ECONOMIC MODERNIZATION AND DEMOGRAPHIC MODERNIZATION

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Summary

The study of European fertility transition underlines the diversity of means used to control the risk of population explosion : chastity and restricted nuptiality, emigration to the new worlds. But neither in Europe nor in other continents, there is no strict correlation between demographic modernization and economic modernization.

On the contrary, there was a wide diversity of underlying circumstances (degree of urbanization and industrialization, level of education, language, religion). What seems to have an explanatory virtue is the existence of a diffusionist model of innovation, the spread of fertility decline following ordinary routes cultural of material flows of exchange.

1. Introduction

The demographic transition theory was based on the European experience, its validity for the rest of the world is open to debate ; that is why a clear distinction has to be made between past transitions (European) and contemporary ones. Since the end of the 1960s, the fertility decline is becoming global.

2. European transitions : from Malthus to Pincus

Except for a few places like Ireland and Albania, on the eve of the First World War, Europe had embarked upon the modern fertility decline. The system of fertility regulation drew upon much earlier sources. From the time of the Renaissance, in those densely populated areas of western Europe where the dominant countries which would be future colonial powers were gathering strength, a regime of delayed and restricted marriage based on a degree of sexual asceticism (of religious inspiration) was establishing itself. This phenomenon has no known historical equivalent. Marriage restriction as a means of birth control is capable, as already seen, of reducing fertility considerably. It is more or less intense depending on the pressure of subsistence.

However flexible this homeostatic system of adapting human numbers to the environment may have been, it still had its limits. It ceased to be sufficient when the mortality decline reached a certain level, thus giving a new boost to demographic growth. For example, in the third quarter of the nineteenth century, despite emigration, the rate of population growth in a country like Sweden was two or three times higher than a century earlier. The transition from a regime of early and universal nuptiality, with a singulate mean age at marriage of 17.5 years and lifetime celibacy practically nil, to a regime of delayed and restricted nuptiality, with marriage deferred by an average of 10 years and prohibited to almost one-fifth of the population, would result, in a 50 % reduction of the aggregate fertility level.

The privilege of sex being reserved solely for married couples, it is difficult to imagine - however much the state of chastity was then revered- a population barred from sexual relations to this degree. By the end of the nineteenth century this early type of delayed and non-universal marriage system was receding in western Europe whilst in the east a decline in legitimate fertility was spreading.

The role of mortality has been considered fundamental by all theorists of the transition. That mortality decline precedes the decline in fertility remains the primary postulate, with the decline in infant mortality then appearing as a necessary condition of a reduction in the number of wanted children. However, the usual frame of reference for explaining fertility decline is much broader, introducing the most diverse factors. The accent has generally been placed on the influence of industrial and urban civilization, and the corresponding transformations in the system of values.
This section has four main objectives :

- to give a more precise verification of the central assumption of transition theory : the principle of priority with regard to mortality decline ;

- examine the possible relation between fertility and a general measure of development (increase in real per capita income), through time series ;
- to discuss the significance of certain results from studies which highlight the diversity of socio-economic and cultural conditions of fertility transition ;
- to present a few propositions which may help clarify the facts, in particular the pattern of international diffusion of the phenomenon, and which may help to render the universality of the process compatible with the variety of circumstances in which it occurs.

2.1 Demographic Disequilibrium, or the Priority of the Decline in Mortality

Between traditional and modern society -which is to say, during transition- the role played by death is gradually replaced by that of the voluntary prevention of births. High mortality and high fertility are inseparable, but the mechanism of their association is complex. The influence of morbidity and mortality on fertility works through different factors. The duration of breast-feeding, the frequency of sexual relations, the felt need for replacement of generations all vary with how long an infant survives. Under these conditions, when mortality declines the number of desired children also inevitably falls, but the adjustment does not occur immediately since couples do not know what the infant mortality rate will be ; hence the greater or lesser duration of the interval between the two declines. From the opposite point of view, the influence of the number of children on the probability of survival is no less manifest : the standard of living, sexual mores, a mother's health, and other demands on her time or the availability of other family members are all closely connected with reproductive levels. In this sense, the high infant mortality of certain traditional populations is also a response -in part voluntary- to excess fertility, many births in fact being unwanted.

In France, juvenile and infant mortality had already declined considerably before the Revolution, when couples began to limit their fertility ; between 1740 and 1780, average life expectation increased by about six years. Thus, the first postulation of transition theory emerges from this test not only unscathed, but strengthened, its universality once more established.

This result was to be expected, on three counts : (1) the historical disappearance of plague and especially of smallpox, which had hitherto killed off so many children, together with the relative rareness of cholera and other epidemic discases in the West in the period up to the mid-nineteenth century ; (2) the profound political and moral changes which accompanied the growth of the modern State from the Renaissance onwards, including governmental institutions regulating public order, the erection of infrastructures (canals, sewers, roads, and from the 1830s railways) and social institutions (schools, including nursing and maternity schools ; hospitals, and schools of medicine), development policies for trade and agriculture, the gradual undermining of dogma and traditional fatalism, the emergence of the idea of equality -all of which contributed more or less to the success of the battle against death ; (3) and finally, in addition to the several determinants common to the diffusion of mortality and fertility decline, the reduction in mortality was both the object of a general consensus (regarding its desirability) and subject partly to factors beyond individual control. Whilst the level of general fertility remained dependent on decisions made by the majority, thus

reflecting the mentality of the rural masses, mortality levels derived in part from improvements accomplished by the educated or governing elite, and thus tended naturally to be more advanced.

2.2 Fertility and Modern Economic Growth

The circumstances of European transition have often been approached with the aim of eliciting information which could help us understand the situation of contemporary less developed countries. Such studies have emphasized in particular the development of statistical indicators which identify pre-conditions of the onset of fertility decline. As most countries in question (except in rural sub-saharan Africa) have currently passed this stage, this approach is now scarcely used. Interest has turned more towards knowing what sort of course to expect, especially where rates of decline are concerned. Five countries have been selected for illustration : Germany, England, France, Italy, and Sweden. The fertility-income ratio is analysed on the basis of pre-1950 series.

In Sweden, as in France, where rural society long predominated, the income flexibility of fertility was slight in comparison to other countries ; but the rate of decline according to income level differed greatly between these two cases. In France, the first phase of transition was confined to a narrow margin of very low incomes ($US 180-330 at 1960 values) at which no other country experienced a fertility decline. Subsequent economic growth during the Industrial Revolution was accompanied only by a very slow fertility decline : at an income level of around $ 800, French fertility remained higher than that of Germany or Sweden. In the latter country, fertility declined slowly in the early stages of economic growth, and then speeded up once the $ 650-700 per capita threshold was reached.

Allowing for differences in the scale of incomes, the three cases of Germany, England, and Italy are similar : fertility transition occurred for the most part over a relatively brief period and within an income range of only about $ 350. The income ranges were as follows : Italy, $ 350-650 ; Germany, $ 450-800 ; England, $ 650-1 000. The first figure correspond to the point of entry into fertility transition, and the second to the level at its end. Each country thus had its own levels, but, once started, fertility decline was in each case concentrated into a brief phase of economic history. These few observations would imply that analogies are to be sought less in levels than in trends of independent variables. Nevertheless, if we regard the English case as one extreme (in which initial industrialization delayed demographic change) and take the French case as the opposite extreme (in which fertility decline began without industrialization), the levels of entry in between appear fairly similar, ranging on the wole between $ 300 and $ 450.

Let us now take a quick look at the experience of countries with late transition. At the point at which fertility enters modern levels, per capita income is either within this bracket, but around the lowest end of the range (Spain, Portugal, Hungary, Romania), or below it (Russia and Japan). In other words, the phenomenon seems, a priori, to proceed as if income levels gradually fell with the geographic spread of the transition, the rejection of traditional behaviour being, as it were, facilitated by the spread of the example.

3. The Diversity of Underlying Circumstances

The relation between improvements in living conditions and trends in fertility is complex : the factors involved are manifold and the indicators used sometimes misleading. The relationship is also ambiguous. Certainly the increase in income enables larger families to be coped with, but as a corollary it introduces a change in tastes, a growing demand for higher-quality goods, and especially a rise in the cost of children. Moreover, it is not sufficient merely to identify variables at work ; we must determine their hierarchy, their respective importance, and the relations which exist between them. There are still few attempts at an overall approach which have produced convincing results in terms of explained variance.

Aside from demographic variables (mortality level, nuptiality regime), the factors most generally invoked are either socio-economic (degree of urbanization and industrialization) or cultural (level of education, language, religion).

3.1 Degree of Urbanization

Rural society is opposed by convention to the urban industrial world, according to the following assumption : because rural society is entrenched in traditionalism, it tends to delay transition, in direct proportion to its population. Underlying its apparent simplicity, the index of urbanization measures very different realities. Sometimes, given the population it groups together,it is as much an index of levels of industrialiation as of education, or of the degree of development in trade and communications ; at other times, it merely signifies the greatest concentration of settlement. The percentage of the population living in large urban concentrations is, on the other hand, more easily assessed, since large towns engender diverse constraints which are inimical to the survival of large families (e.g. anonymity, overcrowding, cost of space, long time of transport the segmentation of social roles).

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Biographical Sketch

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