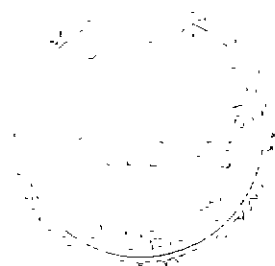


***DEMOGRAPHIC AND SOCIAL EFFECTS  
OF POPULATION POLICIES  
IN EUROPE***

***Henry P. David and Daniel Pierotti***

**Editors**



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**Index**

DEMOGRAPHY  
PUBLIC POLICY  
BIRTH RATE - trends  
POPULATION GROWTH  
(4) EC  
EUROPE  
BULGARIA  
FRANCE  
GERMANY, Federal Republic of  
Demographic Republic of  
HUNGARY  
SWEDEN  
SPAIN  
GREECE  
PORTUGAL  
IRELAND  
DENMARK  
ITALY  
UNITED KINGDOM

## *Table of Contents*

	page
Editors' Introduction	1
Contributors' Overview and Recommendations	3
Country Notes:	
Bulgaria	11
France	13
Germany, especially GDR	17
Hungary	19
"Third child", 1974, Marriage Cohort	23
Sweden	27
Authors and contributors	41



# Introduction

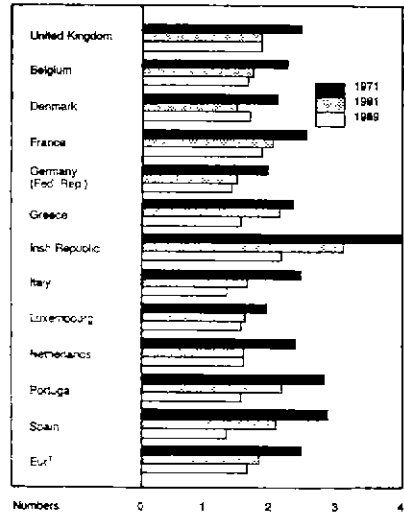
Henry P. David and Daniel Pierotti

There has long been a close interrelationship between population policies, population development, and family planning. Demographers, economists, and policy-makers have traditionally been concerned with the potential effects of macro-level policies on changes in population. Public health and family planning specialists have tended to focus more on micro-level individual and couple reproductive behaviour, and the possible influences of changes in socio-cultural values and lifestyles. Historically, warnings about the effects of declining birth rates have been heard throughout Europe for more than a century. Erenbenik (1989) cites the publication of *Population et Civilisation* in France in 1890 and *The Family and the Nation* in England in 1911.

As the standard of living continues to improve, fewer children are being born. Most countries of Europe, especially the industrialized nations, are not replacing their populations - regardless of size, geographic location, or political system. Fertility levels are below replacement. Data in the files of WHC/EURO indicate that in the European community in 1990, Ireland had the highest birth rate (18.1 per 1 000 population), but that figure represented a decline from 21.8 in 1970. The lowest birth rate in 1990 was recorded in Italy, 9.9 per 1 000 population, down from 18.1 in 1960.

The total fertility rate, representing the average number of children that would be born alive to a woman during her lifetime, has been steadily declining in most European countries below the 2.1 generally considered to be replacement level.

Figure 1 shows the average number of children per woman in European Community countries in 1971, 1981 and 1989. For the European Community as a whole the average number of children per woman fell by one-quarter between 1971 and 1981 (from 2.43 to 1.80) and fell by a further 12 percent between 1981 and 1989 (to 1.58). In only Denmark and the United Kingdom did the average rise between 1981 and 1989. The Irish Republic had noticeably the highest average number of children per woman for each of the three years shown in the chart, whereas the Federal Republic of Germany had the lowest average in 1971 and again in 1981 (level with Denmark), but Italy had the lowest average in 1989. Between 1971 and 1989 the average number of children per woman fell the most in Spain (by 55 percent) and almost as far in Greece and Portugal.



¹ Eurostat estimate

Source: EUROSTAT

During the last two decades, several European countries developed and/or improved existing pronatalist incentive programmes designed to try to motivate their populations to have a second and, especially, a third child to maintain population stabilization. However, there has been only limited consensus on what constitutes a pronatalist population programme, its varied components, and the variables that interact between public policies and private reproductive behaviour. Even less agreement exists on longer-term assessment of the demographic effects of pronatalist population policies or the factors impinging on their effectiveness.

It was the objective of the 7-8 October 1991 Copenhagen Consultation on the Third Child in Europe to consider the prevailing situation in Europe, note already existing scientific studies and make recommendations for consideration by UNFPA and WHO/EURO. Participants included Rudolf Andorka (Hungary), Elisabeth Bruyer (France), Henry P. David (USA), Daniel Pierotti (SFP/WHO/EURO), and Karl Schwarz (Germany).

As an overview of the present situation, the consultants developed a brief paper, defining their understanding of what constitutes population policy in terms of demographic, psychosocial, and legislative policy perspectives. Types of population policies are described and historical concerns are noted along with below-replacement fertility levels and the likely reasons for them. Pronatalist incentives and disincentives are cited and the effect of immigration is briefly mentioned along with political considerations. Of particular relevance is continuing access to modern contraceptives and safe legal abortion for all women regardless of income. Finally, the question is raised on whether a pronatalist population policy is advisable and what alternatives exist.

To examine existing evidence on which policies have or have not affected demographic trends, brief country reports are appended from Bulgaria, France, Germany, Hungary and Sweden.

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# *Consultation on Population Policies an overview*

Henry P. David, Rudolf Andorka, Elisabeth Bruxer,  
Karl Schwarz and Daniel Pierotti

Population policies are the product of political discussions. While their formulation often tends to be ambiguous and macro-level in intent, the results produced depend on micro-level changes in couple perceptions of costs and benefits of having children, values, and resulting behaviour. In theory, the means for achieving such endeavours are numerous. In actual practice, policy implementation is severely limited by administrative, political, technological, economic, and ethical constraints.

One difficulty with population policies is that governments rarely enunciate precise goals. The policy context can range from non-interference in private reproductive behaviour to a totally coercive approach, mediated by controls ranging from traditional cultural influences to required acceptance of fertility regulations.

The major objective of pronatalist policies is to encourage early marriage and larger families, expressly resulting in a higher total fertility rate in future years. Such pronatalist policies should not be confused with traditional social welfare policies designed to ease the burden of childbearing and childrearing and not specifically oriented to influencing reproductive behaviour or achieving demographic goals. In some cases policies may have both demographic and social welfare aims. Strong pronatalist policies may be associated with restrictions on the availability of effective contraceptives and legal abortion.

## **Types of Population-Relevant Policies**

As noted by Höhn (1989-1991), population-relevant policies generally encompass three types of activities:

- . Direct population policies specifically designed to influence demographic behaviour, such as nuptuality and fertility, control of the level and composition of immigration, or availability of modern health service to reduce mortality.
- . Indirect population policies unintentionally influence demographic behaviour. Examples are policies affecting social security, education, labour market, housing, regional planning, and women's emancipation.
- . Adaptation policies, designed to cope with specific situations, such as population aging (e.g. reform of the pension system, provisions for long-term care, health insurance) and/or the integration of foreign migrants.

Qualitative and quantitative evidence of the impact of direct, indirect, and adoptive population policies on demographic behaviour is difficult to differentiate from the many variables influencing private reproductive decisions (David, 1982). Demeny (1986) has suggested that unintended demographic effects of indirect policies are particularly strong in a social welfare state and might be more influential than direct policies.

### **Historical concerns**

The concern in many European countries with population stabilization or maintaining replacement level fertility echoes the fears of demographers facing declining birth rates in the 1930s. It was assumed then, as some hold now, that reproductive behaviour was strongly influenced by economic perspectives and that reductions in economic costs of children would encourage couples to have a third child.

Countries as diverse as Germany, Italy and the Soviet Union, discouraged in the past celibacy and emigration, restricted access to contraception and legal abortion, encouraged early marriage, and subsidized large families. Most of these programmes failed to achieve their stated goals.

With the emancipation of women and better access to modern contraceptives and legal abortion, the standard of living improved and birth rates declined. Experience in each country is usually reflective of its historical, cultural and religious traditions, changes in lifestyles, and perceptions of the family and the value of children in a modern society.

### **Below-Replacement Fertility levels in Europe**

Most European countries have experienced below-replacement fertility levels since about two decades or longer. Initially, the response of policy-makers was muted by the belief that the state and society should not interfere in the personal reproductive decisions of individuals and couples - regarding the number and spacing of their children.

Below-replacement fertility levels are likely to be perceived differently by different persons. There are no absolute values and no purely demographic perspectives.

Diverse governmental and nongovernmental institutions initiated varied endeavours at different times to increase benefits for families with children. These have included family allowances, tax allowances, maternity and/or paternity benefits, child-care allowances, reduced working hours for mothers, job guarantees, places in crèches and kindergartens, subsidies in housing, forgiveness of housing credits, and other benefits in kind (e.g. Heilig et al., 1990; Höhm, 1991; David, 1992).

In some countries, the level of fertility rates (in terms of period rates) increased after the implementation of such policies. However, it is not clear exactly how cohort fertility rates were influenced by specific policies, particularly, first, second, and third order parities (e.g. Andorka, 1991; Chesnais, 1985; Festy, 1986; Hoem, 1990; Schwarz, 1988).

## **Reasons for Below-Replacement Level Fertility**

Numerous theories have been advocated by specialists in different social sciences to explain the complex causes of the decline in fertility in advanced societies. Many contradict each other. The following variables have been suggested as particularly influential in demographic behaviours through private reproductive decision-making. Other factors, not so readily apparent, may also be involved.

### **1. The Emancipation of Women**

Emancipation policies encourage women to achieve a good education and to find self-realization in a well-paid job and career (Höhn, 1991). Marriage is perceived as risky and for many women (not all) attaining job security and career marketability precede having a family.

### **2. Economic Aspects**

Costs and economic benefits have been studied in diverse societies. The increasing costs of educating children and the declining monetary benefits (to zero) for the parents are persuading many couples to have fewer children. (As Demeny has noted, it is not that the "benefits" of having children have disappeared, but rather that many benefits have slipped out of parental hands and accrue to the advantage of states and corporations).

### **3. Motivations**

Current socioeconomic condition of changing motivations for childbearing are likely to be more persuasive in influencing private reproductive behaviour than public population policies when access to modern contraceptives and legal abortion is readily available. There is also a growing awareness that population policies can influence personal motivations in different and sometimes unexpected ways.

### **4. Private Perspectives**

Couple perspectives and future orientations are likely to play a major role in effective contraceptive practice. Personal values are probably as important as lifestyle changes in confronting traditional and religious cultural mores. Ecological considerations are also believed to play an important role in motivating responsible sexual behaviour.

## **The Immigration Factor**

The level of immigration and population policies are interrelated. How immigrants are accepted in a given society will, to a large extent, depend on economic conditions at any given time. For example, many economic problems are influenced by the aging of the population, resulting from below-replacement level fertility.

Also to be considered are national policies regarding citizenship and payment of benefits to wives and children of foreign workers residing in their countries of origin; problems of assimilation, etc.

It is realistic to assume that immigrants will continue to arrive for largely economic reasons and that resources will have to be provided for their assimilation and integration into society.

### **Political considerations**

Below-replacement level fertility is not a short-term problem, and its consequences will not be experienced by society for several decades.

How likely is it that policy-makers in a democratic society, concerned with elective politics, would be willing to stake their careers on demographic issues when few people think more than a few years ahead - and then more in terms of their family's wellbeing?

Still, it is important to recall that democratic societies tend to be more sensitive to individual rights than are totalitarian regimes imposing policies from above.

### **Pronatalist Incentives and Disincentives**

Incentives are defined as monetary or non-monetary inducements for voluntary reproductive behaviour that conforms to specified population policies. Inducements may be small or large, in cash or kind, parity specific in amount for everyone or based on a percentage of income, one-time or incremental, or in any combination.

Disincentives are negative sanctions of diverse types actually incurred, or perceived as likely, as a consequence of deciding to violate policy-specified reproductive behaviour - such as importing and/or purchasing contraceptives illegally or obtaining a legally restricted abortion. Mandatory parental support of childbearing costs may also be a disincentive.

Although the terms are widely used, it has been difficult to formulate generally accepted definitions of pronatalist incentives and disincentives. Definitions vary according to the intentions of the designers of such measures or the perceptions of the persons affected. In addition to country-specific cultural aspects, incentive programmes need to be defined in terms of type, oriented to whom, when, and in what form.

### **Access to Modern Contraception and Safe Abortion**

Access to modern contraception and legal abortion, major pillars of female emancipation, permit a prolonged decision-making process jointly with the male partner.

As a result, the number of unplanned children being born has decreased considerably. In some countries such as the Netherlands, less than 5% of all births are said to be unplanned.

Alternatives to childbearing or postponing childbirth - and improving a couple's standard of living by reducing or postponing the costs of child-rearing - have been greatly facilitated by improvements in reproductive technologies.

## Realizing Access to Modern Contraception and Safe Abortion

Suggestions to increase the birthrate by prohibiting the availability of modern contraception and legal abortion have been implemented by several authoritarian regimes, including, in recent years, former Soviet Union, Vichy regime in France 1940-1942, Germany during World War II, and Romania during the last 30 years. In all cases, the birth rate rose for only a brief period and then resumed its decline (e.g., David, Fleischhacker and Höhn, 1988. Hord, David, Donnay and Wolf, 1991).

As noted at the 1990 Tbilisi Conference (WHO, 1991), unwanted pregnancy and unsafe abortion constitute major public health problems. "Making abortion a crime has little impact on its incidence but greatly prejudices its outcome. Restrictive legislation does not affect the birthrate in the longer term, but is associated with high rates of unsafe abortion leading to ill health, infertility and death". The draconian Romanian restrictions on abortion did not prevent women from attempting to terminate unwanted pregnancies. By 1989, there were 159 maternal deaths per 100.000 live births, the highest recorded figure in Europe; more than 85% of maternal mortality was due to induced abortion (Hord, David, Donnay and Wolf, 1991).

Findings from a double blind longitudinal study of 220 children born to women twice denied for the same pregnancy in Czechoslovakia, and pair matched controls showed that unwantedness in early pregnancy and subsequent compulsory childbearing has a detrimental effect on psychosocial development with socially undesirable longer-term implications (David, Dytrych, Matejcek and Schüller, 1988).

The evidence is persuasive that restricting access to modern contraceptions and legal abortion has only a short-term effect on the birthrate as couples find ways to adjust to realities.

### Is a Pronatalist Policy Advisable?

Only fertility well above replacement level could reverse the aging process. For example, to achieve a cohort TFR of 2.1, 10% of women could remain child-free but 40% would have to have 3 or more children. Or, if 60% of women had two children, 20% would have to have three plus children. Present studies indicate that the proportion of women who wish to have 3 or more children continues to diminish in most European countries.

European studies of the value of children suggest that it would be extremely difficult to persuade a significant number of couples to have additional children, particularly a third child. The economic costs for the parents and the loss of potential career opportunities for women are powerful factors favouring a small family norm.

To compensate for such costs, pronatalist policies would require increasing budgets. These policies would compete with the growing financial burden of the elderly, who constitute a sizeable voting block in most countries.

## **Alternate Considerations**

Many indirect population-relevant policies could be implemented to benefit families. Working hours could be better coordinated with operating hours for crèches and kindergartens. More childcare facilities could be established in large offices and commercial enterprises. Models of job-sharing, flexible part-time work, and computer coordinated work at home could be explored. Fathers could be encouraged to assume more responsibilities so that not only mothers would be faced with the problem of reconciling job and family needs (e.g., Höhn, 1991).

A timely set of population relevant policies is needed to cope with the many issues of population aging. Reform of the pension system and health insurance is politically sensitive, as are efforts to increase productivity of an aging labour force.

Whatever policies are tried, they should be based on a national consensus and be non-coercive.

## **Recommendations**

1. It is recommended that WHO/EURO continue the process of sharing experiences about the demographic and social impact of population policies in Europe.
2. It is further developed that WHO/EURO publish a collection of papers to be developed by the consultants in association with SFP/WHO/EURO.
3. Since population policies have considerable influence on health and wellbeing, it is recommended that the observations be brought to the attention of policy-makers.
4. Finally, it is also recommended that \$ 4000 be provided to facilitate a further analysis of the HL 1974 Hungarian data set, as described in the appended paper by Carlson and Kamaras.

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# *Demographic Effects of Population Policies in Bulgaria*

Dimitar Vassilev

The reduction of the TFR in Bulgaria follows a very constant trend, independent of financial stimulating measures (Figure 1). The demographic transition of the Bulgarian population started in 1912 and developed on a very intensive scale in the period between the First and Second World Wars. From the postwar period (1950), no significant change was detected. Pronatalist measures were practically without effect or had only a very short, temporary effect. Fertility behaviour was influenced more by the sudden changes than by the changes themselves (disappointing measures, non-adaptation and surprise).

There is **no significant change in the preferred number** of children by couples. There were more than 10 different surveys on the opinion of the families concerning their size (including the World Fertility Survey). All these studies have shown that the desired number of children varied by narrow margins (between 2.05 and 2.25 children in the different categories). No one group at any time has shown more than 2.25. It is unacceptable to think that this trend could be influenced by so simple a measure as an increase of 10-15% in the family income. During the last 25 years the desired number of children in Bulgaria remained unchanged in comparison to the changing financial situation of the families (increased incentives and the neutralizing effect of inflation, etc.).

Bulgarian data support the concept that the incentives have a very limited temporary effect. Incentives given monthly for the second child in the family have never exceeded 10-15% of the mother's salary. The incentives for the 3rd child were about 20%. Financial help as an incentive could not compensate for the expenses of the families in connection with the care of their children.

The proportion of the children born as first, second, third, etc., remains unchanged, uninfluenced by the State's encouragement measure. Graph No. 4 presents the results of a study covering the period from 1978 to 1987 (10 years). Birth order remained unchanged despite the fluctuation of the family income (incentives or neutralizing effect of the inflation). The first child always took about 43%, the second a bit less and the third and more, the remaining percentage, but never more than 13%.

Fertile capacity of the women kept constant. Using one conditional methodology on the basis of the Bulgarian statistical data, it has been assessed that the ratio of the total possible pregnancies: pregnancies that occurred, terminated pregnancies, and full-term pregnancies, also remained unchanged during the last decade - not influenced by the financial status of the family and incentives (Figure 5).

## **Opinion of the couples on the influence of financial stimulation**

During 1980-1981 a survey was done to collect data on the opinion of couples in connection with the effect of the different measures that could influence spouses and their family in their fertility behaviour. The results are presented as Graph No. 6. The left-side of the graph shows the answers given by the women: 1 - not influenced (73.1%) by the measures, including financial; 2 - partially influenced (17.8%); 3 - encouraged by the measures, including financial (9.1%).

The same survey also collected some subjective data about the proposed character of the measures (after the answers given by the couples interviewed) that could influence the couples in their fertility behaviour. The results are presented on the right-side of the graph. The categories replying were: workers, employers, housewives, students etc. Between 60 and 80% declared they were not influenced at all but believed that some financial help could persuade them. This was not confirmed in reality, but only demonstrated how people are sometimes ready to simplify a very complex problem such as fertility behaviour, transforming the complex factors by simple financial encouragement. The next group were women who stated that housing is a decisive factor. Moral encouragement was also indicated as a possibility. It could be concluded that financial measures are provisionally acting factors, with an effective time limit.

Attempts to stimulate the birthrate by means of financial measures have to be regarded as a kind of compensation to the couple, not as an encouragement. It means that the family is getting back from society the amount of money used to feed, educate, and take care of its children. It is morally and socially motivated, not an incentive.

# *Population Policies and Fertility Trends in France*

Elisabeth Bruyer and Chantal Blayo

Sensitivity to demographic issues, and in particular the attention paid to factors affecting the birth rate, to trends in women's behaviour and to the prospects for aging, is a very marked and perhaps specific cultural component which sets France apart from other developed countries.

France appears to be one of the rare countries within the Western cultural and economic sphere to have applied, over a long period of democratic government stretching up to the recent past, policies with explicit demographic objectives.

This situation is due to specific historical conditions. The downturn in fertility began very early in France, at the end of the 18th century, whereas a similar trend did not become apparent in the rest of Europe until the mid-19th century. Owing to that "head start", France, which in 1800 was the most populous country in Europe (with the exception of Russia), had been overtaken at the end of the century by the United Kingdom, Germany and the Austro-Hungarian Empire. By 1980, net reproduction rates fell below the threshold of 1.

The economic crisis in the 1930s and the fact that the "empty generation" of the 1914-1918 war had reached childbearing age precipitated a latent crisis in the birth rate: in 1935, there was an excess of deaths over births.

In this context, a second feature developed over a long period, namely that of a current of ideas and action in favour of families (e.g. family associations, etc.). Other examples of this feature are certainly seen elsewhere in Europe, but its specific characteristic in France was that it developed at the same time as the rise in scientific demography. The phased study of populations has long nourished, supported and offered "positive" arguments for the religious and political orientations of the pro-birth movement. Bertillon, Landry and Sauvy constitute a generation of demographers engaged in public policy.

In that climate of crisis, the work of Landry and then of Sauvy was given practical form with the gradual introduction of a coherent system of social protection, including social security, family allowances, fiscal provisions and the establishment of a national institute of demographic studies (Institut national d'Etudes démographiques - INED)<sup>1</sup>.

The coincidence between the introduction of that system and the upturn in the birth rate (from 1941), together with the stabilization of the fertility rate over some 20 years at levels far higher than those seen before the Second World War, have not failed to be interpreted as an indicator of the effectiveness of pro-birth measures: "The new behaviour pattern is the sign of a new state of mind and appeared almost

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The key dates in that process are: 1932, 1939, 1942/3, 1945, 1946

immediately after the adoption of coherent family legislation; the latter thus played a major role in restoring fertility levels". "In addition, public opinion believes in this **cause-and-effect link**"<sup>1</sup>. Public opinion also believes that the recent increase in fertility is related to the increase in the number of large families.

In fact, it became clear from the mid-1950s that the new behaviour pattern has been due to the increased prevalence of medium-sized families (2 and 3 children), while the fertility of large families has not markedly increased. This "optical illusion" is interesting, because it shows that an "objective misunderstanding" can be a factor in the success of a pro-natalist policy.

More recent trends, marked by an abrupt fall in the birth rate, follow the pattern prevalent in other European countries. The nature of these fertility changes can be assessed through the birth order and has created a **third child goal**.

**Fertility of marriages**<sup>2</sup>: Has dropped in several stages:

- |   |  |
|---|--|
| Between the generations of 1950 and 1960: | - families with more than 3 children became rare from the 1950 marriage generation; the largest families were the most affected; |
|   | - this reduction in the number of large families was offset by a rise in the number of first and second children;                |
| Between the generations of 1960 and 1970  | - disappearance of large families;   |
|   | - collapse of third order births; second births begin to be slightly affected;   |
| Generations of 1970 and after             | - the reduction now affects all orders of birth, even the first, with extension of the interval between marriage and birth.      |

At the end of this process, a homogenous grouping of families (40% of married couples) around a strongly dominant two-child model is clearly apparent. Voluntary infertility, which had fallen considerably (from 18% to 11%), has begun to rise again as from the 1975 generation. Forty per cent of the fall in legitimate fertility is the result of the fall in third order births.

<sup>1</sup> cf. L. Henry, Population No. 1, 1954, p. 218

<sup>2</sup> This sharp reduction in the fertility of married couples has been accompanied by profound changes which L. Roussel has grouped under the term "**deinstitutionalization**": individual behaviour patterns are no longer referred to social norms that were previously very prevalent. This amounts to a silent "cultural revolution".

- **Disaffection for marriage.** Extramarital cohabitation is increasingly tolerated by society: in 1983-1985 two thirds of first unions took the form of cohabitation; there was a rapid increase in the number of divorces and less remarriage of divorced people.
- Birth no longer takes place systematically within a legal union; out-of-wedlock births become more acceptable.

By virtue of their extent, their nature and their coincidence with trends in other countries, these processes go far beyond a framework of cause and effect of a pro-natalist policy. Conversely, mention may be made of the "perverse" effects of measures (mainly fiscal but also single parent allowances) which, given the same income and family size, favour common-law unions.

The fall in fertility has been accompanied - paradoxically - by a fall in the resources allocated to social welfare. The age war has begun, at least so far as welfare budgets are concerned. Funds in the "family" sector, which are on the increase, are transferred to the sectors on old age and health, where expenditure that runs counter to fertility is being increased without limit.



# *Population Policies and Fertility Trends in Germany,*

with particular Reference to  
the former German Democratic Republic

Charlotte Höhn and Karl Schwarz

Until 1975, there was a great similarity between fertility trends or levels of fertility in the German Democratic Republic (EDR) and the Federal Republic of Germany (FRG). In 1965, for example, the total fertility rate in the GDR was 2.49 and in 1975 1.54. In the FRG it decreased during the same period from 2.51 to 1.45. The same is true, if we compare the final family size of birth cohort 1930 with the number of children of women born in 1940, ten years later. In the GDR, it decreased from 2.20 to 1.98 and in the FRG from 2.15 to 1.97.

By the mid-1970s it became evident that the replacement of generations would no longer be assured, particularly if the fertility decline decrease should continue. That perspective would have been disastrous for the EDR, which had lost millions of emigrants to the FRG in preceding years. In 1974, the EDR Government therefore implemented a package of measures designed to stop fertility decline. The aim was to reach at least replacement level or perhaps more. Women in the EDR were encouraged to have more children by assisting them to be mothers of at least two or three children. They should nevertheless be able to belong to the labour force with a participation rate of up to 80 or even 90%. Measures to stimulate fertility were improved until 1990. The most important measure seems to have been to organize childcare facilities for almost the entire day for children up to 10 years of age and older. In 1989, almost 90% of all children were in such centres with little or no cost to the parents. Taken together, all the measures were very expensive with some compensation attained by the low wages.

It is estimated that nearly 80% of costs of childcare costs in the EDR were covered by the State. In the FRG, only about 40% of these costs are paid by the society. The EDR policy seems to have been supported by the total population. In the FRG the situation for families also improved. But, there was constantly a strong and difficult debate regarding the type and the financial level of family policies. Today, the term "population policy" is still not accepted because policy-makers fear any possible association with the pro-natalist policies of Nazi Germany. Meanwhile, the total fertility rate in the FRG decreased to 1.4, a level which has remained rather constant in recent years. Most women born after 1950 will, by the time they are 45 years old, have 1.5 children. About 24% will probably have no children because the nuptiality rate is low and they do not want to have children outside marriage.

Post 1975 family policies have had remarkable consequences in the EDR. The highest total fertility rate was reached in 1980, at 1.94. This was largely due to a strong increase in the rates for one and two children and, to a much smaller extent, to increasing rates for children of higher parity. Other characteristics were a high rate of out-of-wedlock children, very early marriage, and a high rate of remarriage after divorce, which was always much more frequent than in the FRG. However, these trends towards higher fertility did not last very long.

After 1980, there was a continuous decrease in the total fertility rate, declining to 1.56 in 1989. For first and second children, it decreased from 1.74 in 1980 to 1.31 in 1989.

Presently, the difference in total fertility rate between the Eastern and Western regions of Germany has largely disappeared. The recovery of fertility in the EDR could not be sustained. The long-term impact can be assessed by studying fertility by birth cohorts. For women born in 1940 in the EDR, the number of children was 1.98; for birth cohorts 1945 it was 1.86, and for birth cohorts 1950 it was 1.79. For younger birth cohorts completed fertility increased moderately (plus 0.09 children in the cohort 1960) despite the many incentives in favour of more children.

The EDR experiment indicates that even strong financial and material support for the families cannot change fertility very much. The main reasons for this are:

- ready access to effective and low-cost contraceptives plus the possibility of legal abortion, which help to reduce unwanted births;
- the total economic cost of children cannot and will not be borne entirely by the state;
- the changing role of women who are now well-educated for a professional career and wish to become economically independent, e.g., in respect to pensions and in case of divorce;
- men and women desire to have life-long options in their professional and private careers, options which did not exist in former times; and
- the decline of sociocultural pressures for children and greater acceptance of unmarried and childless persons;

Certainly, the Welfare-State needs children for stability and survival. But, impersonal governmental administrations have assumed responsibility for nearly all economic risks of life, including, for example, unemployment, illness, security in old age, physical handicaps etc., which formerly were obligations of the family and other small social groups. It is now possible for people to say that their neighbours and other citizens should have the children necessary for the survival of the society. However, couples never had children for the state; they always had them for their own reasons. It is unlikely that this situation will change in the foreseeable future.

A future population decrease is also unlikely. The surplus of deaths over births of the native population will continue to be compensated by immigrants from all parts of the world. Efforts should be concentrated on early assimilation and integration of immigrants as well as on reducing uncontrolled immigration.

# *Population Policies and Fertility Trends in Hungary*

Rudolf Andorka

## **1. The development of family policies in Hungary**

In Hungary, the postwar baby-boom was short and relatively low. Period fertility rates began to decline in 1952. In 1953, a Government decree ordered the enforcement of the existing prohibition of induced abortions. Some physicians were given prison sentences. Following these measures, the TFR increased to 2.97 in 1954, but started to decline again in 1955. A 1956 decree liberalized induced abortions during the first three months of pregnancy.

The level of fertility continued to decline until 1962, when it reached 1.8; it remained at this level until 1965. The formerly very low family allowances were increased in 1965 and 1966. In 1967, childcare allowances were introduced, offering a benefit approximately equal to the minimum wage level to formerly employed mothers up to the child's 3rd birthday, following the 5 months' maternity leave with full wage. The TFR increased to 2.06 in 1968 and remained at a similar level until 1972.

A new government decree in 1973 (effective 1 January 1974) limited availability of induced abortions. Married women having one or no child could have an abortion only under special conditions; married women with 2 children could have an induced abortion on the basis of social indication. Induced abortions remained available on request for unmarried women, women having 3 children, and women above the age of 35. At the same time family and childcare allowances were increased. Fertility increased in subsequent years; by 1975, the TFR had reached 2.38. It gradually declined again, falling below 2.0 in 1980 before stabilizing around 1.8.

In the 1980s, the family and childcare allowances were increased from time to time. This was, however, barely enough to compensate for the increasing inflation. In 1985, a new type of childcare allowance was introduced, offering a sick-pay type benefit to the formerly employed mothers up to the child's 2nd birthday. Induced abortions were further liberalized in the second half of the 1980s, with social indications permitted for all women. In actual practice, social indications had always been accepted grounds for abortion.

In retrospect, population policies were rather erratic, mixing measures of liberalizing and prohibiting induced abortions and the increase of monetary benefits (the real value of which, however, tended to decline with the inflation, at least until the next increase of their nominal value).

While period fertility rates fluctuated rather wildly, the cohort fertility rates developed much more smoothly. The completed cohort fertility rate declined continuously until the birth cohorts of 1936-1940. The level of completed fertility of the birth cohorts of 1926-1930 was already below the level of simple replacement. In the cohorts born after 1940 the level of fertility was stabilized around completed cohort fertility of TFR = 1.9. A slight increase might be hypothesized for the younger

cohorts, but still remaining below the level of simple replacement.

## 2. Problems of measurement

To assess the impact of population policies, cohort fertility measures are needed. The period fertility rates fluctuate under the influence of historical events and conditions, in consequence of changes of the timing of parities, and without any influence of completed cohort fertility.

Completed cohort fertility rates are available, however, only when the cohorts attain the age of 50. Therefore, the impact of population policies on younger cohorts can be measured only many years later or estimated from the number of children born to them at the age of 35, 40, etc. Cohort fertility rates are not differentiated by the social characteristics, e.g. education of women.

Census fertility rates might be interpreted as cohort rates (number of children born) and are available in breakdown by social characteristics, (e.g. education), but they are available mostly only for married women - not for single women.

The best sources for the analysis of the impact of population policies on cohort fertility in Hungary are the longitudinal (panel) surveys of samples of the marriage cohorts of 1966, 1974 and 1983, conducted and published by the Central Statistical Office.

Even with the best demographic data it is not easy to determine the impact of the different policies, regulations of induced abortions and family benefits, as they were introduced and changed - sometimes continuously. Therefore, extreme caution is advisable when trying to determine the impact of these policies.

## 3. The impact of population policies

In 1953-56, the strict enforcement of the existing prohibitions on induced abortions had no impact on completed cohort fertility. In the cohorts, which were in their propagative ages at that time; the tendency towards a decline of completed fertility continued. The impact of the slight restriction on induced abortions is less clearly ascertained. It might be hypothesized, however, that the restriction only changed the timing of first and second parities. Therefore, the period fertility rates increased but the cohort rates did not. There were no, or almost no, 3rd and higher order children born as a consequence of the abortion restrictions.

In 1953, enforcement of abortion prohibitions had many indirect and negative effects, such as overcrowding in gynaecological wards, kindergartens, schools etc., and was very unpopular. The slight restriction of 1973 did not have the same negative consequences; only few requests for abortions were rejected and fewer unwanted children were born. Nevertheless, the restriction was unpopular among the majority of the population.

The decline of cohort fertility stopped in the generations which were in their prime childbearing ages in the second half of the 1950s, i.e., at the time of the increase of family benefits. It might be assumed that the halting of the declining tendency was due to these family benefits. It might also be hypothesized that had the benefits been higher, as originally planned, the level of fertility might have increased to the level of replacement.

The impact of family benefits can be better evaluated by using more detailed data:

- The distribution of the married women by the number of children born shows an inclination towards having 2 children. Thus, there was a shift from 0 and 1 child to 2 children, which might be due to the family benefits. Parallel to this, the decline of families with 4+ children continued. The percentage of married women having 3 children seems to have stabilized. Thus, the family benefits had an influence only in the range from 0 to 3 children, not on families having more than 3 children.
- Cohort fertility measures by the education of the married women show that the number of children born and the desired number of children increased since the 1960s at each level of education. The average fertility level did not increase, however, as the composition of married women shifted towards the higher educational categories which traditionally have a lower fertility. It might be hypothesized that the increase of the fertility of mothers in given education groups, (most of all the women having a university and secondary school education) was due to the family benefits.

#### 4. Conclusions and future prospects

It seems that the prohibition and restriction of induced abortions does not have any impact on completed cohort fertility. Abortion regulations should not be manipulated with the objective of having a higher number of children.

It does seem, however, that family benefits (financially and otherwise) have some impact on completed cohort fertility. Therefore, it might be possible to attain the level of simple replacement (probably not more) with the support of sufficiently high family benefits. The economic conditions and the culture of each society determine which benefits are the most efficient in the given country and period.

The future of fertility in Hungary will obviously depend on the overall economic-social-political development, but it might be influenced also by the family policies of future governments. Given the existing economic problems and the goal of reducing the expenses of the state budget, the prospects for strong increases of family benefits, and the reduction of the personal income tax paid by the families having children (i.e. tax exemptions for children), are not very promising. Nevertheless, it seems worthwhile to point out the need for an efficiency of such policies.



# *The Third Child in the 1974 Hungarian Marriage Cohort*

Elwood Carlson and Ferenc Kamaras

## Editors' Introduction

The consultants were especially impressed by the research value of the information contained in the series of continuing interviews conducted over a 16-year period in Hungary, beginning with the 5 000 couples marriage cohort of 1975. At the start of this period, significant pronatalist policies were implemented, followed by distinct fluctuations in the total fertility rate. To the best of our knowledge, the cumulative 1974 data set, with the latest 1990 re-interviews, represents a unique opportunity to observe family formation decisions, attitudes toward pronatalist incentives, and the interaction between public policies and private reproductive behaviour. We urge that funds be made available for further analysis of this data set in cooperation with the Hungarian Central Statistical Office.

In examining the crucial policy question of influences on the birth of three children to couples, particularly as it may (or may not) be related to deliberate pronatal encouragements by government actions, one of the most promising sources of information is the series of interviews conducted over a sixteen-year period in Hungary, beginning with the marriage cohort of 1974. Just at the start of this period, significant new pronatal policies were implemented in Hungary to address the perceived problem of population stagnation and contraction. A clear fluctuation in the nation's total fertility rate followed these initiatives, but then the increase subsided again within a decade, and scholars have been debating ever since as to whether the policy initiatives had any actual impact on completed family size as well as on period fertility levels for the cohorts involved. Beyond this surface demographic issue, deeper sociological, economic and psychological questions remain barely examined for this episode, so that a full understanding of the impact of these policies on the particularly important question of third births has yet to be developed.

We look forward to the possibility of conducting such a closer study of the issue. For this work, we would continue our joint analysis of the HL-74 panel, already set in motion by successive research exchange visits sponsored by the Fogarty International Center at the National Institute of Health. The 1974 through 1987 rounds of interviews are already integrated into a data set now under analysis at the University of South Carolina. To show the feasibility of such research, we present a brief summary of relevant information contained in successive rounds of interviews, as it relates to the issue of determinants of third births.

The panel was formed in 1974 from marriages contracted in Hungary that year. There was an initial premarital interview, conducted as part of the mandatory premarital counselling interview for all persons contemplating marriage. Background information collected at that time included detailed previous family and living arrangements, data on housing conditions, opinions about prospective fertility, attitudes about use of childcare allowances, contraceptive practices, and related data.

From the official marriage certificate itself, many of the same facts were collected again (allowing checks for accuracy of reporting) including language identity, economic and educational categories, and residential information.

Three years later, in 1977, the panel was re-interviewed. Questions included items on marital events (separations, divorces, cohabitation, etc.), residential conditions and mobility, working and educational data, and a detailed record of reproductive events (conceptions, contraceptive practices, outcome of pregnancies, use of childcare allowance, attitudes about further childbearing, and general questions about sexual issues). This complex battery of questions was applied to each pregnancy experienced by each respondent, dating back (sometimes prior to the beginning of the surveys) to the first pregnancy experienced by each respondent.

In subsequent panels (1980, 1984, 1987 integrated into cumulative record to date, with 1990 in preparation), similar detailed data were collected on subsequent pregnancies, including in each panel a battery of questions about the participation of respondents in childcare allowance programmes as well as work histories.

From global demographic figures already explored by the Central Statistical Office, it can be demonstrated that reproductive behaviour was significantly influenced by the pronatal policies of the early and middle 1970s. Klinger has concluded (1984) that this influence was largely temporary, affecting the timing but not the eventual total fertility of the cohorts involved. We would propose, however, to have a closer look at the parity-specific patterns in birth rates for this period and subsequent years, to be certain we can agree with this background conclusion. It is entirely possible that, upon further consideration, some degree of cumulative influence on completed family size may be identifiable. We do not insist upon this outcome, but it is possible.

In any case, the temporary or permanent, cumulative impact of these policy initiatives on reproductive patterns can be examined in much greater detail, using the HL-74 cohort's experience. We would propose, as a second step, to consider the responses to the 1974, 1977, 1980, 1984 and 1987 interviews in the light of related Hungarian demographic patterns. Among the questions we would like to investigate in this particular study are:

Did programme participation (child allowances, etc.) show any separate, independent relation to length of subsequent parity intervals, to the outcomes of subsequent pregnancies, and to attitudes about contraception, further births, and so on? In particular, how did social background factors interact with such programme participation to influence timing and outcome of subsequent pregnancies? In this regard, as well as in the matter of abortion, we would propose to pay particular attention to the crucial third parity progression, from parity two to parity three (that is, the birth of the third child). It is in this respect that our project should make its most important and original conclusion, for with the HL-74 cohort, we hope to be able to throw new light on the detailed, individual-level process of involvement in school, work, pronatal support programmes, and family contexts, to show how such support

programmes connect with these other dimensions of life during the family formation period.

While there are some difficulties with this data set, it offers an unprecedented look at the personal level at which marriage partners make decisions about family-building over a period of fourteen years. It includes systematic information for every recorded pregnancy, not only about actual participation in child support programmes, but also about attitudes toward such programmes and contraceptive use, sexual practices, household arrangements and ideal family sizes. There certainly are questions we cannot answer from these data, but if we cannot answer them, we know of no other data sets which could do a better job in Europe at present.



# *Social Policy and Recent Fertility Change in Sweden \**

Jan M. Hoem

Sweden is currently experiencing a rise in period fertility that reflects a change in the time pattern of cohort fertility. Ultimate cohort fertility may eventually also rise as a result of this change. This note provides information on recent changes in childbearing behaviour in Sweden and links certain features of these changes to Swedish social policy that, intentionally or otherwise, provides a financial incentive to the close spacing of births.

## **Fertility trends**

In Sweden, as in many other industrialized countries, the period total fertility rate (TFR) stopped declining in the late 1970s and started rising in the mid-1980s. However, Swedish period fertility never fell to the very low levels reached and still largely maintained by a number of other European countries, such as West Germany, Switzerland, Italy, or Austria, and it has risen swiftly to a level that by the standards of the last quarter century is high for a developed country (see Figure 1). The Swedish TFR was never lower than 1.6 (1978 and 1983), and it rose consistently through the 1980s and surpassed the replacement level in 1990<sup>1</sup>. Sweden was not a high-fertility country during the baby boom years, and it participated in the fertility dive experienced by most developed countries after the mid-1960s. Nevertheless, most other industrialized countries now have a lower TFR<sup>2</sup> and among Western European countries only the traditional outliers, Iceland and Ireland, have higher period fertility than Sweden<sup>3</sup>.

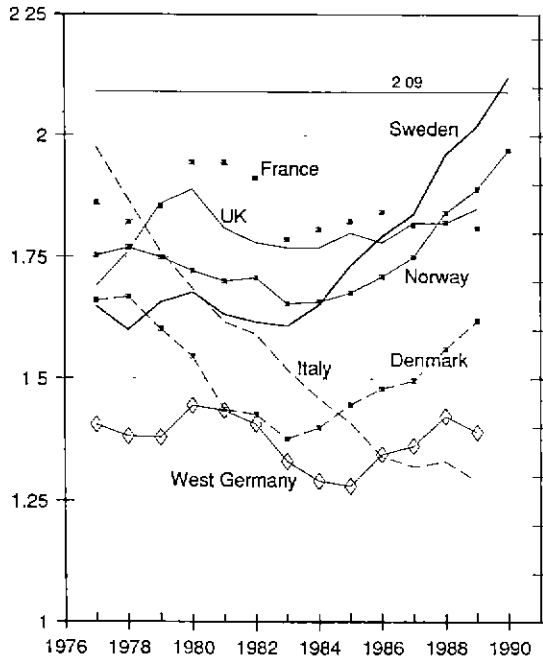
Current Swedish fertility trends are consistent with a general mild adjustment toward more moderate demographic behaviour than was the case in the recent past<sup>4</sup>. Demographic developments in Sweden have often been a precursor of more general trends; thus what has happened recently in that country may indicate what lies ahead for other populations<sup>5</sup>.

In Sweden, fertility at ages 15-19 fell through the 1970s and has remained at a low level of about 11 births per thousand women through the subsequent period of fertility increase. By contrast, fertility has risen since the late 1970s for women aged 25 and older and recently has risen even for women aged 20-24 (see Figure 2)<sup>6</sup>. As a consequence, Swedish women in their early 30s now have somewhat higher fertility than women in their early 20s. This is a remarkable reversal of the pattern in the mid-1970s, when the younger group had twice the fertility level of the older one<sup>7</sup>.

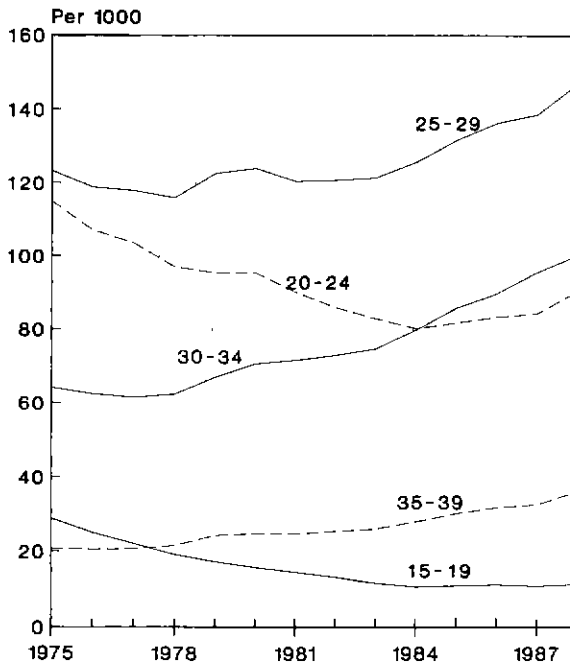
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\* Modified with the permission of the Population Council, from Jan M. Hoem, "Social Policy and Recent Fertility Change in Sweden", *Population and Development Review* Vol. 16, no. 4 (December 1990): 735-748.

**FIGURE 1: Total fertility rate, selected European countries, 1977-89**

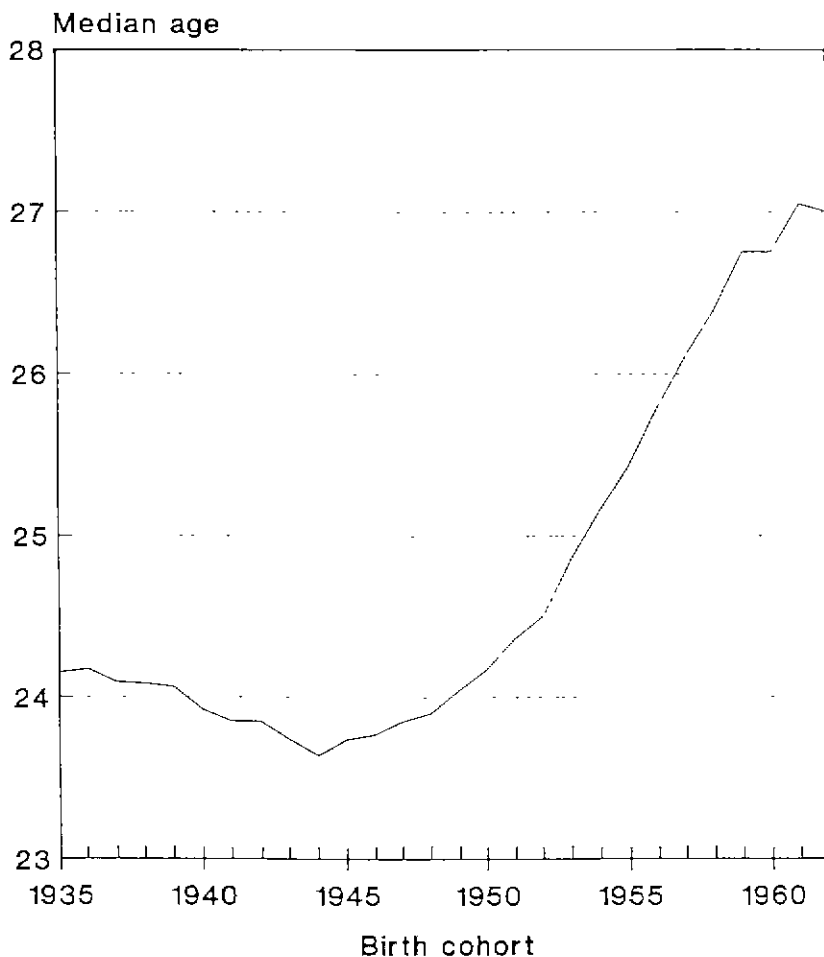


**FIGURE 2: Age-specific fertility rates, Sweden, 1975-89**

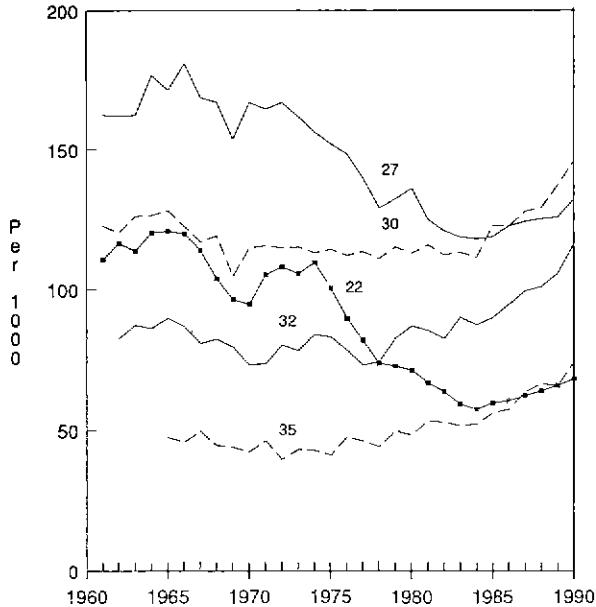


All in all, there has been a marked upward shift in the distribution of ages at childbearing. The median age of women at first birth has increased from around 24 years for the cohorts that started childbearing in the 1950s and 1960s to an all-time high of about 27 years for the cohorts born in 1959-62 that started childbearing around 1980 (see Figure 3). This is quite a late entry into motherhood by current international standards. For instance, the Norwegian cohort born in 1959 had a median age at first birth of 25.0 years, up from about 23 years experienced by cohorts born some 10 to 20 years earlier (Brunborg and Kravdal, 1986: 37)<sup>8</sup>. In fact, Swedish first-birth rates at ages 30 and above have been stable or increasing throughout the 1970s and 1980s (see Figure 4). In the late 1980s, first-birth rates have risen even for women in their 20s, as demonstrated by the curves for ages 22 and 27 in Figure 4. Corresponding diagrams for rates of second and third births for single-year age groups (not shown here) depict similar trends. Most age groups above the teens now contribute to the general increase in Swedish fertility, both at childbearing and at higher birth orders.

**FIGURE 3: Median age at first birth by mothers' birth cohort: Sweden, cohorts born 1935-62**

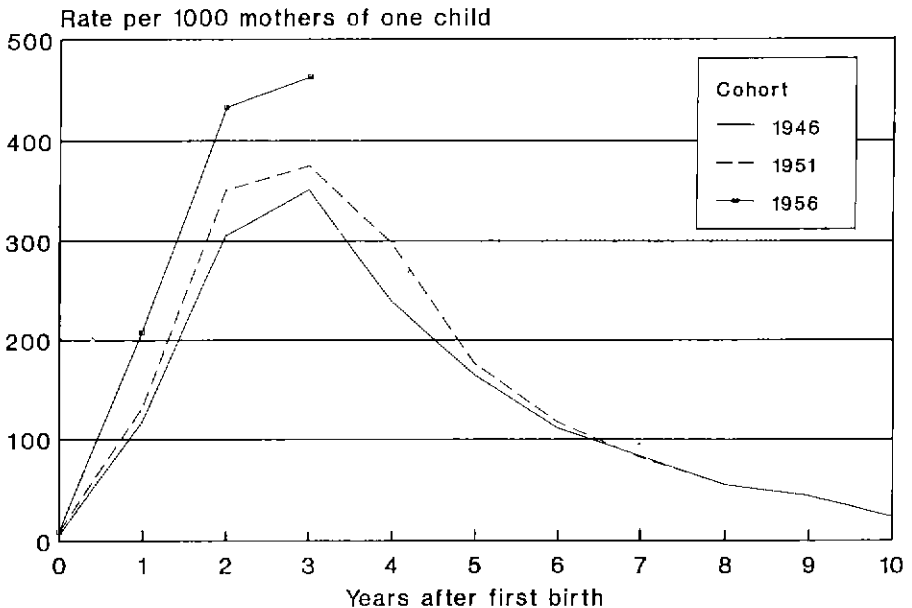


**FIGURE 4: First-order birth rates for single-year age groups, Sweden, 1961-90**



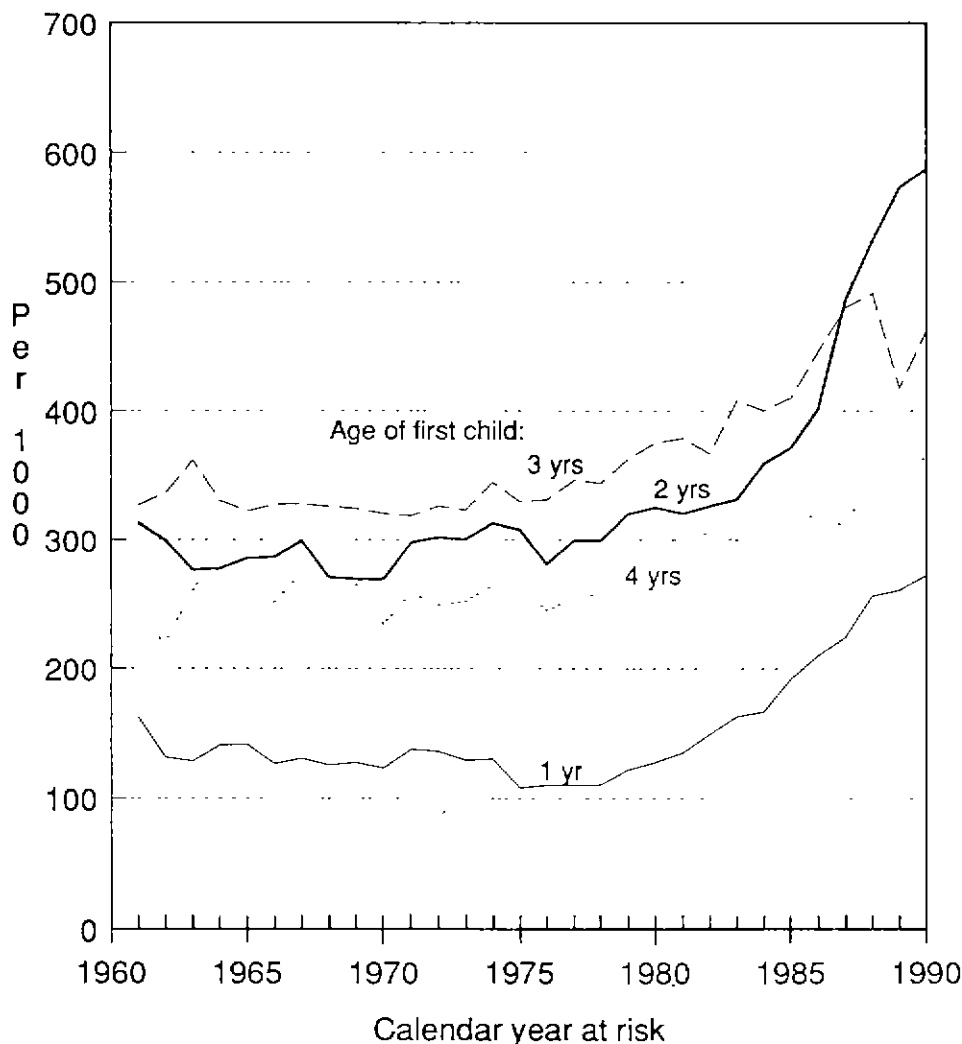
Figures 5-7 demonstrate the underlying trends. Figure 5 plots second-order birth rates by age of first child for selected birth cohorts of mothers. The diagram, one of several plots of second- and third-order birth rates that I have drawn for a range of ages at last previous birth<sup>9</sup>, shows how the rate has increased over the three cohorts at each duration since first birth<sup>10</sup>.

**FIGURE 5: Second-order birth rates of mothers with a first birth at ages 27-28, by duration since first birth: Sweden, cohorts born 1946, 1951, and 1956**



Figures 6 and 7 display the time pattern of the increase more clearly. Their four curves show the rates for second and third birth when the last previous child was 1, 2, 3, or 4 years old, plotted against the (approximate) calendar years in which the mother was exposed to the corresponding "risk" of further childbearing<sup>11</sup>. (Note that Figures 6 and 7 have been scaled differently to reflect the much lower level of third-birth fertility.) The diagrams exhibit quite strong period effects; the duration-specific rates move almost in lock-step, and they all increased from a low point in about 1976 or 1977. Corresponding curves for other ages at last previous birth are quite similar.

**FIGURE 6: Second-order birth rates of mothers with a first birth at ages 27-28, by calendar year at risk: Sweden, 1961-1990**

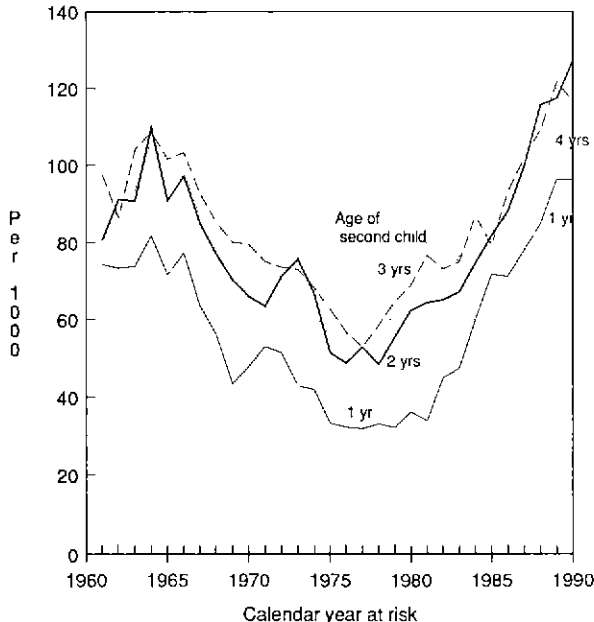


Source: Statistics Sweden, unpubl. data.

## The role of public policies

I believe that recent demographic developments in Sweden can in part be attributed to the low-key and largely indirect pronatalism of Swedish social policies<sup>12</sup>. I know of no other country with a similar political system and at a comparable stage of industrial development that has so consistently tried to facilitate women's entry into the labour market and their continued attachment to it at minimal cost to childbearing and childrearing. Ideally, the record-high and continuously growing labour force participation of Swedish women, combined with comparatively high and generally increasing fertility, should be a reward for such efforts. It is tempting to conclude that fertility is responding to the cumulative effects of the determined expansion in public daycare, child benefits, parental leave provisions, parents' rights to part-time work, and similar measures. A combination of public campaigns for responsible parenthood and a new taste for "self-realization" and "the good life" among young people (Rolén and Springfieldt, 1987) must have been among the forces driving the postponement of entry into parenthood. The marked fertility increase at ages that were previously regarded as high for childbearing reflects a recuperation as couples have their desired number of children after a late start in a society that helps reduce obstacles to parenthood at mature ages. Swedish policies seem to have been successful in softening the effects of women's labour force participation in the daily practicalities of their home life sufficiently to reduce the inherent role conflict to a manageable level. It may be part of this picture that women limited their childbearing during the late 1960s and the early 1970s when they felt like pioneers moving into the labour market and reorganizing their home lives, while current cohorts feel less constrained, now that their rights have been firmly established and greatly strengthened<sup>13</sup>. In addition, having several children may have acquired an increased prestige value as people's economic situation has improved.

**FIGURE 7: Third-order birth rates of mothers with a second birth at ages 27-28, by calendar year at risk: Sweden, 1961-90.**



If indeed social policies are influencing reproductive behaviour, the demographic effects seem to work primarily via the impact on the timing of childbearing. There has been a striking stability in Swedes' apparent preferences for their number of children. In fact, the two-child norm has probably been strengthened. Cohort total fertility has remained at a level just below 2 (Calot, 1990: Figure 2)<sup>14</sup>, and there is no evidence for a substantial increase in permanent childlessness<sup>15</sup>. There is no sign of the growing popularity of childless or one-child families that demographers have recorded in central and southern Europe<sup>16</sup>.

To a large extent, the recent variations in the period TFR reflect the normal aggregation effects that ensue when several cohorts in a synchronized manner first postpone childbearing and subsequently compensate for it - in the case of Sweden so far mainly by shortening birth intervals. As was seen in Figure 1, the same general trends are apparent, though to a much smaller extent, in several other countries, some of which have much less generous family policies than Sweden. Seeing a plausible connection between public policies and demographic consequences, however, is one thing; providing acceptable documentation of a direct casual connection is another. Causality is obscured when rights and benefits (and the extent to which people make use of them) expand gradually and in step with other developments, and when policies in turn are revised in response to demographic behaviour<sup>17</sup>. For instance, it is not easy to locate the effect on fertility of such minor policy revisions as the incremental growth of the daycare system or the recent extension of the length of paid maternity leave from nine to 12 months during a period of changing labour market conditions and increasing female labour force participation (Sundström, 1987, 1989)<sup>18</sup>.

On occasion, however, features appear in demographic data that may plausibly be interpreted as a response to a policy change. I believe that Figures 6 and 7 and the corresponding diagrams for other age groups showing second and third birth rates at last previous birth may contain such features. In most such diagrams, the curve for an additional birth to mothers of one-year olds is particularly steep during the 1980s. Usually, the curve for mothers of two-year olds is also steeper than for mothers of older children. This represents an extra increase in childbearing at quite brief durations since the last previous birth, over and above the general increase in fertility at all normal durations. This extra quickening appeared during a period when an understanding of the favourable financial consequences of a particular item in the social insurance reforms spread among those who could benefit from it. We turn now to a discussion of this phenomenon.

### **The extension of income compensation beyond the next birth**

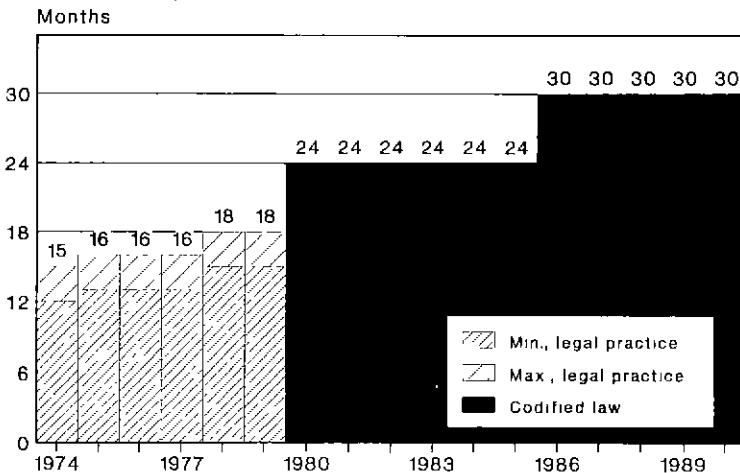
Since before World War II, women working in paid employment in Sweden have had the right to a paid maternity leave after the arrival of any child<sup>19</sup>. In 1974, analogous rights were extended to men and included the option for both parents to share the paid leave in the manner they see fit. The income compensation is determined by the work-related income received by the leave-taker in a specified period before birth. Initially, it was advantageous to postpone the arrival of a subsequent child until income-compensation eligibility had been re-established by further accumulation of job-related income. During the 1970s, however, it became

established legal practice for a parent to retain the right to the level of income compensation paid after one birth during parental leave for the next birth, provided the interval between the two births did not exceed the period of statutory leave plus six months. The parent did not have to generate any job-related income in the interim. In 1974, the interval between births could not exceed 12 months according to this rule, but in practice it could be extended by various devices such as sick leave or accumulated paid vacation, up to a total of about 15 months. In subsequent years, the eligibility interval grew in step with the extension of the statutory parental leave, to a maximum in 1979 of 15 months (plus any vacation due and sick leave admitted; see Figure 8). This benefit extension was itself made statutory and expanded to 24 months in 1980; it was further extended to 30 months in 1986. Such incremental extension of benefits has been typical of the development of social policies in Sweden.

With an eligibility interval as long as two years or more, many parents find it manageable to have two children sufficiently closely spaced to take advantage of the corresponding benefit. If the next child is born after the period of eligibility has been exceeded, the mother's income compensation will be eroded if she works part-time to take care of her youngest child, as many women do in Sweden<sup>20</sup>, or if she does not work. Thus, couples have a short-term economic motive to stay within the eligibility interval. Given the uncertainties involved in conception and pregnancy, some will fail to achieve this goal and will give birth to the next child too late. We should expect, therefore, the next-order birth rate to get a special boost when the last-born child is one or two years old. This is precisely what we observe in Figures 6 and 7<sup>21</sup>.

When a woman takes a leave of absence to look after her family, she sacrifices further job experience and skill development (and other forms of job satisfaction), in some cases for an extended period. By bearing three children two years apart, a woman can easily remain on leave from an employer for five consecutive years or even longer under current regulations. The social policies and the patterns of fertility I have just described indicate that to gain a short-term income advantage<sup>22</sup> while their children are very small, many Swedish couples are willing to adjust the timing of their childbearing after the first birth, even at a possible long-term cost to the woman's career. This behavioural response suggests that childbearing preferences have priority over the wife's job prospects for many couples at the prevailing level of financial incentives and given current expectations about the family's economic standard of living.

**FIGURE 8: Birth interval that gives the same maternity-leave payment as for the previous child: Sweden, 1974-90.**



## NOTES

Britta Hoem's insights have been most useful during the preparation of this note. The author has also benefited from discussions with Lars Ostby, Sten Martinelle, and Marianne Sundström. Figures 4 to 7 are based on special tabulations made in Statistics Sweden at the author's request by Lars Nordin with the advice of Jan Qvist.

1. The current Swedish replacement level is a TFR of 2.09. In 1990, the TFR was 2.13. In 1991, it was 2.11. As is seen in Figure 1, Norway closely trails Sweden.
2. For the latest data available, see van de Kaa (1988), Kono (1990), Monnier (1990), INED (1989 or issue 4-5 of a later volume), Council of Europe (1990 or the corresponding volume for a later year), or Eurostat (1990 or later). For a longer perspective on period fertility and for cohort fertility, see Brunborg (1989), Sardon (1990), and Prioux (1989).
3. Ireland's TFR was 2.11 in 1989 and had been falling consistently over the preceding years; Iceland's was 2.27 in 1988 and 2.21 in 1989, up from an all-time low of 1.93 in 1986.
4. Demographic changes include a stabilization of divorce rates since the late 1970s (Hoem, 1990), some decline in teenage cohabitation since the mid-1970s, and, after two decades of a general decline, a stabilization of (and lately even a slight rise in) age-specific rates of first marriage and of remarriage through the 1980s (Statistics Sweden, 1989: Diagram 10).
5. This analysis is based on data from Sweden's official statistics system, and it does not include marital or cohabitational status for two reasons: (1) Even Sweden's official statistics do not contain detailed information about cohabitational fertility, so inclusion of this important element in Swedish family dynamics is precluded. (2) It would have been possible to include trends in marital fertility, in the manner of Qvist (1987), but I have decided against doing so. Interpretation of marital fertility differentials is made difficult by the shifting age at marriage. This makes women marrying at age 23, say, increasingly selected toward the highly family-oriented (and therefore highly fertile). Conversely, those marrying at age 32 are decreasingly selective of low-fertility individuals as childbearing progressively becomes normal behaviour at this age. Instead of helping to decompose fertility trends into understandable elements, the analysis of trends in marital fertility by age at marriage would induce selectivity effects that could easily disturb rather than facilitate the understanding of childbearing trends.
6. For more details and many more countries, see Qvist (1987), Calot (1990), and Sardon (1990).

7. This pattern is shared with the other Scandinavian countries, and, largely, with West Germany, the Netherlands, Switzerland, and Italy. See Sardon (1990), Ostby (1990), and Texmon and Ostby (1990).
8. Data on the cohort median (or mean) age at first birth are not available for any other countries for the youngest cohorts. (See Prioux, 1989: Table 2, for selected cohorts born up to 1955.) However, the more recent Swedish cohorts have a high mean age at childbirth (counting births of all orders) for a Western European country (Sardon, 1990: Table 11).
9. Graphs for other ages are not shown here. I selected ages 27-28 at first birth as an illustration because this is a typical age at entry into motherhood in Sweden. Compare Figure 3.
10. Each curve in Figure 5 is a plot of ordinary occurrence/exposure rates (per thousand woman-years) at various durations since the birth of the third child, for women of parity 1 who were born in selected single-year calendar periods. Duration 0 means that the first child is less than a year old, duration 1 means that the child is 12-23 months old, and so on. These rates correspond to the empirical  $m_x$  values of a single-decrement life table. Since rates like those in Figure 5 easily add up to more than 1, it may be prudent to note that cumulating  $m_x$  values up to age 3, say, of the first child will not give the probability that a second child has arrived by that age. To derive that probability, the rates must be converted to values corresponding to  $l_x$  values in a life table.
11. Figures 5 and 6 are based on the same table of second-birth rates to mothers of parity 1 who were 27-28 years old at first birth. The table has one row for each year of birth of the mothers and one column for each single year of age of the first child. Selected rows of this table were plotted in Figure 5. Consecutive columns of the same table are plotted in Figure 6, shifted over by one year per column in order that curve points corresponding to the same calendar period of risk have the same value on the x-axis in the diagram. For instance, the group of uniparous women born in 1941 who entered motherhood at age 27-28 did so in 1968-69 and are at risk in 1969-71 of having their second child while the first child is one year old. In Figure 6, their second-birth rate at duration 1 (12-23 months since child 1) has been plotted over the point corresponding to 1971, and so on. Figure 7 has been plotted in a similar manner.
12. For a recent update on Swedish public policies relevant to demographic behaviour, see Sundström (1992).
13. The introduction and subsequent erosion of such a "pioneering effect" would accord neatly with the trends shown by the curves in Figure 7.
14. Only the future can tell whether there will be an increase in cohort total fertility due to the prolonged period of "risk" of further childbearing produced by the closer spacing of births.

15. Some 12 per cent of women have remained permanently childless in each Swedish cohort born in the late 1930s and in the 1940s (Qvist, 1987: Table A5). In the highest available estimate, Martinelle (1990: 26) suggests that final childlessness may rise above 16 per cent for cohorts born in the late 1950s and even slightly higher for later cohorts. Some other countries, including the United Kingdom and the Netherlands, have already gone well beyond such levels (Sardon, 1990: Figure 24; Prioux, 1989: Figure 1).
16. Höhn and Lüscher (1988: 324) write about a tradition of acceptance of childlessness in Germany. Huinink (1989) notes a polarization between childlessness and two-child families, with no increase in the portion of single-child families.
17. Public policies probably have a much stronger influence on women's labour force participation than on their childbearing, at least in Sweden.
18. A satisfactory investigation will need to involve international comparisons, say of the type found in the study of teenage pregnancy conducted by the Alan Guttmacher Institute (Jones et al., 1986), a venture far beyond the scope of this note.
19. Parents have the same rights in connection with an adoption as with a birth, but for simplicity we exclude adoption in the following discussion.
20. In 1988, about seven-eighths of all mothers of children aged 1 through 6 years were in the labour force; two-thirds of these women worked part-time (AKU, 1988).
21. Martinelle (1989) was the first to demonstrate that the pace of childbearing has increased in Sweden among those who have entered motherhood since the late 1970s, and he was the first to propose the "eligibility interval" explanation.
22. Parents may also see a practical advantage in concentrating the work involved in caring for infants and young children over a relatively brief period in their lives by spacing births closely together.

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