

SOCIO-ECONOMIC DETERMINANTS OF FERTILITY CHANGE:
AN INQUIRY INTO THE PHILIPPINE EXPERIENCE

By

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DECLARATION

I certify that this dissertation has not been presented,
in part or in whole, for a degree at any other university.

A solid black rectangular box used to redact the author's signature.

R. González

*To my parents and my
respectable fellow*

*'By that law of our nature which makes
food necessary to the life of man, the
effects of these two unequal powers
must be kept equal. This implies a
strong and constantly operating check
on population from the difficulty of
subsistence. This difficulty must fall
somewhere; and must necessarily be
severely felt by a large portion of
mankind.'*

*From: Thomas Robert Malthus, The First
Essay on the Principle of
Population. (1798)*

PREFACE

While there have been numerous research works on the demographic determinants of income and economic determinants of fertility that are specific to a number of less developed countries (LDCs), little has been done to examine the possibility that a host of socio-economic factors, combined in a single fertility model, would bring about changes in fertility patterns of a particular sector of the population or the population as a whole. This thesis has been spurred by the state-of-the-arts of LDC research on fertility. It was inspired by the writer's growing interest on 'demographic economics', a field which has become increasingly relevant to the plight of the populous LDCs, the Philippines included.

My coming over to Australia to pursue a Master of Economics course in the University of New England and, subsequently, write this thesis have been made possible by two Government institutions to which I am enormously indebted:

- 1) the National Economic and Development Authority (NEDA) of the Republic of the Philippines, my nominating authority, and
- 2) the Australian Development Assistance Bureau (ADAB), my sponsoring agency.

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By and large, I still sincerely believe that without the grace and strength bestowed upon me by the Almighty, I could not have possibly completed this thesis.

Roselli P. Gonzalo

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LIST OF ABBREVIATIONS/ACRONYMS/SYMBOLS USED

Socio-Economic/Demographic Terms:

SR	short-run
LR	long-run
LDCs	less developed countries
MDCs	more developed countries
GNPPC	gross national product per capita
LFPR	labour force participation rate
GINI	gini coefficient of concentration
SFYP ₄₀	percentage share in family income of the bottom 40% of the population
AFY	average family income
CBR	crude birth rate
GRR	gross reproduction rate
TFR	total fertility rate
TMFR	total marital fertility rate
ASFR	age-specific fertility rate
ASMFR	age-specific marital fertility rate
IMR	infant mortality rate
LIEXP	life expectancy at birth
ADLITR	adult literacy rate
FLITR-15+	female literacy rate (15 years old and over)
FEDLVL-3DH	female educational attainment - academic degree holder
FEDLVL-2	female educational attainment - high school
FEDLVL-1	female educational attainment - elementary
FSCHATT	female school attendance
DCALSPC	daily calorie supply per capita
NUTRW	nutritional status of women/mothers

Statistical Terms/Symbols:

BLUE	best, linear, unbiased estimates
OLS	ordinary least squares
R^2	coefficient of determination
\overline{R}^2	adjusted coefficient of determination
SER (σ)	standard error of residual

Institution/Agencies:

UN	United Nations
ESCAP	Economic and Social Commission for Asia and the Pacific
FAO	Food and Agriculture Organization
WHO	World Health Organization
ASEAN	Association of South-East Asian Nations

MMA	Metro Manila Area
NEDA	National Economic and Development Authority
BCS	Bureau of Census and Statistics
NCSO	National Census and Statistics Office
FNRI	Food and Nutrition Research Institute

UPSE	University of the Philippines, School of Economics
UPPI	University of the Philippines, Population Institute
IEDR	Institute of Economic Development and Research
PICC	Philippine International Convention Center
DAP	Development Academy of the Philippines
POPCOM	Commission on Population
PREPF	Population, Resources and Environment for the Philippine Future

Surveys/Census:

PSSH	Philippine Statistical Survey of Households
FIES	Family Income and Expenditure Survey
CPH	Census of Population and Housing
NDS	National Demographic Survey
RFFS	Republic of the Philippines Fertility Survey

Others:

FP	Family Planning
IEC	Information, Education, Communication
KAP	Knowledge, Attitude and Practice
MIS	Married in Israel
MAB	Married abroad

ABSTRACT

During the past two decades or so, the study of the patterns of human reproductive behaviour or fertility has captured the interest of a number of academic disciplines including the field of economics. This is not at all unexpected since the interaction of some socio-economic variables allows demography to be closely related to economics, and vice versa, hence the field which has eventually become 'demographic economics' or 'economic demography'.

The empirical validation of socio-economic variables as possible determinants of fertility change has riveted the concern of some authorities in this field (e.g., Repetto (1979, 1974); Simon (1977); Easterlin (1980, 1976)) on the experience of a number of Latin American and Asian LDCs and even developed countries. Surprisingly, this subject has not been tackled exhaustively in the case of the Philippines, let alone in the works of these authors. It is, therefore, timely that this thesis has focused attention on the investigation of some relevant socio-economic factors affecting changes in Philippine fertility, using longitudinal and cross-sectional data.

An important element of this piece of research is the examination of the relation of economic status to fertility. Accordingly, the non-linearity assumption between income and fertility, i.e., for any household the effect of a change in income on fertility will be affected by the economic position of that household, was empirically tested with the application of the average family income variable (AFY) and two measures of the income distribution pattern, namely, the Gini coefficient of concentration (GINI-C) and share of family income of the bottom 40% of the population (SFYP40-A). In addition, the influence of some social indicators (e.g., infant mortality, life expectancy at birth, female literacy and educational attainment) on fertility has been considered. Repetto's (1979) model has been adopted but modified to a certain extent in order to suit these variables relevant to existing Philippine data.

Although not in the least maximal, the results show that fertility patterns, over time and across regions in the Philippines, respond to the afore-mentioned socio-economic variables. Special mention must be made of the variables AFY and SFYP40-A which have appeared to be highly correlated to Philippine fertility in relation to the other variables in the model.

It becomes imperative, therefore, that Government policy be directed at alternative economic measures that would alleviate the status of the majority of low-income households. Whether it be short-term or long-term, the implication of such policy measures would be an improved quality of life, so long as they are resolutely and vigorously implemented. Perhaps, with such an improvement, population could be prevented from making a proportionate advance.