

## CHAPTER VI

### IMPLICATIONS FOR IRAQ, CONCLUSION AND LIMITATION

#### 6.1 Implications for Iraq.

This study used data of 24 countries (Middle East and Arabic countries) for the year 1997-2004 that shows the interrelation between economic development and health development as implication for Iraq according to the model of study. The first subsection we did use the equations results from two-stage least square method and substituted by data of Iraq for the same years according to health indicators. There are two health indicators in this study. The first one is under 5 mortality rate and the second one is life expectancy.

The first subsection we used the actual number of each health indicator for Iraq during 1997-2004 period and compare it with the results of equations that used health indicator as dependent variable substituted by data of independent variables of Iraq for the same year (under influences of all factors).

The second subsection was for forecasting of the health status for next 5 years under influences of policy variables which used at this study.

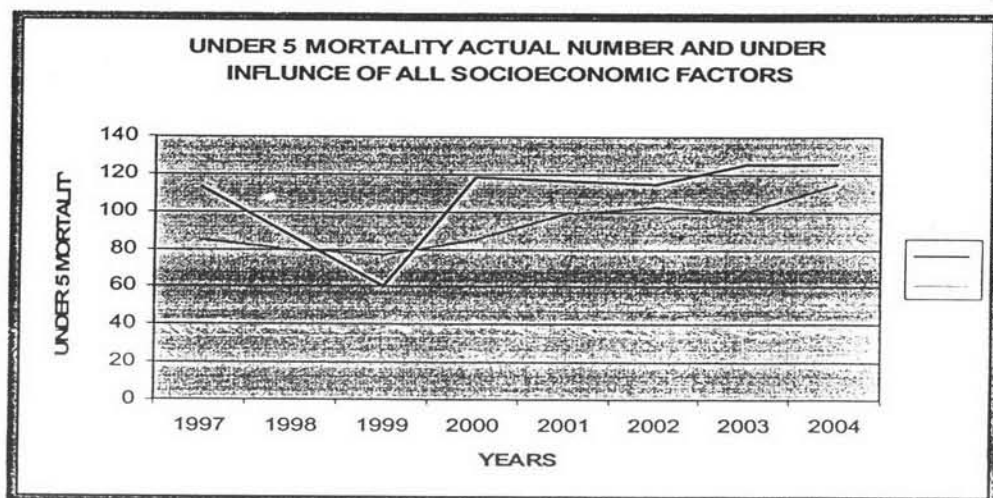
The third subsection we examined the health status under influences of each variable.

**6.1.1** comparing actual number of health indicators in Iraq with the result of two-stage least square method equation and substituted by data of Iraq for the same years (health indicator under influences of all factors)

#### **First used under 5 mortality as health indicator.**

Figure (6.1) compare between actual numbers of under 5 mortality rate of Iraq for the period from 1997-2004 and the results of equations that used health indicator as dependent variable substituted by data of independent variables of Iraq for the same year (under influences of all factors). The first curve is the actual number of under 5 mortality in Iraq from 1997-2004. The second curve is under 5 mortality rate under influences of all factors. Both curves show the same trend of health that means this model is suitable for Iraq.

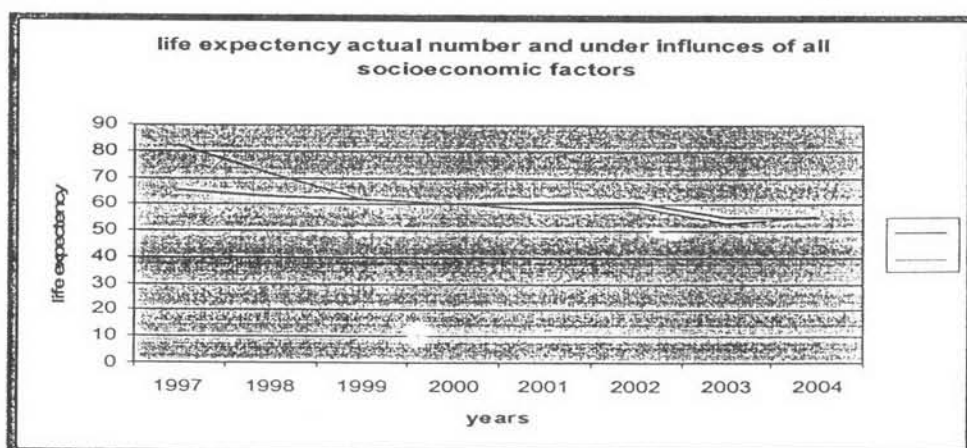
Figure 6.1 comparing under 5 mortality in Iraq( actual numbers) with number of under 5 mortality under influences of all factors.



Second life expectancy as health indicator.

Figure (6.2) shows comparing between actual numbers of life expectancy in Iraq for the period from 1997-2004 year and the results of equations that used health indicator as dependent variable substituted by data of independent variables of Iraq for the same year (under influences of all factors). The first curve is the actual numbers of life expectancy in Iraq. The second curve is life expectancy under influences of all factors. Both curves show the same trend of health that means this model is suitable for Iraq.

Figure 6.2 comparing actual numbers of life expectancy in Iraq with life expectancy under influences of all factors .

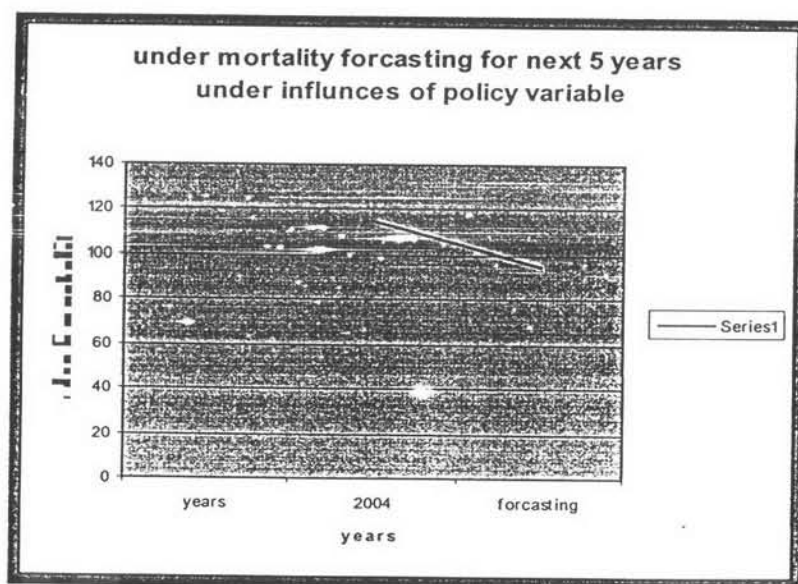


### 6.1.2 Forecasting for health status after 5 years under influences of policy variables.

The scenario for health status in Iraq for next 5 years. Under eye of the Iraqi government. Policy variables at this study are governmental health expenditure as percentage of total health expenditure, total health expenditure, gross enrollment ratio. After substituted the results of two stage method equations by forecasting numbers of these variables from experts and figures for the next 5 years. The forecasting GHE expected to be 60% from total health expenditure. Real per capita total health expenditure 1.76\$. Gross enrollment ratio 66.

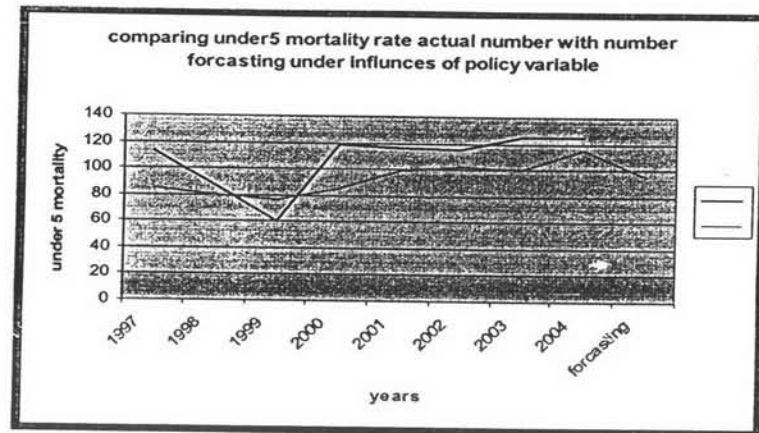
#### First under 5 mortality as health indicator.

Figure 6.3 shows under 5 mortality forecasting for next 5 under influences of policy variable.



This figure show the scenario of forecasting for next 5 years the under 5 mortality will improve if the government improve total health expenditure and gross enrollment ratio and find way to financed health system.

Figure 6.4 comparing under five mortality rate (actual numbers) with numbers forecasting for next 5 years (under influences of policy variables)



This curve compare between under 5 mortality rate actual numbers with under5 mortality under influences of policy variable. It appears that If government works to increase health expenditure, gross enrolment ratio and find way to financed health system the under 5 mortality will decrease.

## Second. Life expectancy as Health Indicators.

Figure 6.5 shows life expectancy forecasting for next 5 years under influences of policy variables.

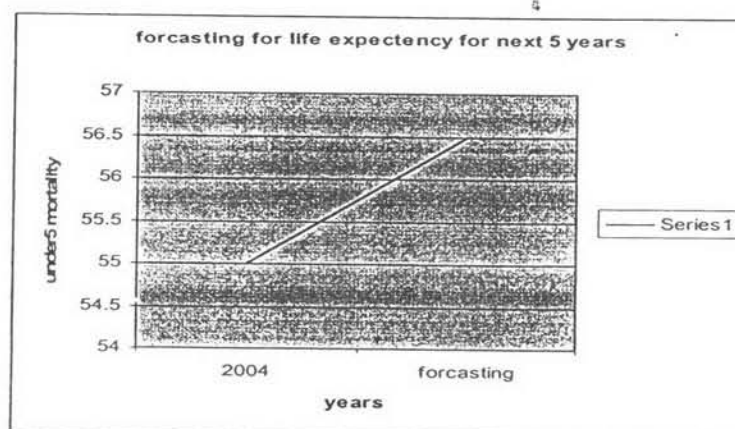
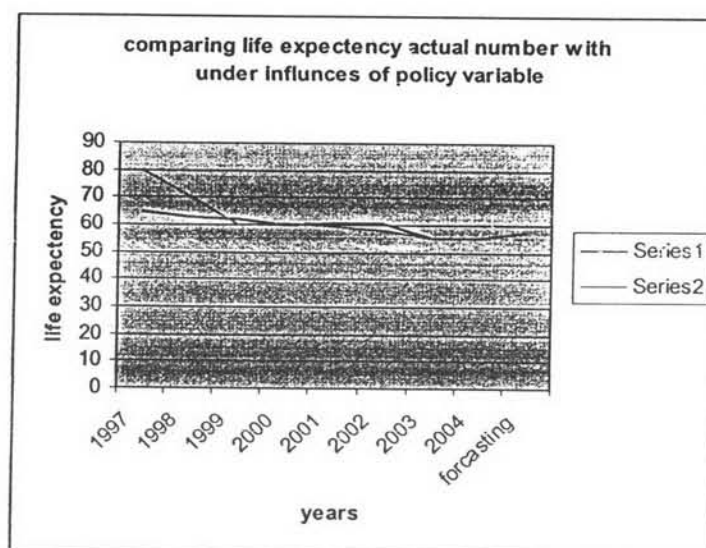


Figure 6.6 comparing life expectancy actual numbers in Iraq with under 5 mortality rates under influences of policy variable.



This curve compare between life expectancy actual numbers with life expectancy under influences of policy variables. It appears that if government works to increase health expenditure, gross enrolment ratio and find way to financed health system life expectancy will increase.

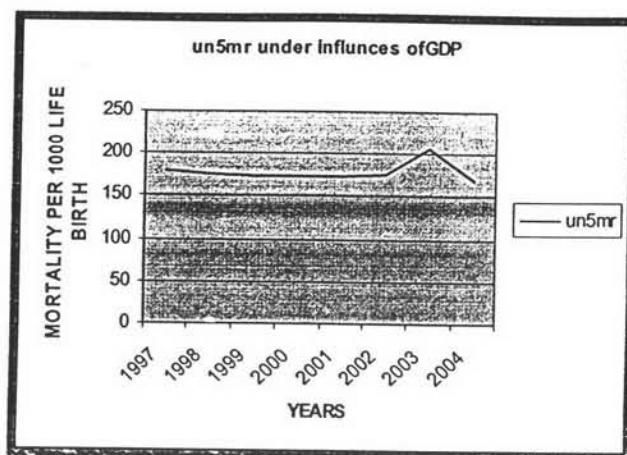
### 6.1.3 Health indicators under influences of each variable.

A- Under 5 mortality rates as health indicators.

First. Under 5 mortality rate under influences of GDP. Under five mortality rates under influence of GDP in Iraq. Using the same equation of two stage least square method. Examine the effect of GDP separately on health status omit all other variables.

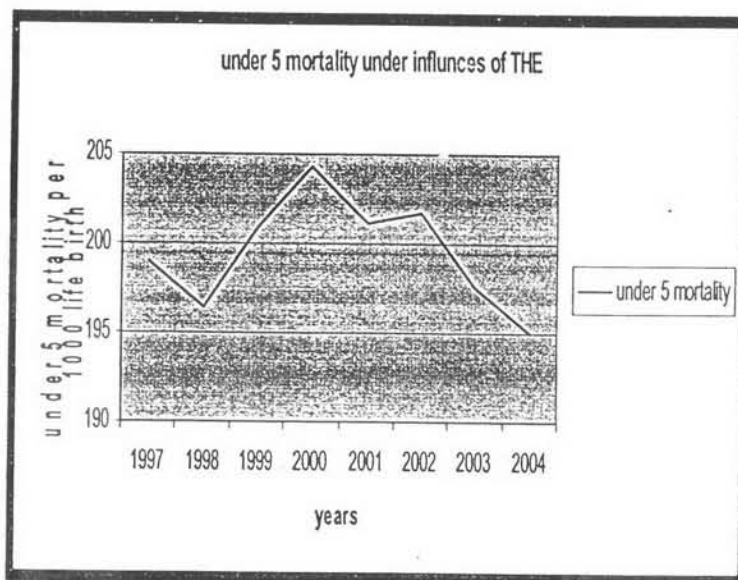
Figure (6.7) show the results of this equation the numbers show that it starts high fluctuation at the same level and suddenly increase at the 2003 the year of last war and decline for the next year. When compare with data of GDP shows a sudden decrease of GDP at the year 2003. That shows obviously when under 5 mortality rate under influence of just GDP the negative impact of GDP on under 5 mortality rate .

Figure (6.7) under 5 mortality under influences of GDP



Second. Under 5 mortality rate under influence of THE. Figure (6.8) year 2003. That shows obviously when under 5 mortality rate under influence of just THE. Negative impact of THE on under 5 mortality rate.

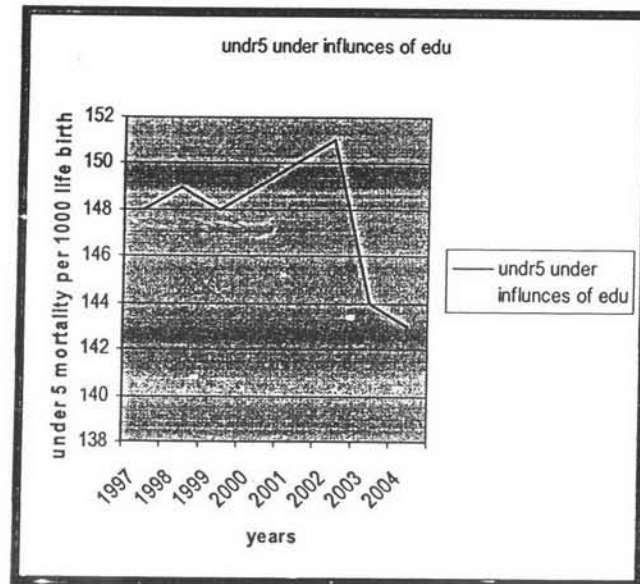
Figure 6.8 life expectancy under influences of THE



### Third -Under five mortality rate under influence of EDU

Figure (6.9) Curve shows that under 5 mortality under influences of EDU. When compare it with data of gross enrollment ratio show the negative relation with under 5 mortality rate.

Figure (6. 9) Under 5 under influences of EDU

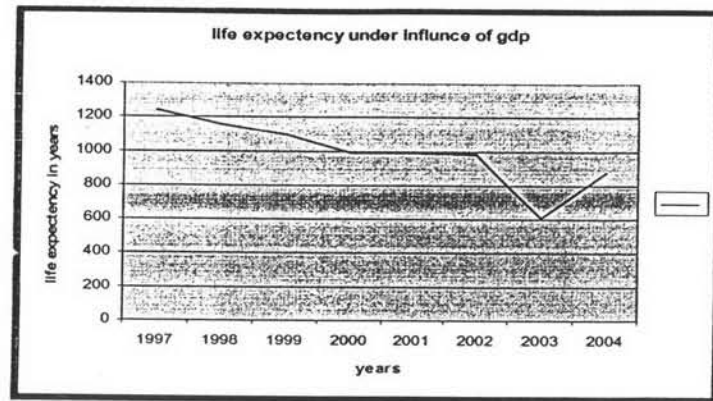


B-Life expectancy as health indicators.

First. Life expectancy (health status) under influences of GDP

Figure (6.12) shows the results of this equation. The number start high and slightly the curve go down till 2000 stay the same level till 2002 and curve go downward at 2003 then slightly increase at 2004 when compare this curve with the actual data of GDP in Iraq we can see the positive relation between them.

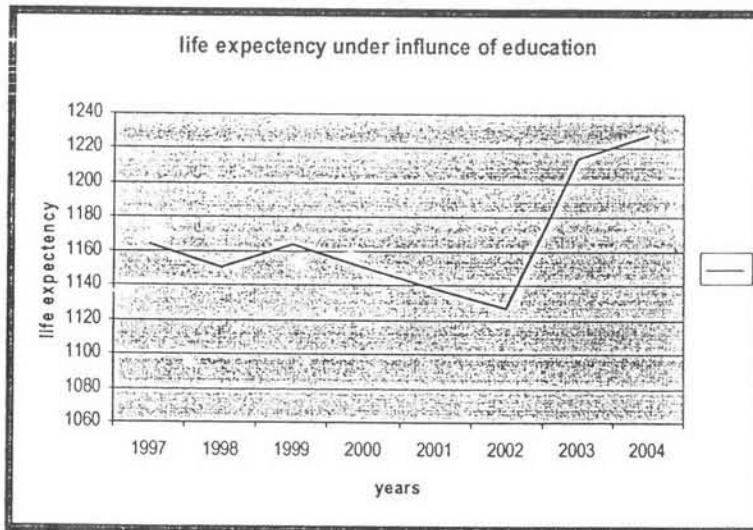
Figure 6.10 life expectancy under influences of GDP



### Second. Life expectancy under influence of EDU

Figure (6.11) show the results of previous equation under influences of education (gross enrollment ratio). The curve shows that positive impact of gross enrollment ratio on life expectancy.

Figure 6.11 life expectancy under influences of EDU





## 6.2 conclusions.

This study used data of 24 countries (Middle East and Arabic countries) for the year 1997-2004 that shows the interrelation between economic development and health development as implication for Iraq according to the model of study.

Iraq is one of Middle East Arabic country. Have history of three wars and international sanctions; three decades of inappropriate policies. The invasion of Kuwait had its known devastating effects on the economy and society in Iraq. The imposition of UN sanctions, has had serious consequences, not only by limiting Iraq's oil exports to quantities specified by the UN and allocating the revenue to the purchase of essentials such as food and medicines in accordance with the oil for food UN Resolution, but created very serious economic and environmental problems, As a result serious gaps developed in the provision of health services. The overall capacity and performance of the health system o deteriorated. Increase mortality rate. Decrease the life expectancy among Iraqi people.

This study used data of 24 (Middle East and Arabic countries) for the period 1997-2004. It had borrowed the health and economic status indicators from these countries, also had studied the interrelation between economic development and health development at these countries as implication for Iraq. The data that had been collected is a secondary data. The reason for using and borrowing these indicators from these countries are. First non availability of data of Iraq for along period of time. Second non stability of health and economic status of Iraq because of three conflicts, 13 years of sanctions. These countries that had same culture of Iraq are Middle East and Arabic countries.

In order to investigate the interaction between economic development and health development, we developed a model using data for 8 years data cross- country for 24 Middle East's and Arabic countries. Simultaneous equations are used with two health indicators. The first indicators are under 5 mortality rate second indicator is life expectancy. Using three equations to each health indicators.

At the first equation health indicator is dependent variable, socioeconomic factors are independent variables. The second equation the dependent variable is gross domestic product and independent variable are health indicator, demographic, geographic factors, capital and labor. Third equations the dependent variable is demographic factors

and independent variables are economic, health, geographical indicators. Results of these equations show that:

First equation .Health status is dependent variable. The education has positive affect on life expectancy and negative on under 5 mortality as expected. Geographical factors effect both under 5 mortality and life expectancy. The affect of GDP on life expectancy is positively significant and negatively not significant on under 5 mortality. The effect of both total health expenditure and dependency ratio.

Second equation .gross domestic product is dependent variable. The under 5 mortality rate has negative significant affect on GDP while the effect of life expectancy is positively not significant. Demographic factor not significant relation for both health indicators. Capital and labor significant positive relation with both indicators.

Third equation. Dependency ratio is dependent variable .Gross domestic products has significant negative impact, under 5 mortality has significant positive relation while life expectancy has significant negative, geographical factors have significant relation with dependency ratio.

From all mention above we can see the interrelation between health development and economic development. Previous analysis shows that EDU (gross enrollment ratio) is the indicator that has greater effect on health.

Implication for Iraq.

It shows that the model is suitable for Iraq. Forecasting for next 5 years, it appears that if government works to increase health expenditure, gross enrolment ratio and find way to financed health system the health status of Iraqi people can improve successfully

### **6.3 limitations.**

Non availability of data of Iraq for long period. , non availability of labor force and used number of population as proxy of labor force, non availability of number of population before 15 and 60 and above

age and used dependency ratio which is the percentage of population below 15 years and above 60 years.

We can improve this study further by utilization larger data set and other variable like poverty, nutrition, inequity indicators.