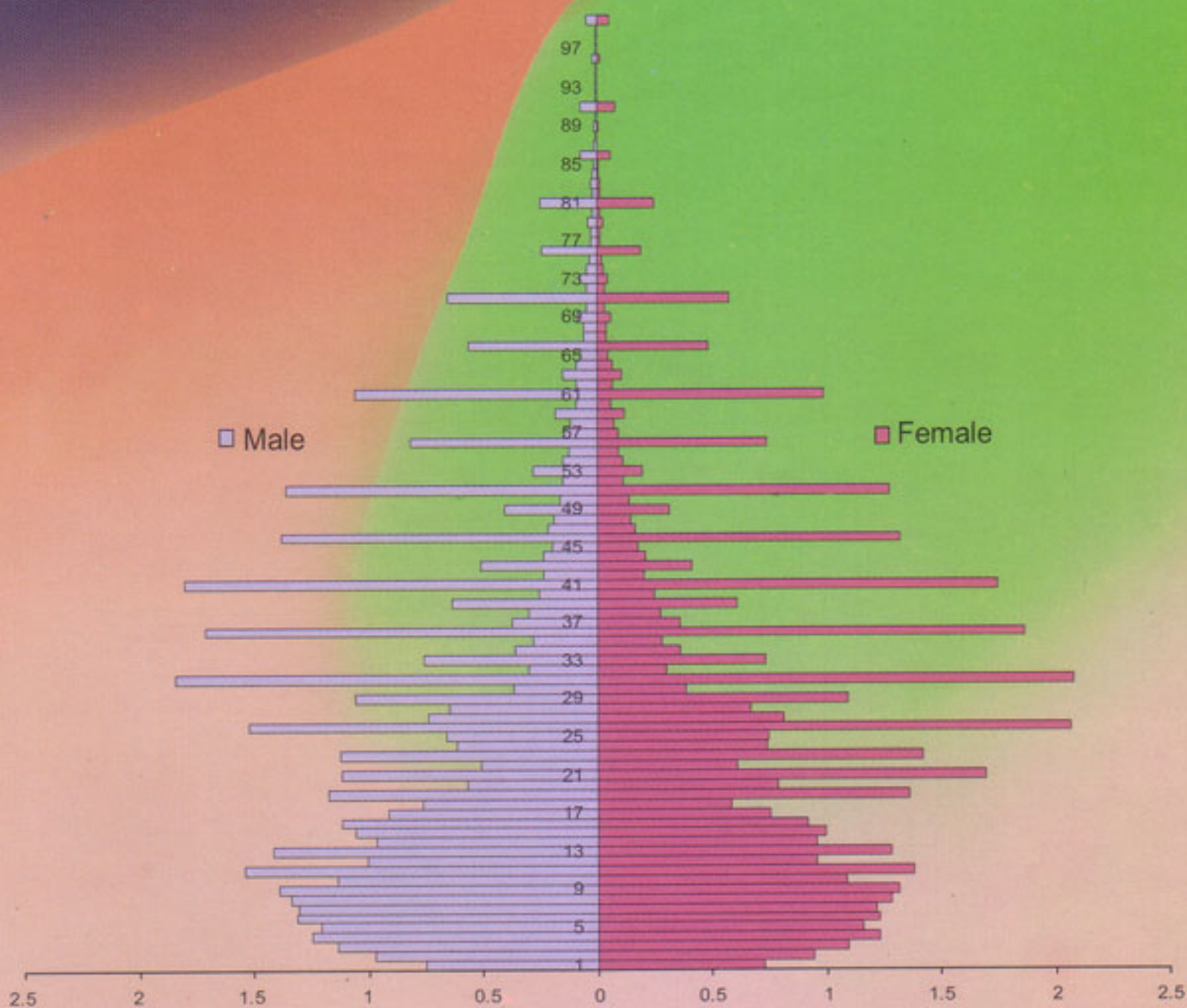


FIRST
EDITION

M.Nurul Islam

An Introduction to Demographic Techniques



Mullick & Brothers



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CONTENTS

	FOREWORD	XII
	PREFACE	XIII
1	Fundamentals of Demography	1–28
1.1	What is Demography?	1
1.2	Demographic Analysis and its Importance... .. .	2
1.3	Typology of Demography... .. .	4
1.4	Demography and other Disciplines	6
1.5	Demography as a Science... .. .	10
1.6	Sources of Demographic Data... .. .	11
1.7	Census Operations in Bangladesh... .. .	16
1.8	Sample Surveys... .. .	19
1.9	Demographic and Health Surveys in Bangladesh	20
1.10	Vital Registration... .. .	23
2	Rates, Ratios and Related Issues in Demography	29–76
2.1	Introduction... .. .	29
2.2	The Ratio... .. .	30
2.3	The Proportion	31
2.4	The Percentage	32
2.5	The Rate	32
2.6	The Measures of Population Changes.. .. .	34
2.7	A Few More Rates and Ratios	46
2.8	Miscellaneous Issues Related to Demographic Studies	48
2.9	Young and Old Populations	59
2.10	Demographic Dividend... .. .	60
2.11	Demographic Transition	62
2.12	Population Ageing... .. .	66
2.13	Malthusian Theory of Population	68
3	Appraisal and Adjustment of Demographic Data	77–134
3.1	Introduction	77
3.2	Evaluating Quality of Demographic Data	81
3.3	Assessment of Coverage Errors	86
3.4	Dual Record System	94
3.5	Assessment of Content Errors	98
3.6	How Do Age Data Become Inaccurate?	100
3.7	Index of Age Preferences: Single Year Distribution	102
3.8	Evaluating Grouped Age Distribution	111
3.9	Adjustment of Demographic Data	114

3.10	Graphical Method...	115
3.11	Carrier–Farrag Ratio Method ...	116
3.12	Quadratic Interpolation...	119
3.13	Moving Average Method...	123
3.14	Osculatory Interpolation...	126
4	Age and Sex Composition ...	135–170
4.1	Introduction...	135
4.2	Analysis of Sex Composition...	137
4.3	Factors Affecting Sex Ratio ...	144
4.4	Regional Variation in Sex Ratios...	146
4.5	Analysis of Age Composition ...	148
4.6	Shape of a Pyramid and its Determinants ...	
4.7	Pyramidal Views of Age-sex Structure of Bangladesh Population: 1995–2011...	158
4.8	Some Demographic Measures Based on age Distribution ...	159
4.9	Other Compositions of the Population...	165
5	Fertility and Its Measures ...	171–232
5.1	Introduction...	171
5.2	Measures of Fertility ...	173
5.3	Mean Length of Generation...	193
5.4	Cohort Measures of Fertility...	193
5.5	Birth Probability and Central Birth Rate...	197
5.6	Marital Fertility...	197
5.7	Fertility Measures Based on Children Ever-born Distribution ...	199
5.8	Estimation of Fertility from Children Ever-born Data: Use of Gompertz Model...	201
5.9	Zaba’s Method of Estimating Fertility from Parity Data ...	205
5.10	Decomposition of Fertility...	206
5.11	Parity Progression Ratio...	216
5.12	Fertility Differentials ...	218
5.13	Proximate Determinants of Fertility...	223
6	Mortality and its Measures ...	233–270
6.1	Introduction...	233
6.2	Sources of Mortality Data ...	234
6.3	Basic Measures of Mortality ...	235
6.4	Infant and Childhood Mortality ...	248
6.5	Maternal Mortality ...	258
6.6	Differentials in Childhood and Maternal Mortality ...	266

7	Standardization of Demographic Rates	271–296
7.1	Introduction... ..	271
7.2	A Brief History of Standardization... ..	274
7.3	Choice of Standard Population	275
7.4	Direct Standardization	278
7.5	Steps Involved in Direct Standardization... ..	287
7.6	Indirect Standardization	288
7.7	Steps Involved in Indirect Standardization	291
7.8	Standardization by More than One Variable	293
7.9	Limitations of Standardization	294
7.10	Comparative Mortality Rate	295
7.11	Comparative Mortality Ratio	295
8	Life Table and its Construction	297–366
8.1	Background... ..	297
8.2	Types of Life Table	299
8.3	Two Basic Assumptions	300
8.4	Complete Life Table and its Functions... ..	301
8.5	Relations between Columns of a Complete Life Tables	307
8.6	Abridged Life Table and its Functions... ..	318
8.7	Steps in Construction of an Abridged Life Table	326
8.8	Abridged Life Table for Bangladesh, 2014... ..	329
8.9	Applications and Uses of Life Table	334
8.10	Multiple Decrement Life Table	340
8.11	Working Life Table	341
8.12	School Life Table	343
8.13	Some Worked-out Examples	348
8.14	Force of Mortality... ..	354
8.15	Some Approximations to the Force of Mortality... ..	363
9	Human Migration... ..	367–425
9.1	Introduction... ..	367
9.2	Historical Background of Global Migration	368
9.3	Theories of Migration in the 21 st Century	374
9.4	Importance and Problems of Migration Analysis	378
9.5	Sources of Migration Statistics	380
9.6	Some Basic Concepts Related to Migration	383
9.7	Rates, Ratios, and Indices Used in Migration Analysis	388
9.8	Indirect Measures of Migration... ..	397
9.9	Measures of Period Intercensal Migration	406
9.10	Choice of Survival Ratios	409

9.11	Estimating Lifetime Migration from Data on Place of Birth and Place of Enumeration	414
9.12	Estimation of Net Migration from Data on Place of Last Residence... ..	419
9.13	Population Distribution and Population Density... ..	420
10	Marriage and Marriage Dissolution	426-476
10.1	Introduction... ..	426
10.2	Marriage Systems and Practices in Bangladesh... ..	427
10.3	Issues and Concepts Related to Marriage... ..	429
10.4	Marital Status... ..	430
10.5	The Marriage Process	431
10.6	Analysis of Current Marital Status Data... ..	432
10.7	Estimating Mean Age at Marriage... ..	435
10.8	Nuptiality Table... ..	446
10.9	Gross Nuptiality Table	446
10.10	Net Nuptiality Table... ..	452
10.11	Measures of Marriage and Remarriage	457
10.12	Age at Marriage from Registration and Survey Data	465
10.13	Marriage Dissolution	468
10.14	Measures of Divorce	469
11	Population Projection	477-506
11.1	Introduction	477
11.2	Mathematical Method of Projection... ..	478
11.3	Component Method of Projection... ..	485
11.4	Cohort Component Method of Projection... ..	485
11.5	An Illustrative Example	492
11.6	Projection for the Second and Subsequent Cycles	498
11.7	Matrix Method of Population Projection... ..	502
11.8	A Note on the Assumption on Projection	503
11.9	Importance and Uses of Population Projection... ..	504
12	Stable Population	507-531
12.1	Preliminaries... ..	507
12.2	Age Distribution of a Stable Population... ..	508
12.3	Crude Birth Rate in a Stable Population... ..	510
12.4	Crude Death Rate in a Stable Population... ..	511
12.5	Intrinsic Rate of Natural Increase... ..	512
12.6	Mean Length of Generation... ..	516
12.7	Derivation of a Stable Population... ..	517
12.8	Mean Length of Generation and Other Reproductive Averages	522
12.9	An Approximation to the Stable Birth Rate... ..	524

12.10	Effect of a Fall in Mortality on the Growth Rate and Age Distribution...	525
12.11	Stationary Population...	526
12.12	Quasi-Stable Population...	528
12.13	Regional Model Life Tables and Stable Populations ...	529
13	Indirect Estimates of Demographic Parameters ...	532–595
13.1	Introduction...	532
13.2	Model Life Table and its Uses in Indirect Estimation ...	533
13.3	Estimation of Fertility: Brass Method...	537
13.4	The Mean Age at Child-bearing...	543
13.5	Estimation of Fertility: Brass-type Estimates ...	545
13.6	Estimating Crude Birth Rate from Census Age Distribution ...	550
13.7	Estimation of Vital Rates from Two Consecutive Censuses ...	555
13.8	Construction of a Fertility Schedule from Census-type Age Distribution ...	565
13.9	Estimation of Fertility and Mortality by Stable Population Analysis..	568
13.10	Adjustment of Birth Rates for the Effect of Declining Mortality ...	575
13.11	Estimation of Child Mortality ...	581
13.12	Graduation of the Mortality Rates...	590
14	Estimating Adult Mortality ...	596–649
14.1	Rationale of the Method...	596
14.2	Orphanhood Technique...	597
14.3	Estimating Adult Mortality from Orphanhood Data: Brass and Hill Method...	597
14.4	Hill, Zlotnik and Trussell's Regression Method: Female Adult Mortality from Orphanhood Data...	604
14.5	Timaue's Regression Method of Estimating Adult Mortality from Orphanhood Data ...	606
14.6	Graduating Adult Mortality Estimates...	609
14.7	Hill and Trussell's Regression Method of Estimating Adult Mortality from Orphanhood Data ...	616
14.8	Estimating Adult Mortality by Widowhood Method ...	618
14.9	Graduation of Adult Mortality Estimates Based on Widowhood Data...	633
14.10	Other Approaches of Estimating Adult Survivorship Probabilities from Widowhood Data ...	638
14.11	Death Distribution Method.....	604
	Bibliography	650–652
	Demographic Tables	653–672
	Subject Index	673–676

CHAPTER

1

FUNDAMENTALS OF DEMOGRAPHY

1.1 What is Demography?

The term 'demography' is a combination of two Greek words *demos* which means 'people' and *graphien*, which means 'to describe'. The literal meaning of the term demography thus stands as 'description of the people' implying that demography is concerned with the description, analysis and an understanding of the population dynamics. Demography, as viewed elsewhere, (Barclay, 1958: 2) is concerned with behavior of the aggregate or some of its parts, and not with the behavior of individuals.

In studying demography, we are especially concerned with the process of replacement. The membership of a population is constantly changing through birth, death and migration. These factors are sometimes called vital processes. Growth, decline or constancy in the number—are all the outcomes of these three factors. For this reason, birth, death and migration are called 'vital events'. Marriage and divorce statistics are also sometimes included in the vital process and hence they are also referred to as vital events. All these events play an important role in demographic analysis of human population. Clearly, demographic analysis is primarily based on two kinds of data. The first kind is the enumeration containing all the persons present in a defined territory at a particular point of time. This refers to a **census**. The other form of statistics is a record of vital events, generally the events occurring in a calendar year. This is provided by some registration scheme, designed to record all of certain events, such as birth, death, migration, divorce, as they occur.

As regards to a precise and complete definition of the word 'demography', the economists, geographers, social scientists, statisticians and others have

defined it in their own way so as to reflect the inherent meaning and scope of the subject of demography. Cox (1959), Hauser and Duncan (1959), Bogue (1969), Barclay (1969) and Pressat (1972) are some of them who contributed to this end. Obviously, some definitions have adopted a narrow outlook on the subject, while some have made its scope very wide. Critically appraising these definitions, we may put forward the following definition of demography:

Definition: Demography is the scientific study of human population with respect to the size, structure, development and distribution of population, and spatial and/or temporal changes in them over time in response to birth, death, migration, marriage and social mobility.

The term 'composition' of the population used in the definition implies (a) such traits as age, sex, race, and ethnic origin (b) such life cycle attributes as educational level, marital status, and household composition, and (c) such variable characteristics as occupation, socio-economic status, income etc.

It becomes obvious from the above definitions that demography is a dynamic and developing discipline and it can be studied either from its technical aspects involving statistical analysis of the population size and its composition and factors responsible for its growth and its distribution or from the societal aspects which are concerned with the relationship between demographic processes on the one hand and, social, economic, political, biological and ecological factors on the other.

We also note that demography deals with the study and analysis of both quantitative and qualitative aspects of human population. Quantitative aspects include, among others, composition, density, distribution, movement, size and structure of the population. Qualitative aspects are largely the sociological factors, such as, education, quality of life, social behavior, crime, development, diet and nutrition, social class, wealth and well-being of human population. In sum, we note that the definitions reviewed above have clearly taken into consideration both the aspects of demography, viz. quantitative and qualitative.

1.2 Demographic Analysis and its Importance

Demographic analysis is the study of populations in a given sector. It includes a set of methods that allows us to measure the dimensions and dynamics of populations. These methods have primarily been developed to study human populations, but are extended to a variety of areas where