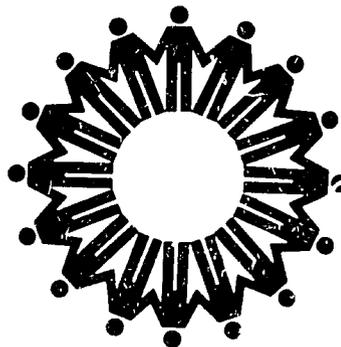


Population Dynamics Group

University of Illinois

Urbana, Illinois 61801

PROJECTIONS FOR COSTA RICA



PROJECTIONS FOR COSTA RICA

Prepared by

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Urbana, Illinois 61801
Paul Handler, Director

THE FOLLOWING SET OF GRAPHS PRESENTS PROJECTIONS OF VARIOUS DEMOGRAPHIC, ECONOMIC, EDUCATIONAL AND HEALTH INDICATORS. THE MAJORITY OF THE GRAPHS CONSIST OF THREE PLOTS, EACH PLOT BEING BASED ON A CONSTANT MORTALITY SCHEDULE AND THE FOLLOWING THREE ASSUMPTIONS:

PLOT 1: THE TOTAL FERTILITY RATE REMAINS AT THE ESTIMATED 1970 VALUE OF 5.1 LIVE BIRTHS OVER THE PROJECTION PERIOD 1970-2010 OR 1970-1990.

PLOT 2: THE TOTAL FERTILITY RATE DECREASES GRADUALLY TO 4.0 LIVE BIRTHS OVER 15 YEARS BEGINNING IN 1970 AND REMAINS AT 4.0 THEREAFTER.

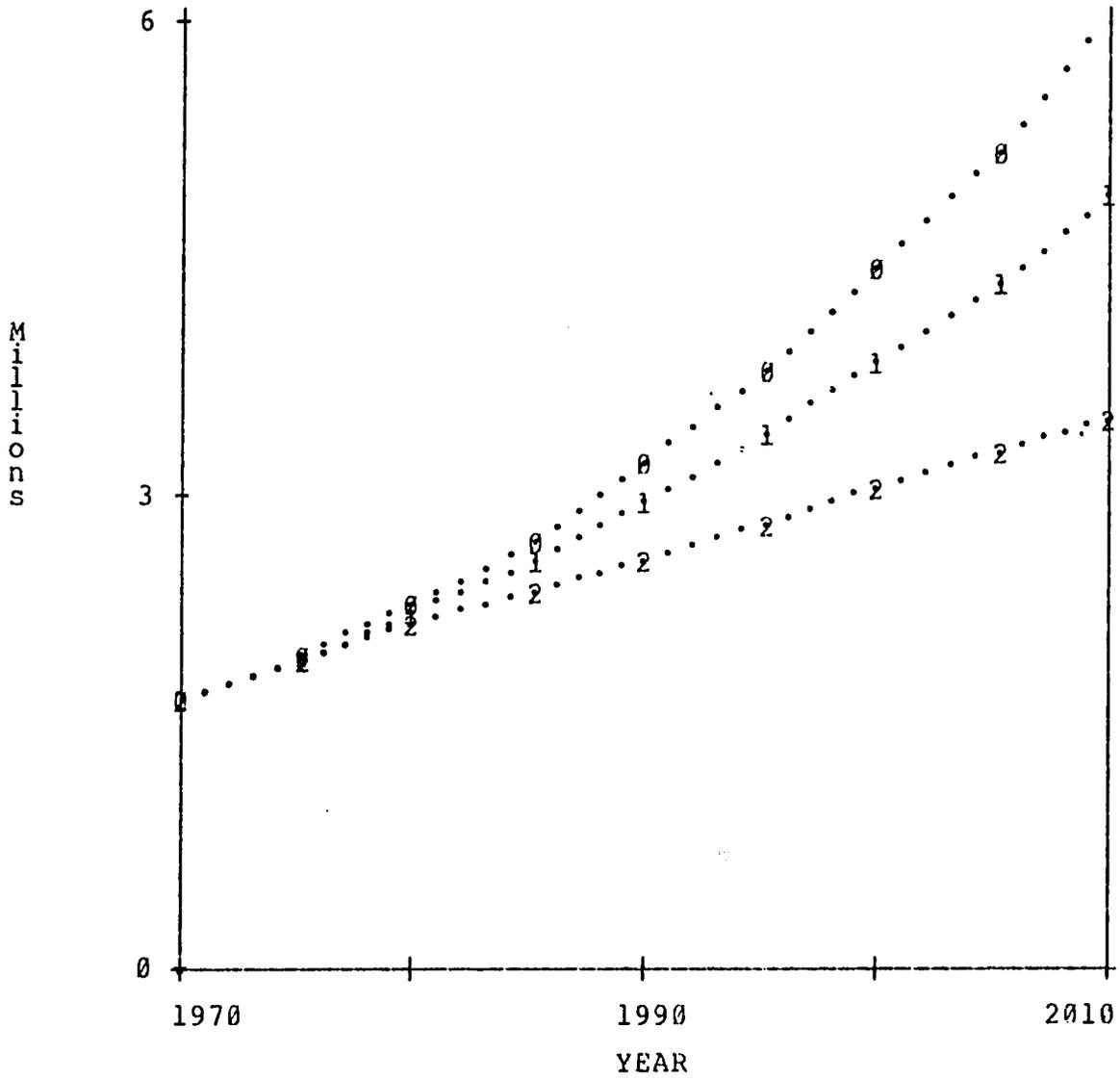
PLOT 3: THE TOTAL FERTILITY RATE DECREASES GRADUALLY TO 2.5 LIVE BIRTHS OVER 15 YEARS BEGINNING IN 1970 AND REMAINS AT 2.5 THEREAFTER.

GRAPHS FOR WHICH THE ABOVE FERTILITY ASSUMPTIONS ARE NOT APPLICABLE WILL BE NOTED.

THIS GRAPH SHOWS THE FUTURE COURSE OF POPULATION GROWTH OVER THE NEXT 40 YEARS. EACH OF THE PLOTS APPEARING ON THE GRAPH REFLECTS A CONSTANT MORTALITY SCHEDULE AND ONE OF THE THREE FERTILITY ASSUMPTIONS DESCRIBED ON PAGE 1.

03/16/75

Costa Rica
Total Pop.



	1970	1980	1990	2000	2010
0	1.72	2.32	3.22	4.42	6.01
1	1.72	2.27	2.96	3.84	4.88
2	1.72	2.20	2.61	3.08	3.52

THIS BAR GRAPH DISPLAYS THE AGE COMPOSITION OF THE POPULATION IN 1975. THE ESTIMATED NUMBER OF BIRTHS AND DEATHS PER 1000 POPULATION, AS WELL AS THE TOTAL FERTILITY RATE AND THE ANNUAL PERCENT INCREASE IN POPULATION ARE ALSO DISPLAYED.

03/16/76

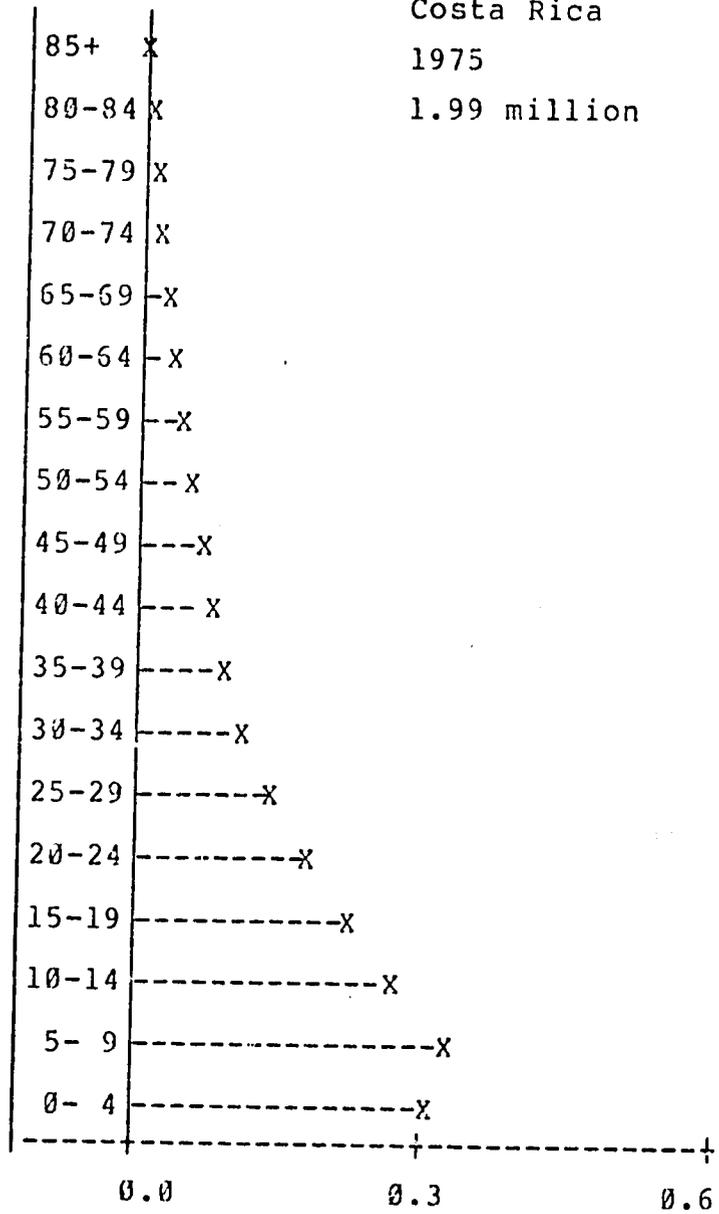
Costa Rica
1975
1.99 million

Births/1000
36.8 Births per 1000

Deaths/1000
6.2 Deaths per 1000

Percent Inc.
3.1 Percent

TFR
5.1 Births

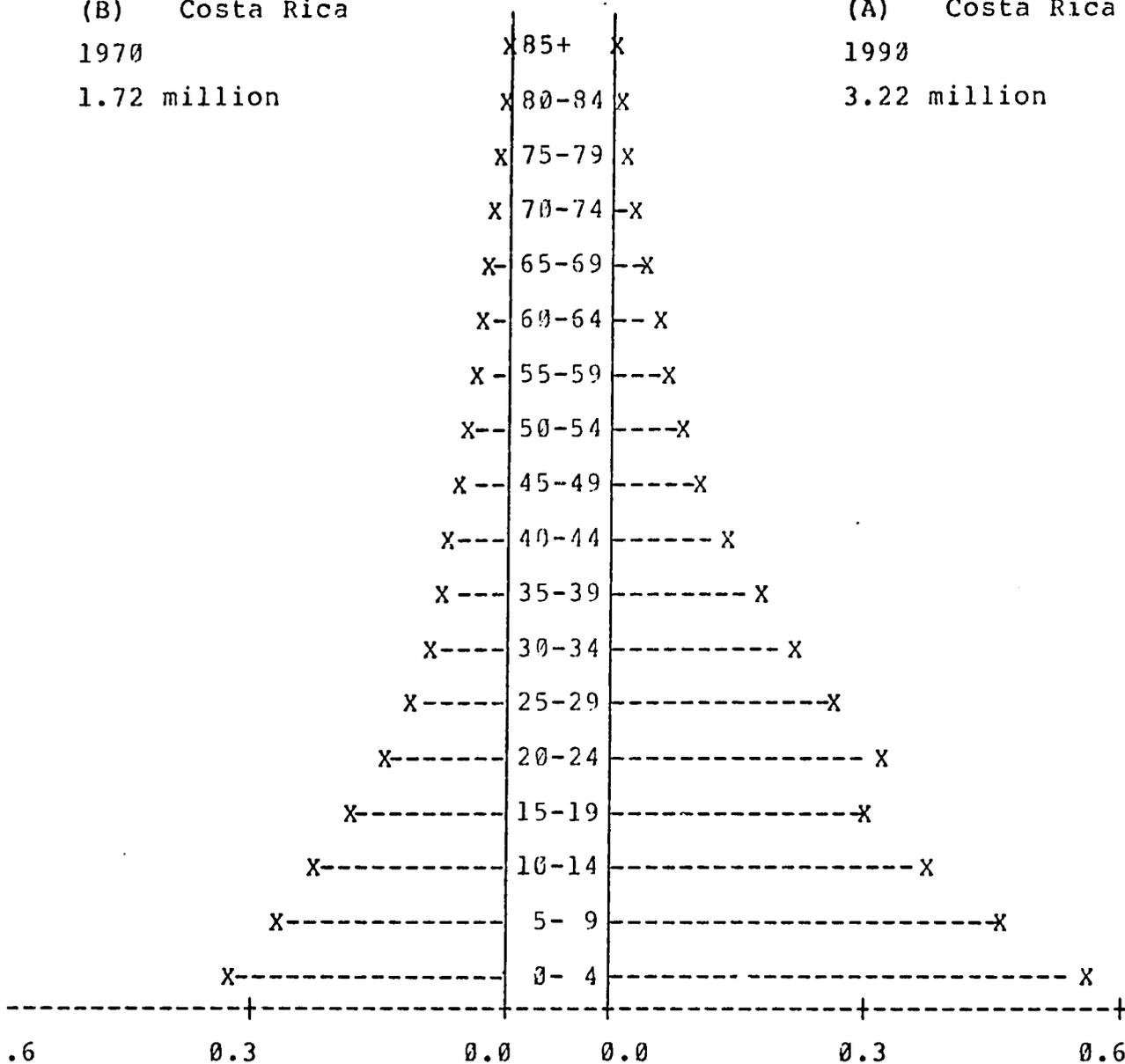


THE BAR GRAPH DISPLAYS THE AGE COMPOSITION OF THE POPULATION IN 1970 AND IN 1990 ASSUMING CONSTANT MORTALITY AND FERTILITY CONDITIONS. THE AGE STRUCTURE SHOWS THE EFFECTS OF RAPID GROWTH WITH ITS BROAD BASE AND QUICK TAPERING TO A SHARP POINT, INDICATING MANY YOUNG PEOPLE AND FEW OLDER PEOPLE. THESE AGE STRUCTURES CORRESPOND TO THE UPPER CURVE IN THE FIRST GRAPH OF THIS BOOKLET, AT THE TWO POINTS IN TIME.

03/16/76

(B) Costa Rica
1970
1.72 million

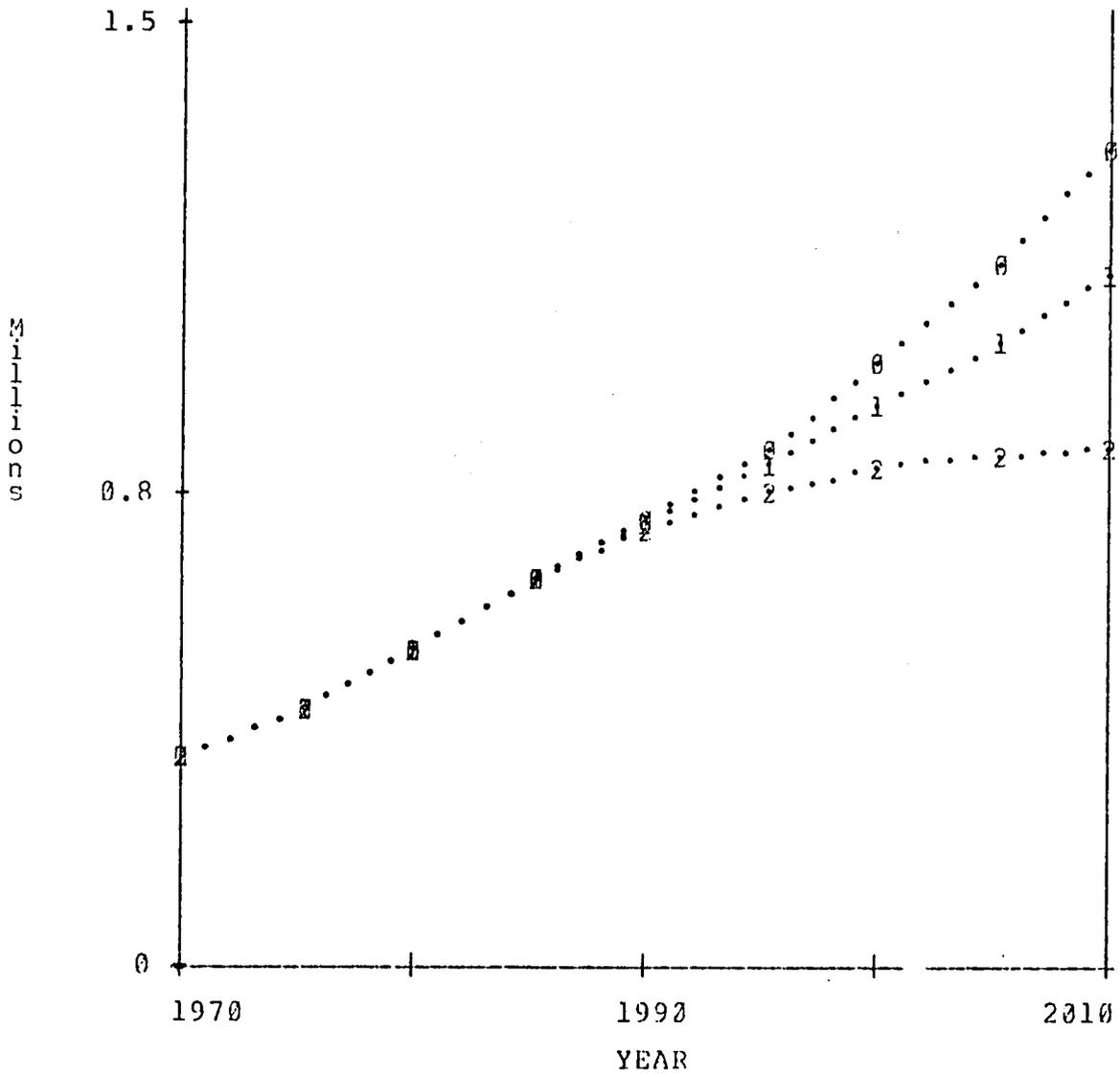
(A) Costa Rica
1990
3.22 million



THIS GRAPH SHOWS THE NUMBER OF WOMEN IN THE CHILD-BEARING AGES (15-44) UNDER THE ASSUMPTION OF CONSTANT MORTALITY CONDITIONS AND EACH OF THE POSSIBLE FUTURE FERTILITY CONDITIONS DESCRIBED PREVIOUSLY. IT IS CLEAR THAT CHANGES IN FERTILITY WILL NOT PRODUCE ANY EFFECTS ON THE NUMBER OF WOMEN IN THIS AGE GROUP FOR ANOTHER 15 YEARS, BECAUSE THEY ARE ALREADY BORN IN 1970. THIS MEANS THAT THE NUMBER OF POTENTIAL MOTHERS IS ESSENTIALLY DETERMINED FOR THE NEXT 15 YEARS, AND THIS IS A MAJOR INFLUENCE ON THE NUMBER OF CHILDREN TO BE BORN DURING THIS PERIOD. ALTERNATIVELY, THIS GRAPH COULD BE INTERPRETED AS THE POTENTIAL NUMBER OF MARRIED COUPLES OR AS APPROXIMATELY EQUAL TO THE POTENTIAL NUMBER OF FATHERS.

03/16/76

Costa Rica
Women (15-44)

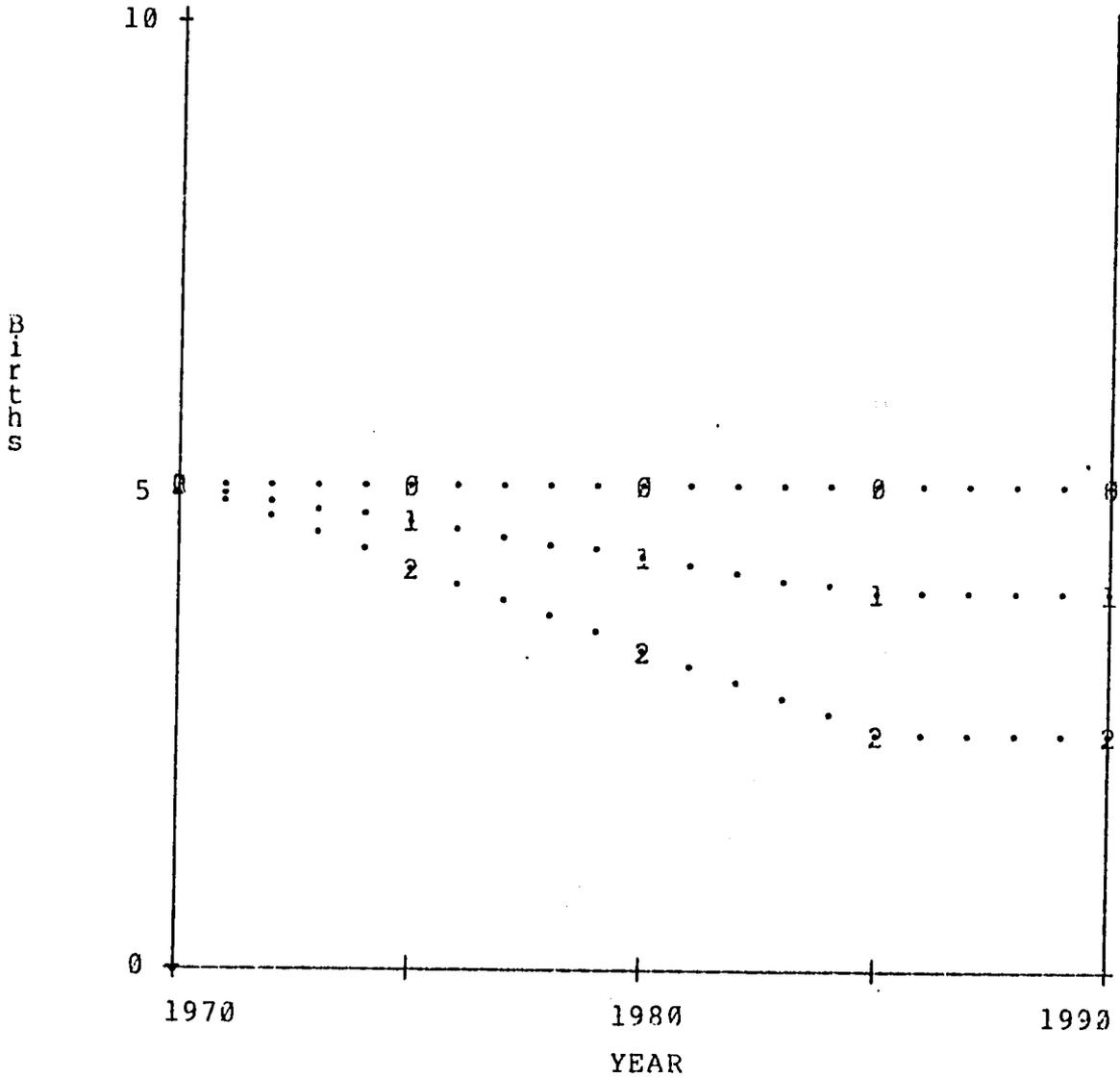


	1970	1980	1990	2000	2010
0	0.34	0.50	0.71	0.95	1.29
1	0.34	0.50	0.70	0.89	1.09
2	0.34	0.50	0.69	0.80	0.83

THIS GRAPH DISPLAYS THE TOTAL FERTILITY RATE OR
NUMBER OF LIVE BIRTHS PER WOMAN OVER THE NEXT 20 YEARS
UNDER THE THREE POSSIBLE FUTURE FERTILITY PATTERNS
DESCRIBED ON PAGE ONE.

Costa Rica
TFR

03/16/76



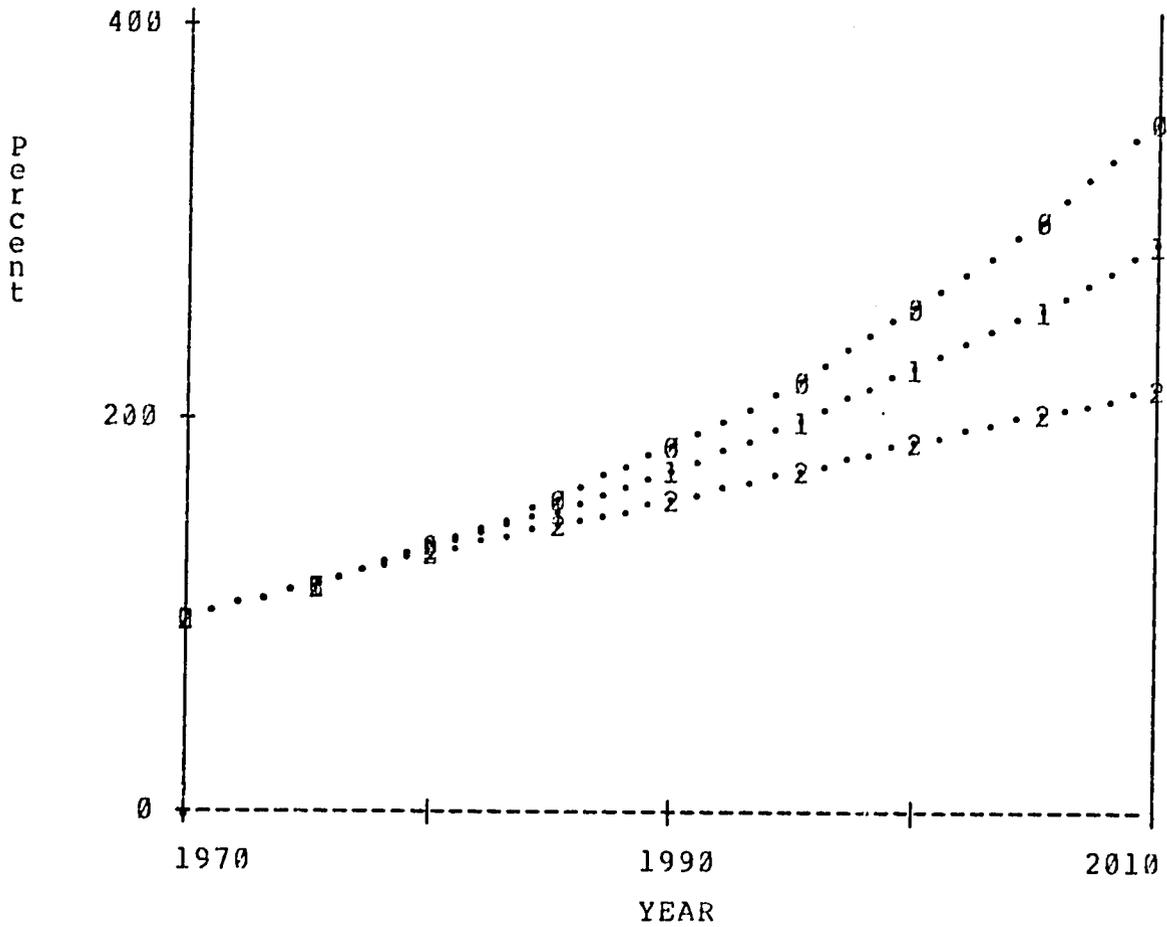
	1970	1975	1980	1985	1990
0	5.10	5.10	5.10	5.10	5.10
1	5.10	4.74	4.37	4.00	4.00
2	5.10	4.24	3.37	2.50	2.50

THIS GRAPH DISPLAYS THE DEMAND FOR FOOD BETWEEN 1970 AND 2010 EXPRESSED IN INDEX FORM. THE PROJECTIONS ARE MADE UNDER THE ASSUMPTION THAT PER CAPITA FOOD CONSUMPTION REMAINS AT THE 1970 LEVEL, WITH NO IMPROVEMENT IN THE DIET ABOVE THAT POINT. EACH OF THE PLOTS APPEARING ON THE GRAPH REFLECTS A CONSTANT MORTALITY SCHEDULE AND ONE OF THE THREE FERTILITY ASSUMPTIONS MADE ON PAGE ONE.

Food Program

03/16/76

Costa Rica
Food Demand



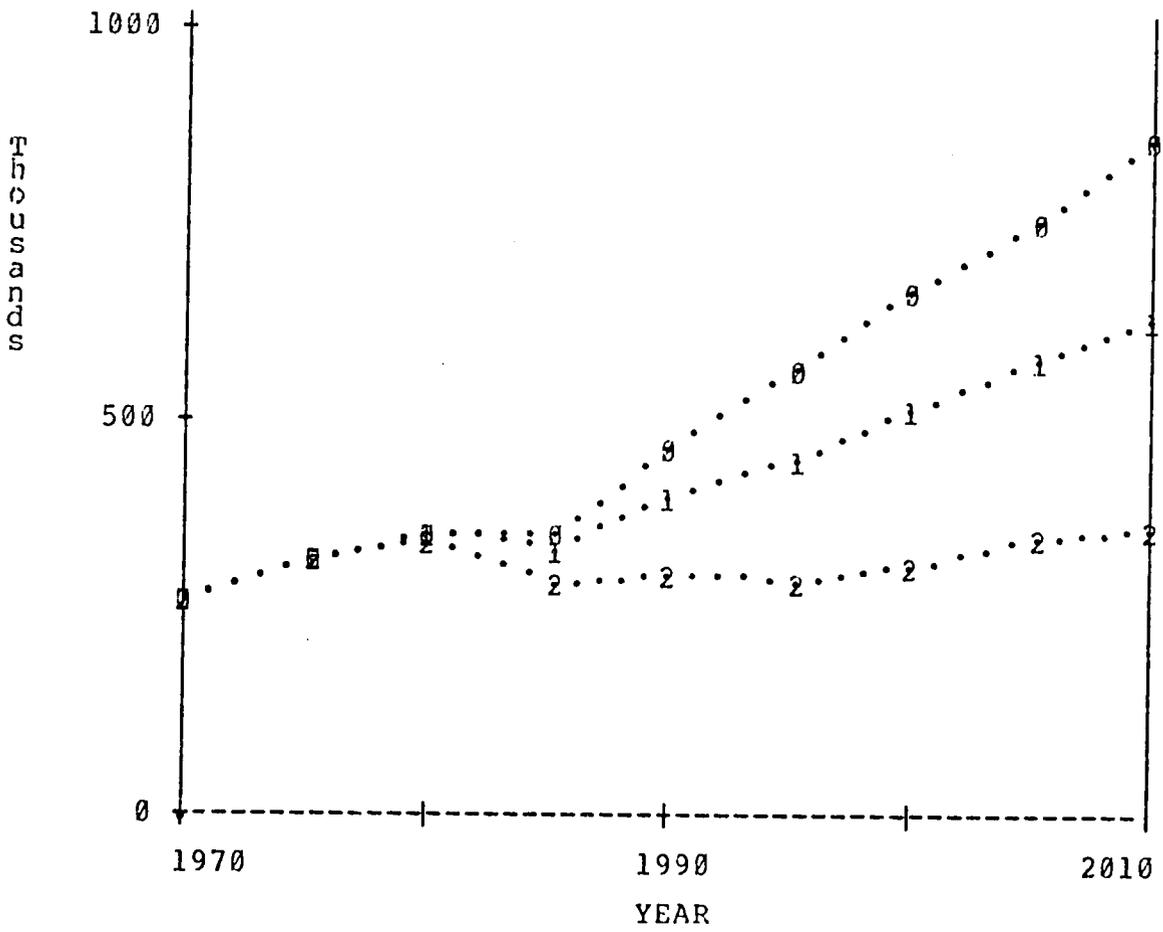
	1970	1980	1990	2000	2010
0	100.0	137.9	189.2	261.0	355.2
1	100.0	135.9	177.3	229.8	292.5
2	100.0	133.2	161.2	188.4	214.9

THIS GRAPH DISPLAYS THE TOTAL NUMBER OF CHILDREN WHO WILL BE ENROLLED IN PRIMARY SCHOOL BETWEEN 1970 AND 2010 ASSUMING AN ENROLLMENT RATE OF 92 PERCENT. EACH OF THE PLOTS APPEARING ON THE GRAPH REFLECTS A CONSTANT MORTALITY SCHEDULE AND ONE OF THE THREE FERTILITY ASSUMPTIONS DESCRIBED ON PAGE ONE.

Educational Costs

03/16/76

Costa Rica
 Number of Students
 Primary



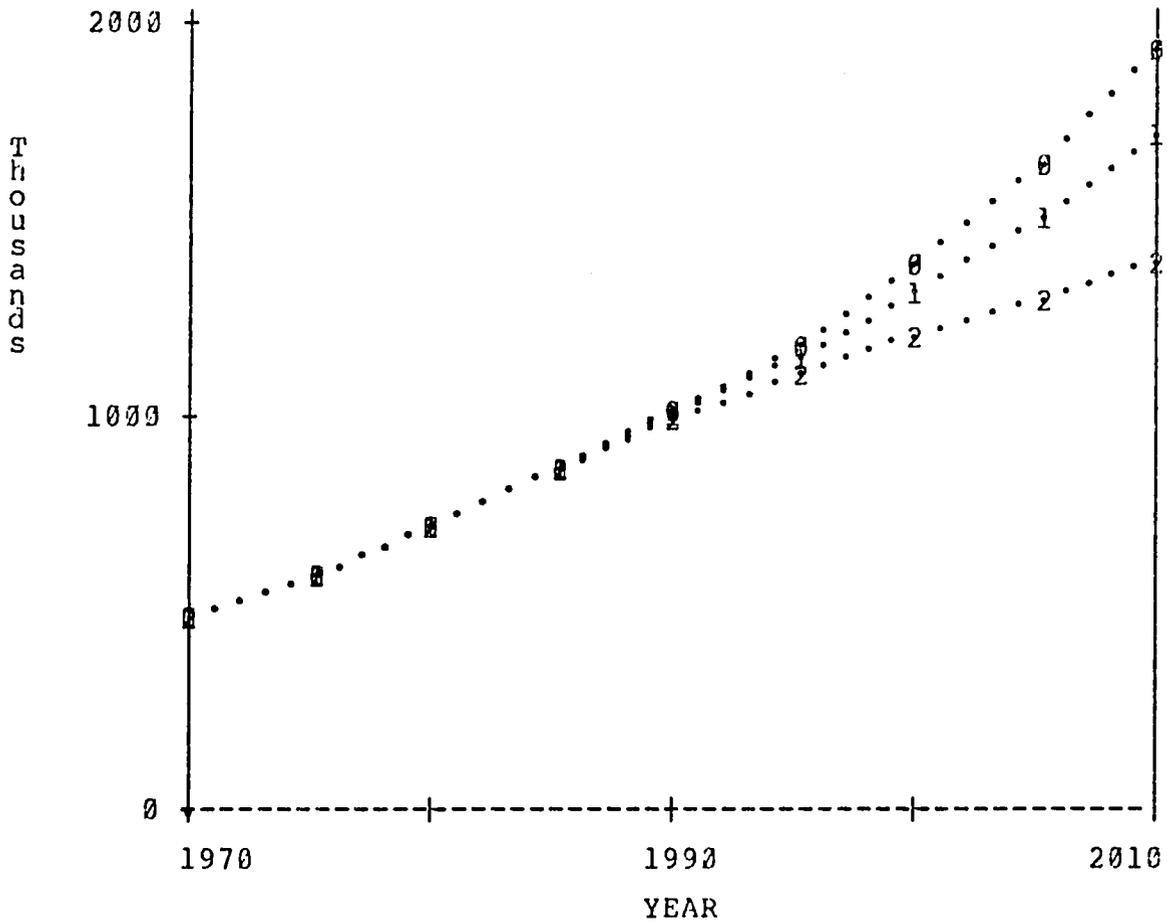
	1970	1980	1990	2000	2010
0	270	360	460	660	850
1	270	360	400	510	630
2	270	350	300	310	350

THIS GRAPH DISPLAYS THE TOTAL NUMBER OF PERSONS WHO WILL BE IN THE LABOR FORCE BETWEEN 1970 AND 2010, ASSUMING THAT THE LABOR FORCE PARTICIPATION RATES FOR EACH AGE GROUP REMAIN CONSTANT OVER THE ENTIRE PROJECTION PERIOD. EACH PLOT REFLECTS A CONSTANT MORTALITY SCHEDULE AND ONE OF THE THREE FERTILITY ASSUMPTIONS MADE ON PAGE ONE.

Economic Development

03/16/76

Costa Rica
Labor Force



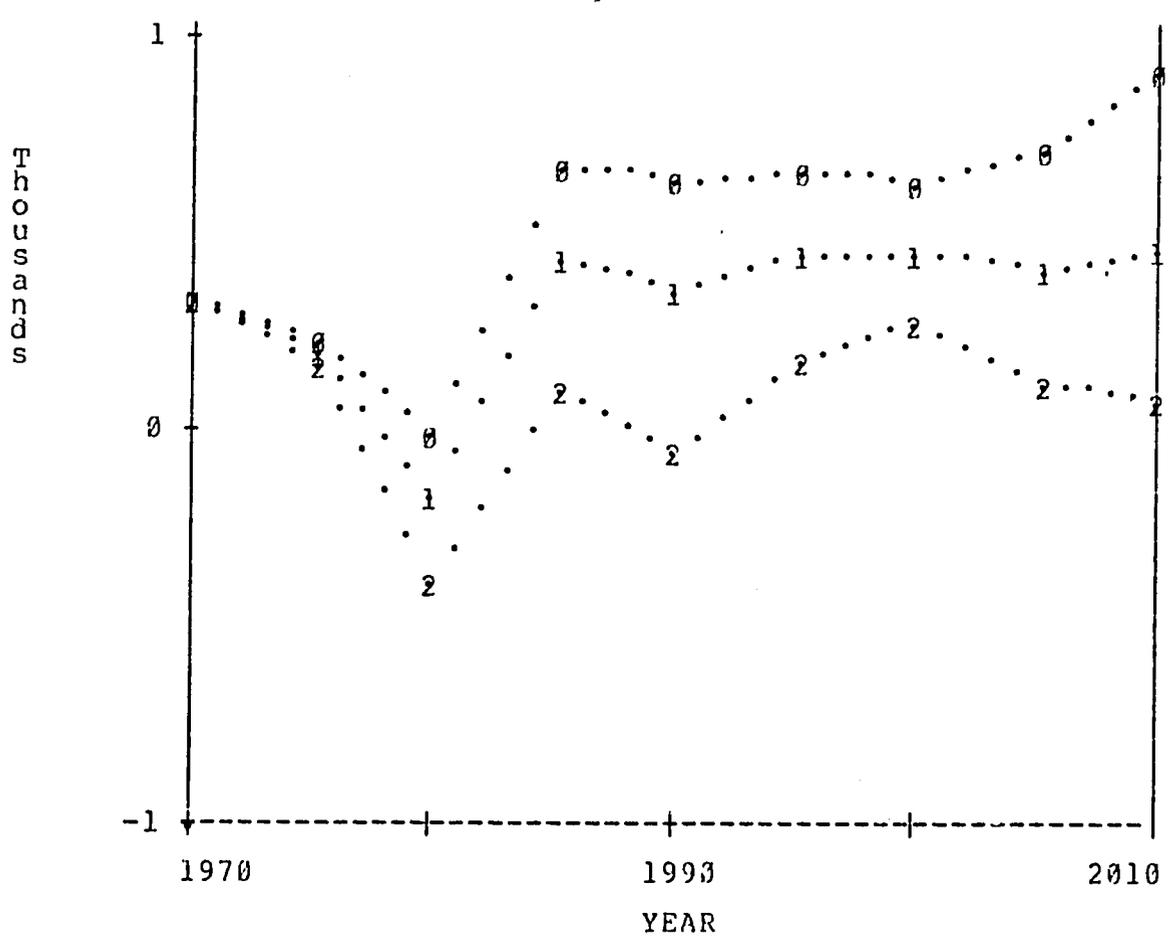
	1970	1980	1990	2000	2010
0	500	733	1021	1400	1938
1	500	733	1012	1318	1705
2	500	733	999	1208	1395

THIS GRAPH DISPLAYS THE ESTIMATED NUMBER OF ADDITIONAL TEACHERS REQUIRED ABOVE THOSE AVAILABLE IN 1970 BETWEEN 1970 AND 2010 ASSUMING A CONSTANT PUPIL-TEACHER RATIO. EACH PLOT REFLECTS A CONSTANT MORTALITY SCHEDULE AND ONE OF THE THREE FERTILITY ASSUMPTIONS DESCRIBED ON PAGE ONE.

Educational Costs

03/16/76

Costa Rica
Additional teachers
Primary



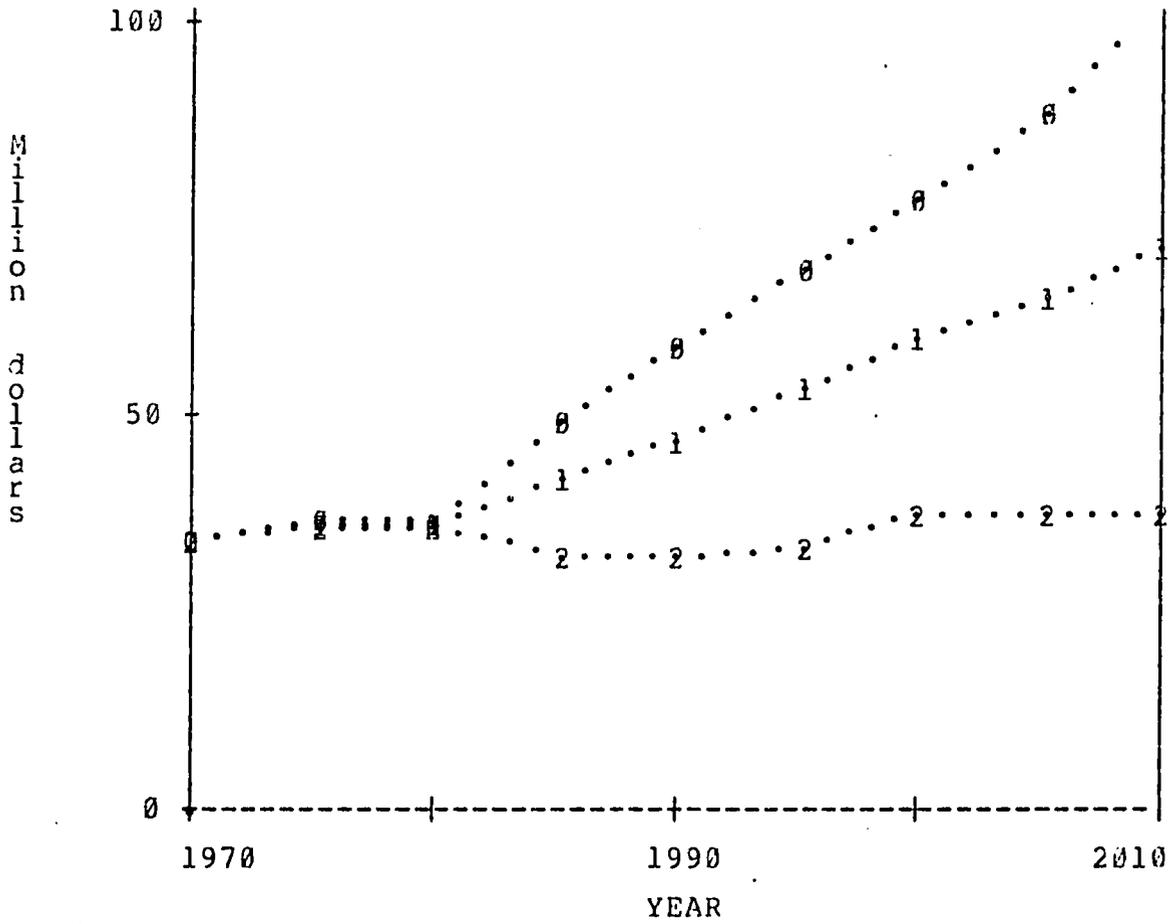
	1970	1980	1990	2000	2010
0	0.33	-0.03	0.59	0.58	0.86
1	0.33	-0.18	0.31	0.40	0.40
2	0.33	-0.40	-0.09	0.23	0.00

THIS GRAPH DISPLAYS THE TOTAL ANNUAL COST IN 1975 DOLLARS OF PRIMARY SCHOOL EDUCATION, BETWEEN 1970 AND 2010, ASSUMING THAT THE COSTS PER ADDITIONAL STUDENT AND THE ENROLLMENT RATE REMAIN CONSTANT OVER THE PROJECTION PERIOD. EACH OF THE PLOTS REFLECTS A CONSTANT MORTALITY SCHEDULE AND ONE OF THE THREE FERTILITY ASSUMPTIONS MADE ON PAGE ONE.

Educational Costs

03/16/76

Costa Rica
Total Costs
Primary

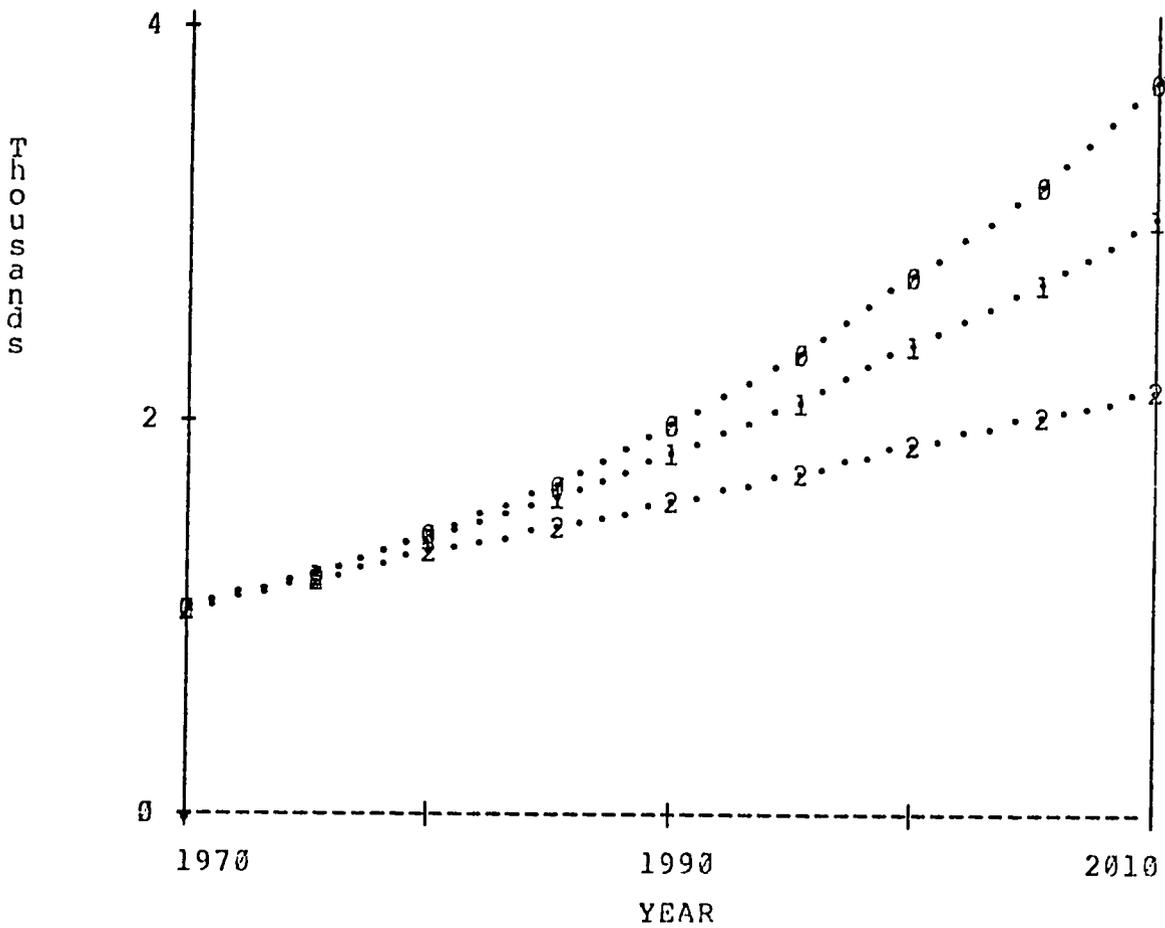


	1970	1980	1990	2000	2010
0	34	36	59	78	103
1	34	36	46	59	71
2	34	35	31	36	36

THIS GRAPH DISPLAYS THE TOTAL NUMBER OF DOCTORS NEEDED BETWEEN 1970 AND 2010, ASSUMING THERE ARE 6.17 DOCTORS PER 10,000 POPULATION. EACH OF THE PLOTS APPEARING ON THE GRAPH REFLECTS A CONSTANT MORTALITY SCHEDULE AND ONE OF THE THREE FERTILITY ASSUMPTIONS PRESENTED ON PAGE ONE.

03/16/76

Costa Rica
Total Doctors



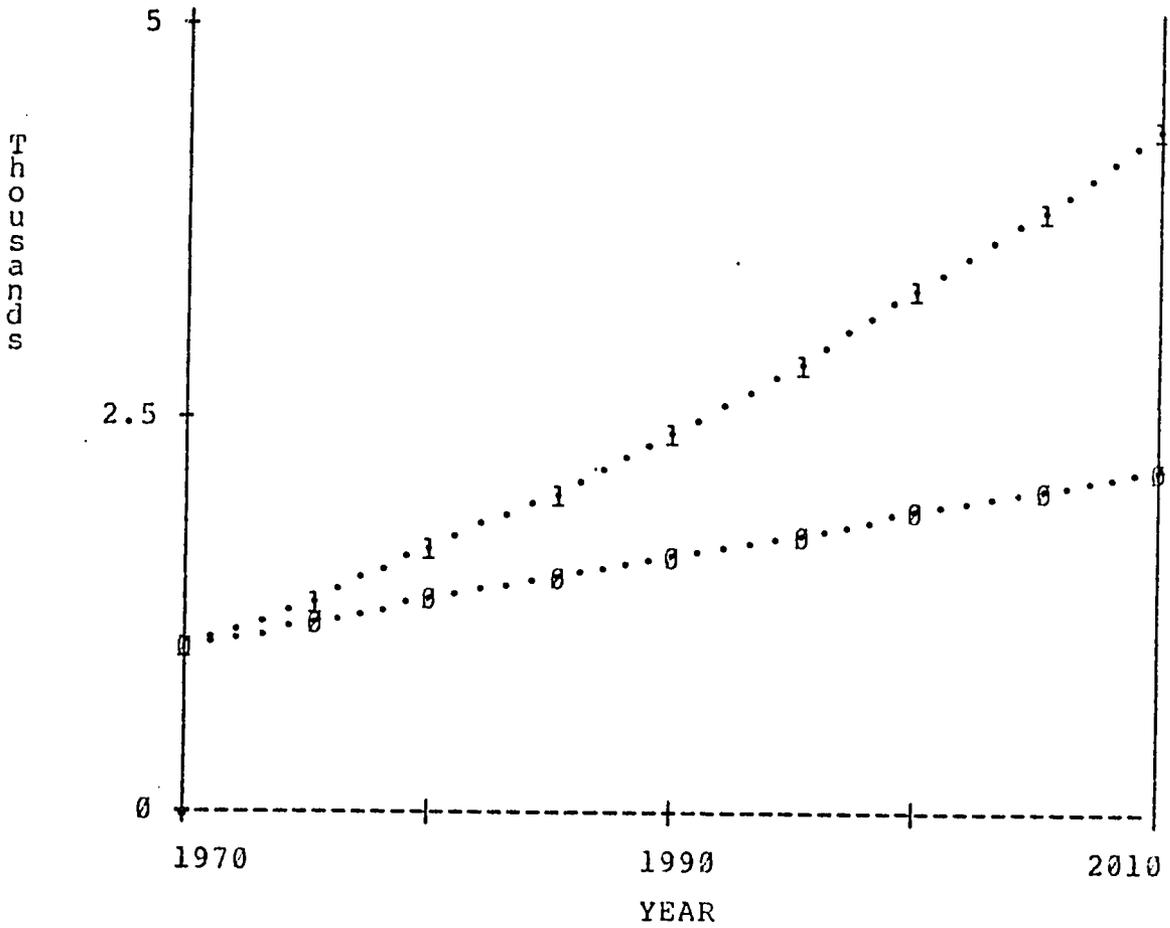
	1970	1980	1990	2000	2010
0	1.064	1.430	1.935	2.728	3.707
1	1.064	1.398	1.828	2.370	3.010
2	1.064	1.355	1.613	1.902	2.171

THIS GRAPH DISPLAYS THE NUMBER OF DOCTORS NEEDED BETWEEN 1970 AND 2010, ASSUMING THERE ARE 12.3 DOCTORS PER 10,000 PERSONS, AN IMPROVEMENT OF 50% IN THE PRESENT DOCTOR/PERSON RATIO.

THE LOWER CURVE APPEARING ON THE GRAPH REFLECTS THE ASSUMPTION OF A CONSTANT MORTALITY SCHEDULE AND A GRADUAL REDUCTION IN THE TOTAL FERTILITY FROM 5.1 TO 2.5 OVER THE NEXT 15 YEARS WHILE MAINTAINING THE PRESENT DOCTOR/PERSON RATIO. THE UPPER CURVE REFLECTS BOTH AN IMPROVEMENT OF 50% IN THE PRESENT DOCTOR/PERSON RATIO OVER 40 YEARS, AND THE REDUCTION OF THE TFR TO 2.5 OVER THE NEXT 15 YEARS.

03/16/76

Costa Rica
Total Doctors

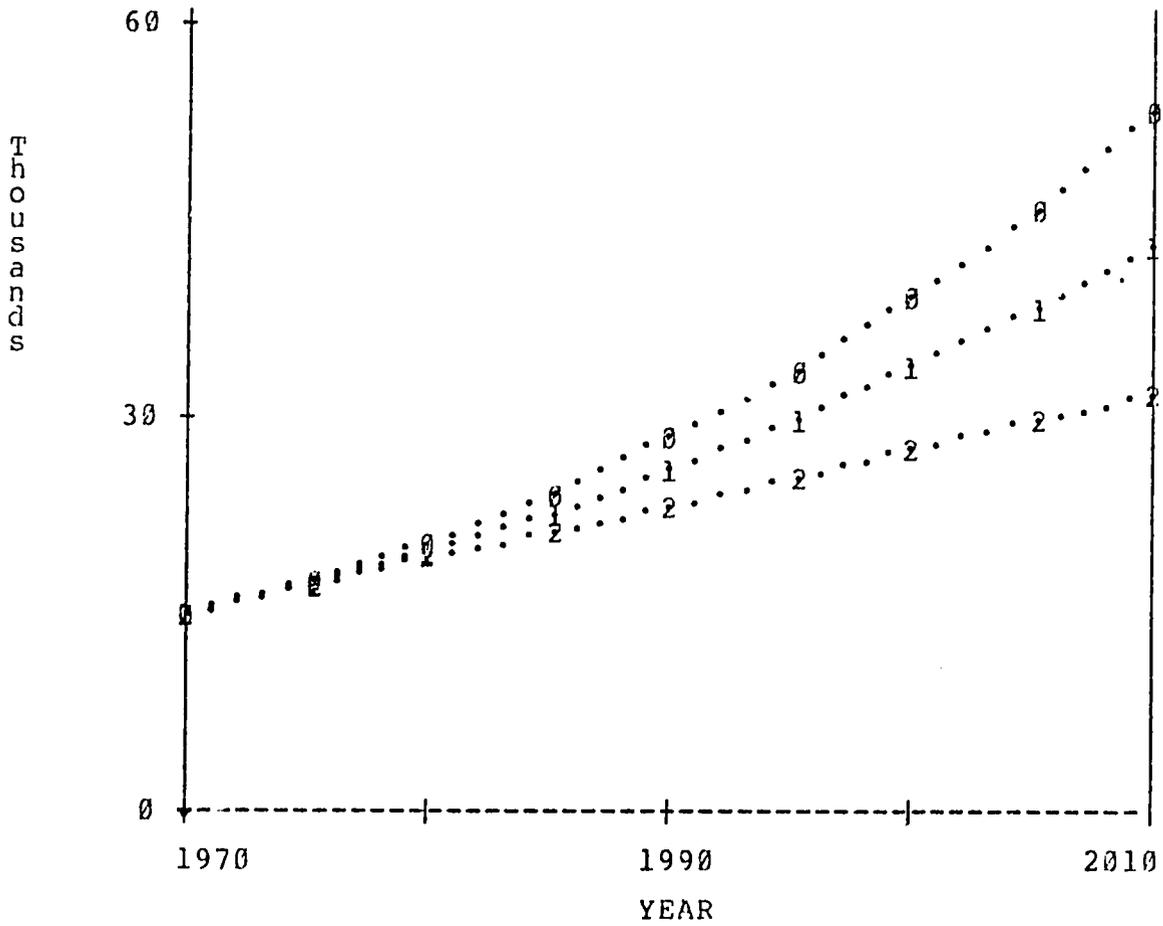


	1970	1980	1990	2000	2010
0	1.064	1.355	1.613	1.902	2.171
1	1.064	1.693	2.420	3.328	4.343

THIS GRAPH DISPLAYS THE TOTAL NUMBER OF MEDICAL
SUPPORT PERSONNEL NEEDED BETWEEN 1970 AND 2010
ASSUMING THERE ARE 14.5 SUPPORTING PERSONNEL PER
DOCTOR OR 89.5 SUPPORT PERSONNEL PER 10,000 PERSONS.
EACH OF THE PLOTS REFLECTS A CONSTANT MORTALITY
SCHEDULE AND ONE OF THE THREE FERTILITY ASSUMPTIONS
DESCRIBED ON PAGE ONE.

03/16/76

Costa Rica
Total Support Personnel

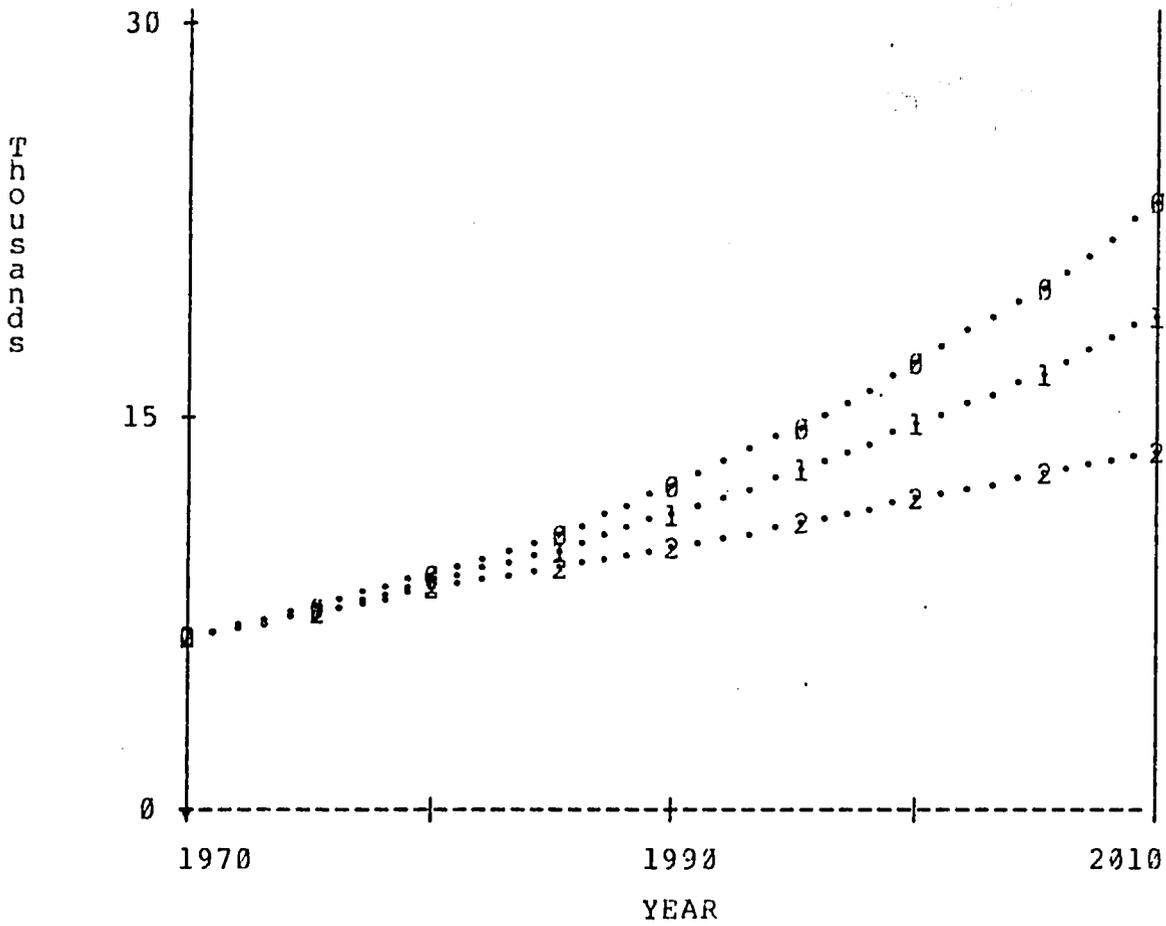


	1970	1980	1990	2000	2010
0	15.43	20.75	28.81	39.57	53.77
1	15.43	20.28	26.51	34.38	43.65
2	15.43	19.65	23.40	27.59	31.50

THIS GRAPH DISPLAYS THE NUMBER OF HOSPITAL BEDS NEEDED BETWEEN 1970 AND 2010 ASSUMING THERE ARE 3.9 HOSPITAL BEDS PER 1000 PERSONS OR 254 PERSONS PER HOSPITAL BED. EACH OF THE THREE PLOTS APPEARING ON THE GRAPH REFLECTS A CONSTANT MORTALITY SCHEDULE AND ONE OF THE THREE FERTILITY ASSUMPTIONS DESCRIBED ON PAGE ONE.

03/16/76

Costa Rica
Total Hospital Beds

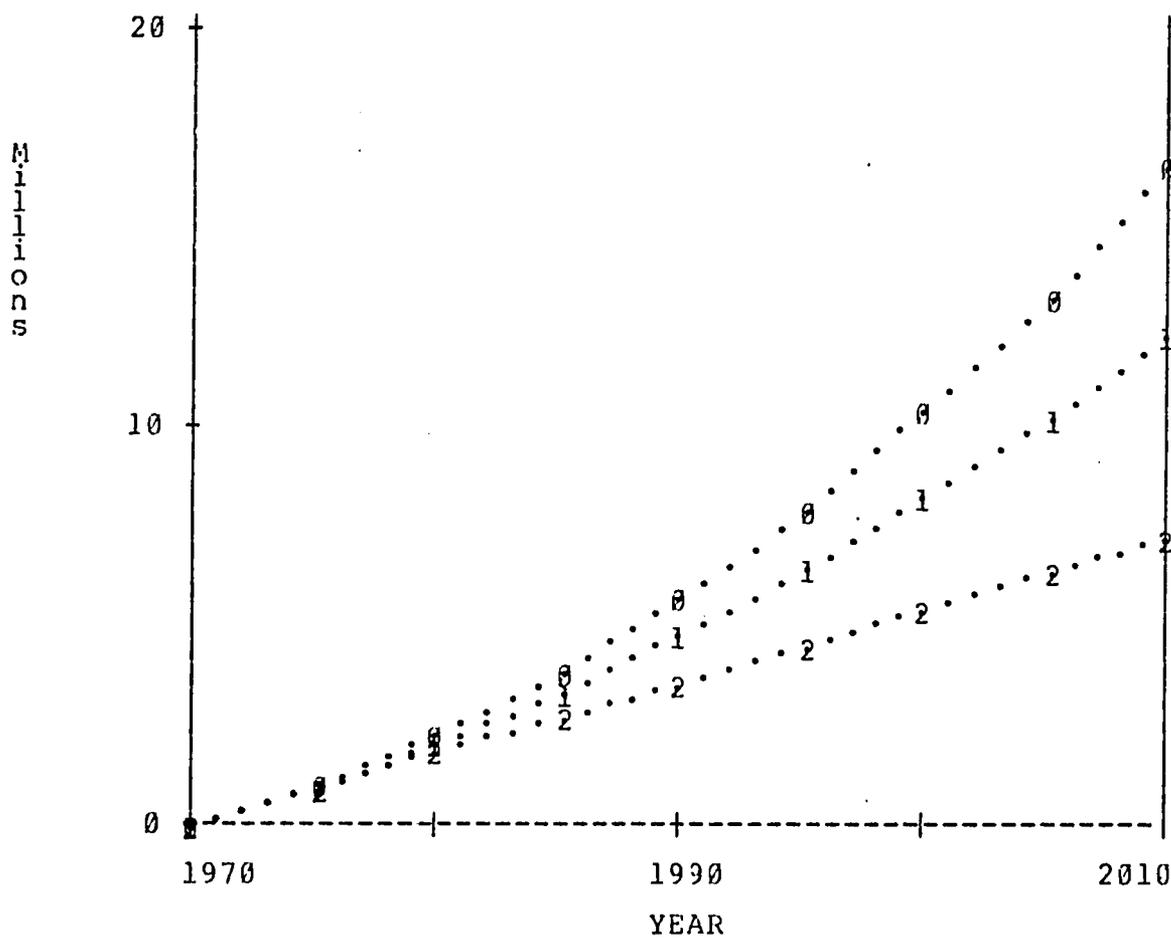


	1970	1980	1990	2000	2010
0	6.72	9.04	12.55	17.24	23.43
1	6.72	8.84	11.55	14.98	19.03
2	6.72	8.56	10.20	12.02	13.73

THIS GRAPH DISPLAYS THE COST OF THE ADDITIONAL HOSPITAL BEDS NEEDED BETWEEN 1970 AND 2010 ABOVE AND BEYOND THOSE EXISTING IN 1970. THE PROJECTIONS ASSUME THAT THE NUMBER OF PERSONS PER HOSPITAL BED REMAIN AT THE 1970 LEVEL OF 254 PERSONS PER BED, AND THAT THE COST PER HOSPITAL PLACE IS 1000 DOLLARS. EACH OF THE PLOTS APPEARING ON THE GRAPH REFLECTS A CONSTANT MORTALITY SCHEDULE AND ONE OF THE THREE FERTILITY ASSUMPTIONS MADE ON PAGE ONE. IF THE COST OF MAKING A HOSPITAL BED AVAILABLE IS DIFFERENT THAN \$1000, MULTIPLY BY THE APPROPRIATE FACTOR TO OBTAIN THE TRUE COST. FOR EXAMPLE, IF A HOSPITAL BED COSTS ONLY \$500, THEN DIVIDE THE COSTS BY ONE-HALF.

03/16/76

Costa Rica
Addl Dollars for Hospital Beds

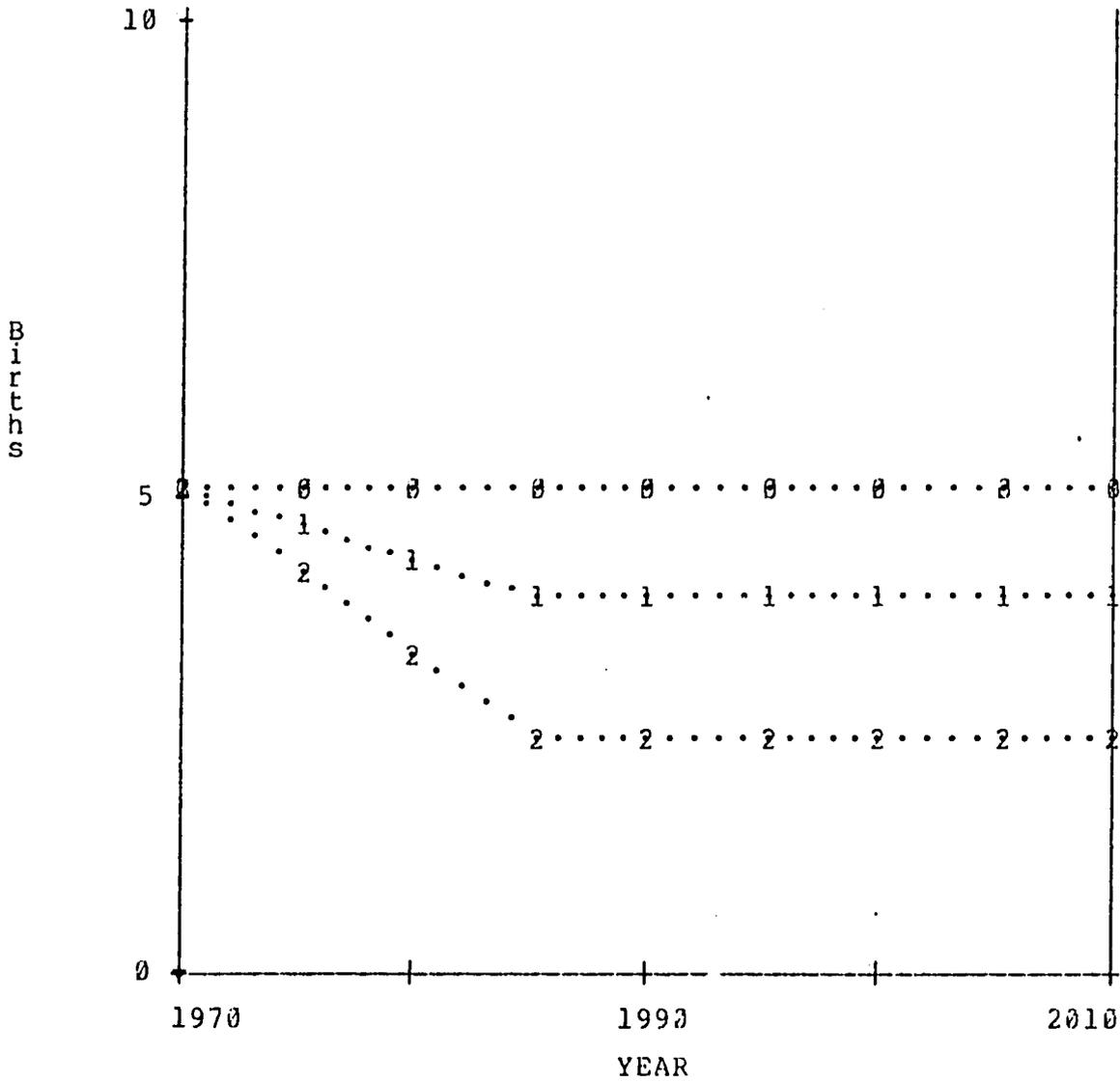


	1970	1980	1990	2000	2010
0	0.00	2.32	5.83	10.52	16.70
1	0.00	2.11	4.83	8.26	12.30
2	0.00	1.84	3.47	5.30	7.00

THIS GRAPH DISPLAYS THE TOTAL FERTILITY RATE OVER THE NEXT 40 YEARS UNDER THE THREE POSSIBLE FUTURE FERTILITY PATTERNS DESCRIBED ON PAGE ONE.

Costa Rica
TFR

03/16/76



	1970	1980	1990	2000	2010
0	5.10	5.10	5.10	5.10	5.10
1	5.10	4.37	4.00	4.00	4.00
2	5.10	3.37	2.50	2.50	2.50

The data for the number of doctors, hospital beds and support personnel was taken from

WORLD BANK
Health Sector Policy Paper
World Bank, March 1975