

41. Interview with Kenrick Radix, former PRG minister and NJM leader, March 20, 1984, St. Georges, Grenada.
42. Minutes of the Sept. 25 meeting, p. 51.
43. Louison, p. 214.
45. On the origins of OREL and the fusion, see the interview with Radix in IPI, April 30, 1984.
46. *Ibid.*
47. Louison, p. 213.
48. James P. Cannon, *The Struggle for a Proletarian Party* (New York, Pathfinder, 1972), p. 70.
49. Louison, pp. 211-12.
50. Personal communication from Ernest Harsch, staff writer of IPI who has read the CC minutes.
51. Interview with Tim Hector in St. Johns, Antigua, March 9, 1984.
52. *Communist Affairs* (London). No. 3, 1984, pp. 290-92.
53. Interview with Gilbert Págo of the Groupe Revolution Socialiste, Fort de France, Martinique, March 13, 1984. The People's Popular Movement of Trinidad and Tobago also supported the Coard faction but it is not clear if it has ties to Moscow.
54. Interview with Hector.
55. *Outlet* (Antigua), Oct. 21, 1983. Quoted in Cathy Sunshine and Philip Wheaton, *Death of a Revolution: An Analysis of the Grenada Tragedy and the U.S. Invasion* (Washington, D.C., EPICA, 1984), p. 7.
56. IPI, June 11, 1984, p. 363.
57. A good place to begin is Lenin himself, "Left Wing Communism" — *An Infantile Disorder*, especially sections 1-3, for his discussion on the relationship between the vanguard party and the masses.
58. Alexander Rabinowitz's *The Bolsheviks Come to Power* (New York; Norton 1976), was written in part to address such claims.
59. This was due to the limited land reform by Gairy after coming back to power in 1967, which explains in part why he still has a base among the peasantry even today. This writer was told that his party would probably get about 25 percent of the vote in the projected elections because of his support in the rural areas.
60. MBS, p. 289.
61. C.L.R. James, "The Grenadian Revolution: from Self-defense to Self-destruction", *Communist Affairs*, (3), 1984, p. 303.
62. According to Louison, Coard's group in the days prior to the coup dismissed the likelihood of an invasion by the US. This sentiment on their part does not contradict the argument being made here. Most Grenadans never expected a full-scaled invasion. For most people, the likely scenario would have been a mercenary army landing or a step up in destabilisation efforts.
63. Clark, "Introduction", p. xxxv, also A. Sadiq, "Blow by Blow: A Personal Account of the Ravaging of the Revo," *Black Scholar*, (15) 1, 1984, p. 11. Clive Thomas gives a figure of 100 which seems much too low.
64. IPI, Feb. 22, 1982, p. 127.
65. *Lenin's Fight Against Stalinism*, ed. Russell Block (New York, Pathfinder, 1975), p. 67.
66. Riviere, p. 364.
67. IPI, March 3, 1980, p. 201.
68. Minutes of the Sept. 25 meeting, p. 54.
69. MBS, p. 125.
70. On James' impact, see Ambursley, p. 200, and Horace Campbell, "The American Invasion of Grenada and the Struggle in the Caribbean", *Black Scholar*, p. 4. James' major polemic is his *State Capitalism and World Revolution* (1950). According to P. Gomes, he was inconsistent on the party question suggesting at times that a vanguard party might be appropriate in an underdeveloped country. P.I. Gomes, *The Marxian Populism of C.L.R. James. Working Papers on Caribbean Society*, Dept. of Sociology, UWI, St. Augustine, Trinidad and Tobago, 1978.
71. Martha Harnecker, *Cuba: Dictatorship or Democracy* (Westport, Lawrence Hill 1979), p. xvii.
72. The similarities between the actions of Coard and Escalante are striking. For details, see Clark, pp. iliv-xlv.
73. This is also the view of the head of El Salvador's pro-Moscow Marxist party. See IPI.

ECONOMIC GROWTH AND THE DEMOGRAPHIC TRANSITION: THE CASE OF AFRICAN COUNTRIES

Asmerom Kidane*

1. INTRODUCTION

The demographic transition theory is probably the most documented on the pre- and post-19th century population growth in Europe. It essentially states that the transition from high fertility and high mortality equilibrium to a low fertility and low mortality equilibrium is the result of socio-economic growth. A detailed discussion on the concept can be found in the writings of one of its formulators¹. Below we will only sketch the basic ideas of demographic transition and some inconsistencies inherent in the theory.

Demographic transition has three stages. The first stage is characterised by high fertility and high mortality, the latter being smaller than the former. The high mortality is usually taken to be an indication of socio-economic backwardness, such as low level of agricultural output, low calorie intake per head, lack of sufficient health services and lack of sanitary facilities. The high fertility rates that go along with high mortality are essentially the result of the latter. Besides, the structure of the family as an economic unit, the lack of economic opportunity for women outside the family, brief education and the economic view that the flow of wealth is from children to parents are some of the main points that contribute to the prevalence of high fertility in stage 1.

The second stage of demographic transition is characterised by a decline in mortality; this decline comes about as a result of greater productivity in agriculture, greater volume and pace of international trade, such as importing sweet potatoes from the Far East, the improved medical practices, especially inoculation, vaccination, the elimination of smallpox, and, finally, an improvement in sanitation such as the increased production of soap. The reasons seem to be improvements in social-economic conditions even though they took place before the industrial revolution.

The last stage of demographic transition shows a decline in fertility. This comes about gradually and is the result of rapid industrial progress and subsequent socio-economic transformation. In the process of industrial revolution, the traditional socio-economic relations within families become weaker. As a result of increased demand for labour by the industrial sector, urbanisation is accelerated and more people move from the agricultural sector. This demand for labour also releases women from their traditional role as more economic opportunities are open for them. This further weakens the traditional family as an economic unit and changes the traditional view on family size. Finally, the wealth flow is reversed, that is, parents spend more on children, and a conscious effort to decrease fertility takes place. This decrease in fertility starts with high income urban families, moves towards the low income and finally spreads to the rural sector. Unlike the decrease in mortality, the decrease in fertility is rather slow but finally reaches a new equilibrium with low fertility and mortality. This new equilibrium is characteristic of modern Europe, North America, Japan and, most recently, Singapore, Taiwan and South Korea. All these countries have reached a high stage of socio-economic growth.

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II. RELEVANCE OF THE DEMOGRAPHIC TRANSITION TO LESS DEVELOPED COUNTRIES

Whenever the issue of population growth and economic development in less developed countries is discussed, there are usually two schools of thought. One group of people argue that if the current rate of population growth (2.5% in 1978) continues, one should expect the population of many less developed countries to double every 28 years. Therefore, they advocate extensive family planning programmes, such as making contraceptives available and teaching the people about the benefits of late marriage. On the other hand, population theorists with a Marxist orientation do not seem to favour the above view. They argue that with an accelerated economic development and an equitable distribution of income, there will be an automatic check on rapid population growth. Their slogan is "...take care of population and population will take care of itself....development is the best contraceptive...". They are no doubt arguing in favour of demographic transition even though they may not know much about it.

Several articles have appeared challenging the basic ideas behind the transition theory and on its relevance to the less developed countries of today. Coale² discusses the inadequacy of the demographic transition in explaining fertility and mortality trends in 19th century Europe. Some of the issues that the author raises include large variations in fertility in pre-industrial societies of Europe, large variations in the proportion of married women as well as variations in marital fertility in pre-modern societies. The last two points have obvious effects on fertility — a smaller proportion married implies less fertility and marital fertility is nothing but number of children per married woman. The author also cites some examples in which decline in fertility in pre-modern societies preceded decline in mortality. Despite these ambiguities, the author still recognises the fact that demographic transition correctly describes mortality and fertility conditions in pre-modern and modern societies.

Many authors have also commented on the relevance of the demographic transition to the conditions of less developed countries in general, and to African countries in particular. Teitelbaum³ states that demographic transition has little relevance to the less developed nations of today because of extreme dissimilarities between pre-nineteenth century Europe and present day African, Asian and Latin American countries. He states that the fertility rate of present day developing countries is higher than those of pre-modern Europe, and that the decline in mortality is much faster now than in pre-industrial Europe. The author also states that the migration of people from pre-modern Europe to the New World was responsible for putting a check on the possibilities of population explosion. Because of these differences, the author concludes that the prospects of accelerated population growth is more acute in the present day African, Asian and Latin American countries.

Caldwell's⁴ article restates the basic reasons behind the concept of demographic theory by providing detailed cases from his extensive sociological studies in West Africa. Caldwell states that decrease in fertility in less developed countries is not a function of the spread of modernisation or of the rate of progress of economic development. He goes on to state that decrease in fertility will likely precede industrialisation and that there is little association between economic development and decrease in fertility. He further argues that, in every stage of economic development, fertility behaviour is dependent on rational consideration and that families may have high or low fertility rates depending on the intergenerational flow of wealth. His major restatement of demographic transition can be summarised

in the following quotation from his paper:

....a fair degree of emotional nucleation is needed for economic nucleation and a considerable amount of both is required before parents are free to indulge in their greater expenditure on children⁵.

III. DEMOGRAPHIC TRANSITION IN THE AFRICAN CONTEXT

The preceding paragraphs summarise the idea of demographic transition, its shortcomings and its relevance to present day developing countries. Basically, the theory states that low mortality and low fertility in Europe have come about as a result of an accelerated social and economic development. The papers by Teitelbaum and Caldwell discuss the relevance of the theory to less developed countries. Even though the two authors were strong in their arguments, their studies were not supported by empirical evidence. In the following sections an attempt will be made to empirically verify the relevance of the demographic transition to African countries. More specifically, we will study the extent to which the socio-economic performances of the past twenty years have decreased mortality and fertility rates. In the subsequent paragraphs, decrease in mortality and increase in life expectation at birth will be used interchangeably since one is the inverse of the other. Expectation of life is the more reliable and widely accepted measure of mortality and is preferred over the crude death rate.

In this and similar studies, there is the problem of identifying appropriate indicators of socio-economic performance. Per capita GNP is probably the most commonly used indicator of socio-economic performance. It is a valid indicator because it incorporates the value of all goods produced and services rendered in a given country during a calendar year. However, it should not be the only yardstick and other socio-economic indicators, especially the ones mentioned by the authors of the theory, should also be considered. The other indicators that will be included in this study are the volume and extent of health services, and the level of education and urbanisation.

IV. METHODOLOGY

In an attempt to verify the relevance of the demographic transition to African countries, the socio-economic determinants of life expectation and fertility during the period 1960-65 will be considered. This is the period when most African countries were gaining their independence. A similar investigation will also be conducted for the period 1975-80 for comparison. If there is a difference in the results between the two periods, such a difference may give some insight into the efforts made by African governments to control fertility and mortality rates. The results may also give some insight into the appropriateness of the demographic transition theory within an African context.

The methods of analysis will be multiple regression and zero order correlation. The regression equation for life expectation will be

$$e_o = f(Y, I_H, U, L) \quad (1)$$

where e_0 = expectation of life at birth
 Y = per capita income (US dollars)
 I_H = Health Index
 U = percentage of people in urban areas
 L = index of literacy

The regression model for fertility will be the same as those for life expectancy except that the dependent variable will be general fertility rate F_G . In other words,

$$F_G = g(Y, I_H, U, L) \quad (2)$$

Regression estimates will be made for equations 1 and 2 for the periods under consideration (1960-65 and 1975-80). In order to get the best fit, three functional forms — linear, logarithmic, and semilogarithmic equations will be estimated and the best fit will be identified for further discussion. A correlation coefficient among all the variables will be presented in order to give further insight in the strength of the relations.

Each of the equations will be based on cross-sectional data and a unit of observation will be an African country. Forty-six out of the fifty-one countries will be included. South Africa will not be among those countries under study because, from an economic development point of view, it has a Western European type developed economic system. The remaining four countries are not included because of the incompleteness of the data.

Also, in order to investigate the possibilities of regional differences among African countries, they will be divided into four regions, namely the East, West, North, South and Central Africa. In this case the method of analysis will be limited to comparing rate of changes in the socio-economic and demographic variables. Regression or correlation will not be considered because the number of observations per region will be small.

One of the major problems in conducting an empirical study of demographic changes is the lack of reliable and up-to-date data. Even though there has been considerable improvement in the quality of Africa's economic and demographic data, some of them are still not reliable. The years 1960-65 were especially data-deficient and some imputations had to be made in some of the variables in a few of the countries, namely Botswana, Lesotho and Swaziland.

The data on income was obtained from the Statistical Yearbook of the United Nations.⁶ The data on life expectancy, general fertility and percentage of people in urban areas were obtained from a special publication of the United Nations Population Division.⁷ The literacy rate of a country is usually taken as an index of the level of education. However, this information is not available for several African countries for the years 1960-65. The second best indicator was chosen to be the percentage of women enrolled in elementary schools.⁸ This variable was chosen over the other available indicators of educational performance because, when studying fertility determinants, the educational level of women seems to have a considerable effect on decision levels of families with respect to having more or less children. The index of health performance of a country is also difficult to determine. The number of

physicians per 10,000 people, the number of nurses and modern midwives per 10,000 people, and the number of hospital beds — any one of these three — could conceivably be taken as a proxy for the index of health services. However, it was not possible to choose one of the above because the correlation coefficient among the three variables was rather low. Thus, it was decided to define health performance index as a weighted geometric mean of the three indicators where more weight is given to the number of doctors. The Health Index will then be

$$I_H = [(0.51 I_D) (0.25 I_{NM}) (0.25 I_B)]^{1/3} \quad (3)$$

where I_D = number of doctors per 10,000 people

I_{NM} = number of nurses and midwives per 10,000 people

I_B = number of hospital beds per 10,000 people.

The data for I_D , I_{NM} and I_B was obtained from the World Health Organization publication.⁹

Another major problem in empirical demographic analysis is to decide what is the best measure of fertility. There are three possible measures: the Crude Birth Rate which is defined as the number of births per 10,000 people; the General Fertility Rate, defined as the number of births per 10,000 women of childbearing age; and Total Fertility Rate, defined as the sum of age specific fertility rates. Theoretically, the best measure of fertility is the Total Fertility Rate while the Crude Birth Rate is the least useful. Total Fertility Rate is not available for some African countries for the period 1960-65. Thus, General Fertility Rate is taken as a measure of fertility. In a recent article published by Entwisle¹⁰, a comparative study was made about several measures of fertility for a given set of data and the result shows little difference among the various measures.

V. EMPIRICAL FINDINGS

TABLE 1

MEAN VALUES OF VARIOUS SOCIO-ECONOMIC AND DEMOGRAPHIC INDICATORS FOR AFRICAN COUNTRIES

		1960-65	1975-80	Rate (%) of Increase
Expectation of Life at Birth	e_0	39.3	46.4	18
General Fertility Rate	F_G	199.1	191.9	4
Percent of population in urban areas	U	14.5	21.7	50
Percent of women enrolled in grade 1-8	L	34.4	40.5	18
Index of Health Services	I_H	1.08	1.57	45
Income per capita	Y	136.3	196.8	41

The mean values of each of the socioeconomic and demographic measures are given in Table 1. Each of the socio-economic indicators shows that there was an improvement in the socio-economic conditions between the two periods under study. In other words, since the attainment of independence in the early 1960's, most African countries have shown some progress in the general well-being of the population. From the demographic variables point of view, there is some significant increase in the expectation of life at birth (decrease in the mortality rate), while there was some slight reduction in the general fertility rate. This is a rough indicator, but it tends to show that the idea of demographic transition may have some relevance when examined within the African context.

The more powerful methods of correlation and regression results are given in Tables 2 to 5. The three functional forms mentioned above were tested and a multiple linear regression seems to give a relatively better fit. Tables 2 and 3 show that each of the socio-economic variables is positively related to life expectancy in both periods under study. In 1960-65, GNP per capita seems to be the most important socio-economic variable affecting life expectancy and is followed by the Health Index and the percentage of population in urban areas. By 1975-80 the Health Index shows closer positive correlation with life expectancy and is followed by the growth rate of urban population and per capita GNP.

The effect of all explanatory socio-economic variables on life expectancy is shown on the multiple linear regression results in Table 4, where income and literacy index are observed to be the significant explanatory variables in 1960-65, while literacy and urbanisation are significant in 1975-80. The most important statistic, the Co-efficient of Determination, shows an improvement in the 1975-80 equation over that of 1960-65. Thus, the explanatory and predictive power of the multiple linear regression of life expectancy on socio-economic variables becomes stronger over a period of time. This is further evidence that, as the socio-economic conditions of a country improve, the mortality level tends to decrease.

TABLE 2

ZERO ORDER CORRELATION COEFFICIENTS
(1960-65)

	e_o	F_G	U	Y	L
e_o	—				
F_G	.130	—			
U	.403	0.46	—		
Y	.526	-.205	.479	—	
L	.279	-.173	-.044	.091	—
I_H	.448	-.310	.380	.782	.482

TABLE 3

ZERO ORDER CORRELATION COEFFICIENTS
(1975-80)

	e_o	G	U	Y	L
e_o	—				
F_G	-.358	—			
U	.525	-.340	—		
Y	.521	-.305	.525	—	
L	.429	-.222	-.038	.304	—
I_H	.564	-.552	.500	.767	.482

The correlation co-efficient between the General Fertility Rate and the socio-economic variables indicates that fertility tends to decrease with an improvement in socio-economic conditions even though the strength of the association is not as strong as with mortality. The signs of the co-efficients are in a predictable manner. Moreover, the association is more significant in 1975-80 when compared to those of 1960-65. The explanatory power of the general fertility regression equation is 35.6% in 1975-80 compared to 13% in 1960-65. This empirical evidence again suggests that fertility may decrease with economic development but is much less responsive when compared with the decrease in mortality.

The empirical results on fertility from the correlation matrix and those from the regression equations may seem to be contradictory. This apparent 'contradiction' is due to the existence of multi-collinearity among some of the explanatory socio-economic variables, especially the high positive correlation between per capita GNP and Health Index. Still, the results in Tables 2 and 3 should be seen as complementary to those in Tables 4 and 5. While Tables 2 and 3 are generally taken as indicators of the direction of the association between the demographic and each of the socio-economic variables, the regression results can be taken as indicators of life expectancy or fertility on all the socio-economic variables put together.

TABLE 4

REGRESSION RESULTS OF LIFE EXPECTATION ON VARIOUS SOCIO-ECONOMIC VARIABLES (1960-1965)

Explanatory Variable	1960-65					1975-80				
	Coef.	S.E.	t	R ²	\bar{R}^{2*}	Coef.	S.E.	t	R ²	\bar{R}^{2*}
Constant	30.990	2.820	10.640 ^a			28.042	4.982	5.640 ^a		
U	0.166	0.0730	1.605			0.165	0.065	2.560 ^a		
Y	0.2554	0.0765	2.101 ^a	0.371	0.309	0.004	0.005	0.760	0.462	0.409
L	0.1528	0.0765	2.000 ^a			0.313	0.125	2.510 ^a		
I _H	-0.0474	1.3790	-0.034			0.526	1.082	0.490		

TABLE 5

REGRESSION RESULTS OF GENERAL FERTILITY RATE ON VARIOUS SOCIO-ECONOMIC VARIABLES (1975-80)

Explanatory Variable	1960-65					1975-80				
	Coef.	S.E.	t	R ²	\bar{R}^{2*}	Coef.	S.E.	t	R ²	\bar{R}^{2*}
Constant	209.3000	14.960	13.990 ^a			208.870	28.810	7.25 ^a		
U	0.4262	0.387	1.100			-0.316	0.373	-0.85		
Y	-0.0023	0.064	-0.04	0.13	0.045	0.049	0.029	1.69	0.356	0.293
L	-0.1360	0.406	-0.34			0.172	0.721	0.24		
I _H	-10.306	7.317	-1.41			-21.223	6.255	-3.39 ^a		

^a Significant results ($\alpha = 0.05$)
* adjusted R²

VI. REGIONAL VARIATIONS

The regional differences in the socio-economic and demographic indicators are shown in Table 6. All regions show an improvement in socio-economic development along with fertility and mortality decline. North Africa seems to show the highest socio-economic improvement with high fertility decline and high increase in life expectancy, while West Africa tends to show the least improvement. In all regions the decrease in fertility is not considerable. Still, the results tend to confirm the opinion that an accelerated economic and social development is likely to lead to a decrease in both fertility and mortality.

VII. COMPARISON WITH OTHER RESULTS

Most of the time series and cross-section studies on the determinants of fertility and mortality among advanced countries show a long run inverse relation between various socio-economic variables and the demographic indicators. A study by Blake¹¹ shows a negative relation between several socio-economic variables and fertility.

The same study showed a negative relation between education and fertility, especially the educational level of women. There is an enormous body of literature on this subject for the developed countries.

For developing countries the relation between income and fertility in the short run was found to be positive. The studies by Adelman, Buck and Clark tend to show a short run positive relation between income and fertility.¹² Simon states that such a short run positive relation is not surprising, because such studies tend to be on homogeneous farm households in rural areas and do not include urban sector households.¹³ On the other hand, a study made by Russet showed a negative relation between income and fertility.¹⁴ The latter was a geographically distributed cross-section study. A differential fertility study by Hawthorne for Lebanon shows low fertility among uneducated urban dwellers as compared to those uneducated rural dwellers.¹⁵ Furthermore, there was lower fertility among educated urban families than among uneducated urban families.

The relationship between life expectation, income and other socio-economic variables over a period of time seems to be positive. But the evidence suggests that such a relationship tends to be weaker as the country climbs to a much higher position on the socio-economic ladder. This relationship is discussed by Preston.¹⁶ A recent article on the determinants of mortality was presented at the June 1979 meetings in Mexico City. The proceedings of the meeting, which deliberated on the socio-economic determinants and consequences of mortality, were published by the United Nations¹⁷ and had some results on the correlates of mortality in Africa. The empirical findings suggest a negative correlation between crude death rate and other socio-economic variables, such as index of health status (which were quantified quite differently from the I_H above, percent of urban population, adult literacy rate and per capita GNP. The results are based on data for the year 1970. The results seem to be similar to our findings in Tables 2 and 3. Finally, Vallin suggests that no country can attain a life expectancy of more than 60 years — a very low mortality rate — unless such a country attains a high stage of economic development.¹⁸

It is now more than twenty years since most African countries gained their independence. This period is relatively short for showing the impact of the demographic transition on the continent under study. Still, the results in the preceding paragraphs tend to suggest that, in the final analysis, African countries are likely to have low fertility and low mortality, so long as their socio-economic conditions improve. The significant increase in life expectation, and to a lesser extent the predictable negative association between fertility and most of the socio-economic indicators for the 1975-80 period of study, tend to confirm the possible relevance of demographic transition to African countries. These countries seem to be moving towards the second stage of the transition theory.

The major problem is, that while it is relatively easy to decrease the mortality rate, it seems quite difficult to decrease fertility. A problem that may keep fertility relatively high is the current age composition of the African population, which is predominantly young. This will prevent the population from decreasing quickly because of the so-called population momentum.

Nevertheless, in order to reduce fertility and change the age structure of the population the rate of socio-economic development ought to be considerable and there should exist an economic structure whose fruits should reach most members of the society. Moreover, economic growth should not be narrowly interpreted as mere increases in income and other socio-economic indicators; it should also result in transforming the entire society by re-orientating the living and thought habits of the population. Countries like Saudi Arabia, which have very high per capita GNP as well as a high investment in education, health and other infrastructure, may not be considered as developed because the life styles and living habits have not evolved accordingly. Only economic development that comes about as a result of conscious effort, hard work and greater innovation can have an impact on decreasing fertility. Japan, Taiwan, Singapore, and South Korea, are the latest examples of this effort.

This study has been rather aggregate. An African country was taken as a unit of observation; socio-economic and demographic relations were established using data some of which are not free from error. Similar studies based on a carefully prepared sample survey for some of the countries and comparing such results would complement this study and, most importantly, would give a stronger indication of the relevance of demographic transition in African countries.

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TABLE 6
Mean Values and the Rate of Increase of Demographic and Socio-economic Indicators for Four Regions

	1960-65				1975-80				Percentage Change			
	East	West	North	Central and South	East	West	North	Central and South	East	West	North	Central and South
Expectation of life at birth	41.2	37.2	47.3	37.8	48.0	43.3	54.9	44.2	16.5	16.4	16.0	16.9
General Fertility Rate	205.4	201.6	213.8	177.6	197.6	197.0	193.8	174.2	-3.8	-2.0	-9.0	-2.0
Per capita GNP	109.6	124.3	224.8	139.6	257.8	273.1	1281.7	499.0	135.2	119.7	470.1	257.4
Percent of people in urban areas	12.1	11.7	28.8	13.3	16.4	17.6	39.5	24.7	36.0	50.0	37.0	86.0
Index of Health Performance	1.05	0.77	0.91	1.39	1.43	1.20	2.47	1.84	36.0	56.0	71.0	32.0
Percent of women enrolled in grades 1-8	35.6	30.90	32.50	39.70	41.70	37.20	40.70	44.10	17.2	20.0	25.0	11.0

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