u>	<u>Un- known</u>	
Under 25	1	22	12	1	55	6	3	100
25-29	5	19	22	3	38	11	2	100
30-34	18	6	38	1	21	13	2	100
35-39	22	1	45	2	10	17	3	100
40-44	35	1	35	-	2	25	1	100
45-49	57	-	18	1	1	21	1	100
All women	25	7	30	1	18	17*	2	100

* 27 percent would start practicing in future, thus the 'hard core' population was estimated to be 13%.

It is generally claimed that after a family planning programme has been in operation for some years, those who are more responsive to the family planning messages will have adopted contraception and that the 'hard core' population will begin to unveil themselves. This hard core population is now conveniently defined as those women wanting no more children and yet will not practice contraception. In 1967, similar survey was carried out and this 'hard core' population was estimated to be around 23 percent.* Subsequent analysis of the characteristics of these women revealed that they were the older women and, as a rule,

* Original estimate was 30 percent including those women infecund.

were less educated. Projections based on such analysis had predicted that since they were in the older age groups, many would soon be moving out of their reproductive cycle. Comparison of the proportions of these 'hard core' population between the years 1967 and 1972 largely confirmed such predictions while the change in the proportion desiring more children were slight for the last 5 years. In fact, the reduction in the proportion of the hard core populations was only partly the result of their natural completion of the reproductive cycle. Our present survey, by sampling women 15-49 had included almost all women who were under 45 in 1967. The substantial reduction of the hard core population from 23 percent to 13 percent was a distinguished achievement and probably marked the beginning of a new page of Hong Kong's contraceptive history.

Future prospects are bright. In the following 10 years, it will be expected that those who were less affected by industrialization in the last two decades will all have moved out of their reproductive age. Their place will be filled by those women who will have been fully exposed to the same impact. The social pressure brought about by rapid industrialization has demonstrated their effects in raising education attainment and employment opportunities of the population. With continual housing shortage, and ever-increasing cost of raising children, choice will have to be made between having more children or to maintain or enhance the standard of living. Improvement in the education standard of the population will enable the couples to make more rational choices which will depress further their ideal family size. Government's direct participation in the provision of family planning service in the very near future is undoubtedly a very strong stimulus. Increase in the inputs expanded upon a "semi-motivated" population should yield results which would otherwise come slowly though eventually. On the other hand, organized opposition against contraception is practically non-existent while individual oppositions through

ignorance and superstitions are few and rapidly fading since they are mainly confined to the old-age groups. Hence, assuming that abortion laws will not be modified to any significant extent, future demand for contraceptive services will certainly be on the increase. Expansion of the family planning programme involving Government participation has ensured that their increased demand will be met.

CHAPTER VIII

SUMMARY AND CONCLUSIONS

Having described the variables that have affected the contraceptive behaviour of the population, it is time to relate the mechanisms through which the relationship between industrialization and fertility decline was established in Hong Kong in the last two decades.

Based on the findings of this survey and other relevant statistics, it can be seen that industrialization has affected fertility in a number of ways, many of which are inter-related. For the sake of convenience and ease of exposition, we call the more direct consequences of industrialization the 'Primary Variables'. These include the following. (See Diagram 8.1)

a) A rise in the female participation rate

This is largely the result of the expansion of the manufacturing and its related industries. This variable, in addition to causing changes in the 'Secondary Variables', has induced changes in variables of the same level such as urbanization and overcrowdedness as explained below.

b) Urbanization and overcrowdedness

This has long been regarded as a condition for and the consequence of economic development. Urbanization in Hong Kong has been mainly achieved through 'international migration' i.e. from Mainland China. The economic stability and its sustained growth have always been the 'pull' factor attracting large number of immigrants causing housing shortage and overcrowdedness. The latter has been intensified by the establishment of factories in certain resettlement estates where supply of labor is more adequate.

c) A rise in the education standard of the population

Increase in Government's revenue as a result of rising income and the increase in demand of better qualified labor in the process of industrialization have been the underlying forces responsible for the expansion of education programme which have demonstrated their effects in the almost complete elimination of illiteracy in Hong Kong.

d) Eagerness for pecuniary rewards

People's aspirations for higher standard of living has been aroused in the process of rising income. Increased earnings have enabled many to share some of the luxurious consumption practices which are being pursued with still greater eagerness. This eagerness has further developed into a strong desire for pecuniary rewards with the result that wealth is not only regarded as the pre-requisite for a higher standard of living but a means of security. Thus, the function of raising children as a source of security at old age has been correspondingly weakened.

As postulated in Chapter I, some of these primary variables are the consequences of as well as the conditions for industrialization and they have, so far, constituted the framework within which the forces conveniently called the 'Secondary Variables' develop.

One of the secondary variables is rising age at first marriage. Rise in the education level coupled with the increasing job opportunities have imparted upon most of the adolescent girls not only the right to decide their own marriages but a sense of responsibility to support their own families. Study of those women marrying late has largely confirmed this hypothesis. Of course, rising age at marriage may have been the direct result of modernization accompanying industrialization.

In reducing the proportion of women exposed to the risks of conception in the younger age-groups, rising age at first marriage is considered to be the only secondary variable affecting fertility directly. Through changing the pattern or the timing of child-birth, women marrying late has had greater opportunity to respond to the impact of the motivational and educational campaigns of an expanding family planning programme. Despite the absence of conclusive evidence we claim that its effect has been cumulative and is not limited to the short-run.

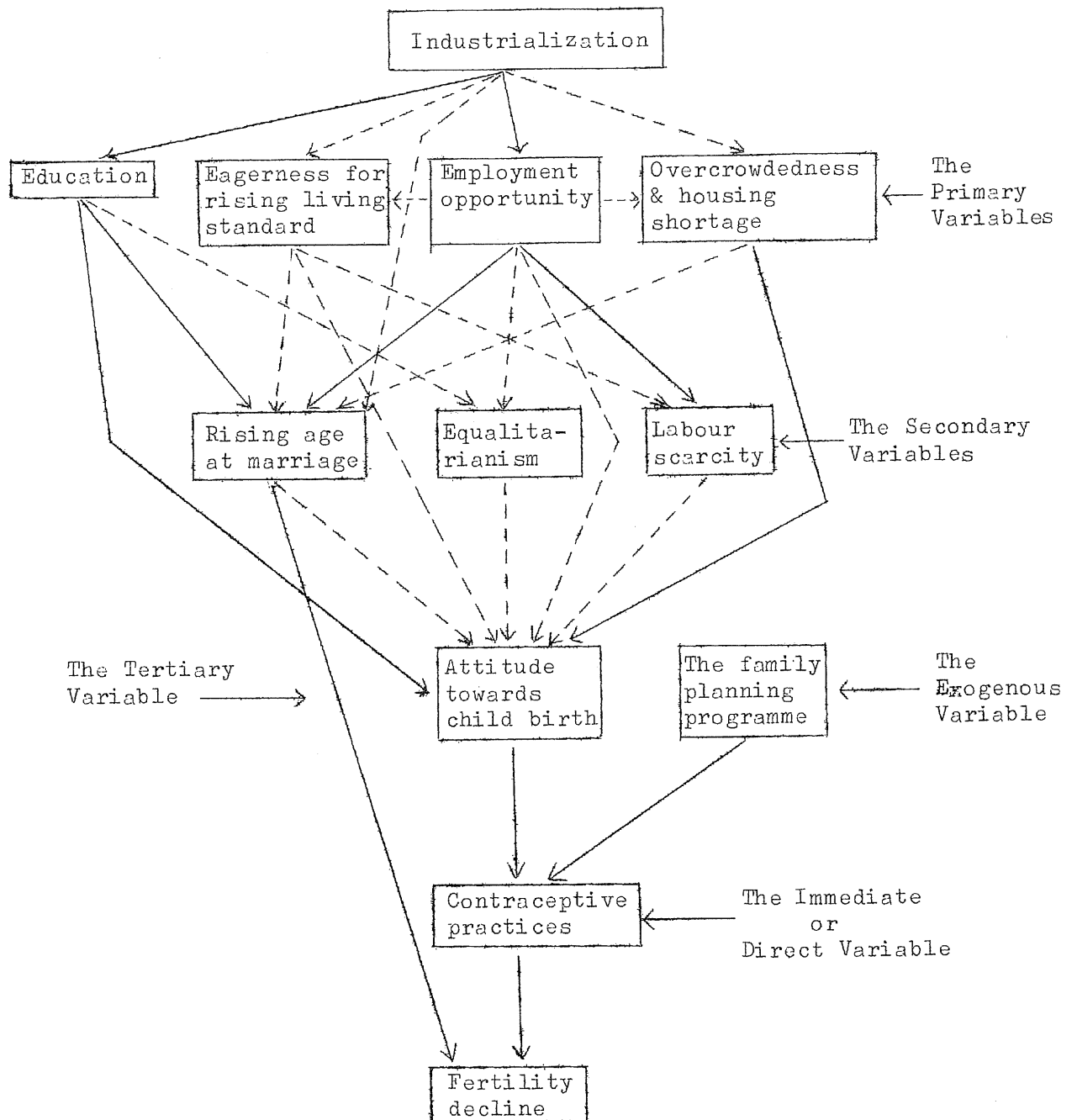
The other two variables so far considered are the labour shortage and the development of equalitarianism. The former is certainly the consequence of the rise in the female participation rate and the latter has been fostered by the rise in the level of economic independency and education attainment especially among the female population. Equalitarianism manifests itself in changing the relationships among husbands and wives, parents and children and in-laws resulting in a greater communication flow between husband and wife, and a cultivation of mutual independency between parents and grown-up children. These resultant factors, coupled with labour scarcity have operated in such a way as to generate a negative attitude towards child bearing which is called the 'Tertiary Variable'.

The attitude towards child-bearing has been affected by both the primary and the secondary variables. In the case of the former, eagerness for a higher standard of living and the prevailing poor housing standard have been competing with childbirth while the improvement in the education level has certainly helped to dispense with the traditional concepts of a large family norm. In the case of the secondary variables, labour scarcity resulting in the shortage of domestic servants and equalitarianism have either increased the cost or decreased the benefit of raising children. A change from the traditional

attitude towards raising children has always been the pre-requisite for the reduction of fertility rates since it constitutes the potential demand for contraceptive or abortion services.

The practice of contraception, as referred to in the text, is the immediate variable determining Hong Kong's fertility level on the assumption that abortion has not been practiced to any significant or has remained constant in Hong Kong during the last two decades. The level of contraceptive practices, besides being dependent on the strength of the potential demand brought about by changes in the attitude towards raising children, is also determined by the supply of these services. At this point, the contribution of the family planning programme has been tremendous. Still, it would be over-simplified to say that the organized effort of the Family Planning Association has been confined to making provision for the supply of these services. Through advocating and legitimizing the use of contraception, the Association has helped to create and subsequently satisfy the effective demand. However, important though her activities have been in regulating the fertility level, her existence can only be remotely related to the process of Hong Kong's industrialization and is more adequately described as the exogenous variable.

Diagram 8.1



Note: Casual relationships indicated by dotted lines were not resulted from direct application of factual data. They have been established on the basis of intimate knowledge on the Hong Kong population.

Using Diagram 8.1 as our model of analysis, we can easily explain why industrialization in Hong Kong has had the greatest impact upon the younger generation. Although the variables ultimately depressing fertility are likely to be much more complex than what has been shown, yet from a common sense point of view, they should be expected to operate more vigorously among the younger rather than the older generation. Looking through the primary variables, we can see that the opportunities to go for higher education and pre-marital employment have been most favourable to the younger women though overcrowdedness and eagerness for a higher standard of living might not have discriminated women of different ages. As far as the secondary variables are concerned, labour scarcity is not strongly felt by those who are in the early stage of family formation. It is also observed that greater communication flow between husband and wife and a decreasing dependency upon grown-up children have been gradually established among women in the younger age groups. Even the development of the independent factor i.e. the family planning programme has been inevitably in favour of young couples who were probably more in time to take advantage of its specialized services. That the factors develop within and outside the process of Hong Kong's industrialization have acted in such a way in favour of the younger couples must have produced the observed differences in fertility decline among the younger and the older segments of the population. It was the residue or diffusion effect that has led to the fertility decline in the older age groups.

Limitations

The above model largely explains the relationship between Hong Kong's industrialization and its pattern of fertility decline. What is deficient is the establishment of casual relationship with factual data among variables of the same level or of different levels, not to mention the amount of contribution attributed

by each of these variables towards fertility decline. This is so since many of these variables are not subject to objective measurement though their effects in strengthening the operation of other variables or directly depressing fertility are very obvious. Consequently, many of the causal relationships indicated in Diagram 8.1 are necessarily hypothetical.

The actual effect of industrialization in Hong Kong have been obscured by a sizeable proportion of immigrants who arrived at Hong Kong after their late maidenhood. The forces generated during the process of industrialization must have acted in a very much different way compared with those who have been under the same impact even though both were of the same age. This disturbing factor was supposedly held responsible for some of the irregular frequency distribution which, in turn, have imposed severe restrictions on more subtle analysis.

Our project has been ambitious in relation to the resources allocated. We aimed to collect information to serve a multiplicity of purposes, for theoretical analysis, programme administration and some just informational. Consequently, it was not possible to pursue certain variables in greater depth, which we consider would have been crucial to throw more light on a number of specific issues.

Admittedly, this is a general report aiming to describe the forces operating within a theoretical framework. It is hoped that subsequent analysis will yield much more illuminating results.