Beyond GDP; the Nation's Economic Performance Adjusted for Home Production, Foreign Debt and Resource Depletion

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Dissertation submitted in partial fulfillment of the requirements for award of the M.S/M.Phil. Degree (Economics & Finance)

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DECLARATION

I hereby declare that this thesis, neither as a whole nor as a part thereof, has been copied out from any source. It is further declared that I have carried out this research by myself and have completed this thesis on the basis of my personal efforts under the guidance and help of my supervisor. If any part of this thesis is proven to be copied out or earlier submitted, I shall stand by the consequences. No portion of work presented in this thesis has been submitted in support of any application for any other degree or qualification in International Islamic University or any other university or institute of learning.

Rahila Tariq

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ABSTRACT

As reported by Stiglitz et al, (2009) GDP is flawed measure in many respects to measure any country's economic welfare as it ignores many practical indicators of welfare. Home production (HP), Debt stock and Resource Depletion (RD) are three of those factors. We propose three modified measures of GDP making adjustment for these factors. We also compare the Economic Performance of the countries as approximated by conventional GDP and the modified version of GDP. Ignoring the service provided by female at home is subject to serious criticism as it is not taking into account the contribution of female. This thesis also proposes way to estimate Home Production and bias in GDP against HP. This study concludes that HP has positive value and the percentage of HP relative to GDP is range from 25% to 40% for most of the countries and countries with higher HP have higher rate of Bias in GDP. Conversion of non-market activities to market activities has positive contribution in welfare of the country and the countries which have higher rate of HP than Debt stock and RD have higher value of MGDP1 than GDP, MGDP2 and MGDP3. Economic Performance results show higher growth than conventional Economic growth. Regression results indicate that Economic Performance has insignificant relationship with its corresponding Economic Growth if RD and Debt intake is taken into accounts. It means that addition of Debt stock and more RD have caused negative growth in general and may mislead the result if using GDP as for calculation of welfare in particular.

ACRONYMS

CBAGDP	Cost Benefit adjusted GDP
EP	Economic Performance
EG	Economic Growth
FLFP	Female Labor Force Participation
GDP	Gross Domestic Product
GNP	Gross National Product
HP	Home Production
MEW	Measure of Economic Welfare
MGDP	Modified Gross Domestic Product
NNP	Net National Product
RD	Resource Depletion
SSF	Stiglets Sen Fitousi Report
SWF	Social Welfare function
WDI	World Development Indicator

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Chapter 1

Introduction

GDP (Gross Domestic Product) is a widely used measurement tool for wellbeing and economic performance by economists and non-economists (Bleys, 2012; Islam & Clarke, 2002). But for the last few decades, economist found that GDP has many limitations. It was developed as a tool for production planning guide after the Second World War and it may not be used as a yardstick for economic development. As reported by Stiglitz et al, (2009) GDP is a flawed measure in many respects to measure any country's economic welfare. It ignores many practical indicators of welfare such as inequality, leisure, morbidity, mortality, pristine environments, crime (Jones & Klenow, 2010), home production, the calculation of time in seeking a job or work, time spent to go to work and transportation, disamenities of urbanization, depletion of natural resource, foreign Debt stock, etc. These deficiencies brought out two streams, GDP and non GDP or welfare approach (Stiglitz, et al, 2009; Jones & Klenow, 2010). There is a joke quoted by Stiglitz et al (2009) that captured the true picture of our economic measures. It mentioned the contrast of two families, one is happily married and the other is a bachelor. The couple went to home after work and makes some food with the vegetable grown in their own garden and enjoys eating that food and lives happily, but none of their work is included in GDP because no measure calculates home production. In contrast, there is a bachelor who resides in a hostel, eats from a restaurant and pays charges for taxi, visits club and other recreational places for his satisfaction, and all his tasks are contributing to GDP, including the cost of preparation and serving of the meal and

drinks, the repair costs of the automobile, and the taxi to home, all enter into GDP accounting (Stiglitz et al, 2009).

Unfortunately, it is extremely difficult to adjust the GDP for many of these realistic factors mentioned in Stiglitz et al (2009) report. However, there are a number of factors for which data is easily available and the GDP could be adjusted to incorporate these measures as economic activity. Adjusting GDP for these factors should give a clearer picture of economic well-being and economic performance of the countries. The aim of this study is to calculate a refined measure of GDP after adjusting it for some of these available factors. This study estimates GDP adjusted for three factors (i) Home Production (ii) Natural Resource Depletion and (iii) Foreign Debt stock. The study compares economic growth as calculated by the GDP and Modified GDP that we call Economic Performance. One of the major observations on the conventional GDP measure is the bias against home production. This study also calculates this bias. It is bias against Home Production by not taking it into account.

1.2 Motivation

The GDP ignores actual welfare of an economy in many respects and it is a market phenomenon and it does not include non-market economic activities (Stiglitz et al, 2009).On the other hand there are different purposes of statistical system, the adoption of one metric which might be inappropriate for another, and there are different set of relative prices which comprises GDP and different levels of preferences are the issues related to GDP, therefore GDP does not depict as a single welfare tool for societal actual state of well-being and their living standard (Jones & Klenow, 2010). In addition it is based on several assumptions like whether measures the welfare of individuals or society as a whole or sum of any part of society? Or just market

activities are being taken into account? So what should be calculated is the main question and the basic objective must be cleared in all respects. Concept of GNP also introduces to measure the welfare in spite of the limitation which lies in the GDP, but GNP has some limitation too, which add and subtract some other economic measures to justify the clear picture of an economy and it is also not a flawless rod for measuring Economic Performance.

The GDP ignores the services provided by family member at home particularly female members, wherever it is quite clear that many non- market activities like Home Production have all the characteristics of a good economic activity. Therefore the GDP is underestimated actual level of economic activity. Our work is to introduce household work in GDP accounting and its consequences on welfare. Home Production as we discussed above is the major portion neglected by GDP. Because there are not only many limitations in measuring exact value, but also this is a non-market activity which is not a part of GDP. With this home production, we neglect the role of female who provided a variety of services at home for their family members and for a better economy which is a type of deprivation and is unjust. We in this study measure Home Production (HP) and also calculate the bias to not include women work in National Income Accounts. The GDP also ignores the inflow of External Debt stock and the Resource Depletion. Therefore it is very important to adjust GDP for these factors to get a clear picture of actual state of welfare in an economy.

1.3. Adjustment for the missing factors and Proposed Study

As Stiglitz et al (2009) report's has mentioned many limitations in the calculation of GDP. If we use GDP as a welfare measuring tool across countries, many factors like

home production and household engagement, personal defense expenditures, mortality, life expectancy at birth rate, inequality, value of intermediate goods, government provided goods and services like health and education and other social factors which contribute to the welfare remains out of this measurement of welfare. This study includes measureable missing factor, i.e. Home Production, Debt Stock and Resource Depletion in the GDP. A perfect measure of GDP is not possible because of data availability problem, however, there are numbers of variables for which the data could be obtained and estimated; therefore it is possible to adjust for these variables. This thesis proposes Modified measures of GDP adjusted for Home production, Debt stock and Resource Depletion and makes comparison Between Conventional and Modified GDP to check the level of welfare and the Economic performance within the country generally from 2000 to 2012, for almost 13 years and specifically in 2000, 2005 and 2010, with the lag of five years.

1.4 Objectives of the study

These are the some objectives of the study.

1. To estimate the value of Home Production (HP).
2. To estimate the Modified GDP after adjusting it for Home Production (HP), Debt Stock and Resource Depletion (RD).
3. To compare the growth in GDP and Growth in Modified GDP
4. To estimate bias against home production in GDP growth.
5. To estimate relation between GDP and Modified GDP.

1.5 Significance of the study

The growth measures as indicated by GDP growth could be misleading because it could be a result of conversion of non-market economic activities (home production) into market economic activities. However, it is quite obvious that such a conversion does not really change the economic prosperity of a nation. Therefore, as an indicator of growth, it is very important to control for this factor. Similarly the Debt and Resource Depletion also need to be controlled for evaluating performance of the nations.

This study should provide a better picture of economic growth by providing the estimates of economic performance, which include both market and non-market activities and also adjust the performance for the Home Production, Debt stock and Resource Depletion.

1.6 Organization of Thesis

The rest of the document is organized as follows: first Section contains the introduction about the topic and further comprises the discussion about problem in using GDP as a measure of welfare or the motivation, adjustments for the missing factors, proposed study and its objectives. After that second Section comprises existing studies regarding this topic and in Section third we discuss the methodology of the research, data collection and data sources and fourth and fifth Section proceed with the results of the study and descriptive statistics, sixth Section contains summary, conclusion and policy recommendation for the study and seventh Section contains references and at the end, last Section contains appendices of the study listed in Tables.

Chapter 2

Literature Review

2.1 Criticizing GDP as a measure of welfare:

The GDP was adopted as a measure of economic performance after the Second World War. The governments throughout the globe have been using the measuring scale of GDP growth and even to date; one can find a large number of studies using GDP as a measure of performance of government. However, voices against the use of GDP as a measure of performance also have a long history. GDP as a measure of economic welfare in general and economic performance in particular has been criticized on various grounds, for example Haq (2003), Sen (1976, 1999), Nordhaus & Tobin (1972), Gronau (1980), Islam (2000, 2001), Islam & Clarke (2002), Stiglitz et al (2009), Jones & Klenow (2010), Ravallion (2011), Bleys (2012) etc. these authors argue that human development is a better proxy for performance than GDP.

2.1.1 Not taking into account the difference of prices

Nordhaus & Tobin (1972), Stiglitz et al (2009), Islam &Clarke (2002) criticized the use of GDP as a measure of performance for not taking into account the difference in prices. Islam & Clarke (2000, 2002) argues that there must be a cost with a benefit so GDP must be adjusted for that cost. Bleys (2012) listed two approaches, one is an Origin based scheme used by the OECD, and the other one is objective based or GDP approach that is widely used by European Parliament. This debate summarized in the Chapter into the following Sections.

2.1.2 Not taking into account the non-market activities

GDP is a market phenomenon and it does not include non-market activities (Stiglitz et al, 2009). If we want to include non-market household production in economic production we need to broaden our definition of the word economic, i.e. the use of natural and human resources to satisfy human needs and wants (Goldschmidt, 1982, 1987, 1990, 1993). Nordhaus & Tobin (1972), Gronau (1980), Pampel & Tanaka (1986), Solberg & Wong (1992) Dunlop, et al. (1999), Sen (1976, 1999), Garibaldi & Wasmer (2004), Esteve-Volart (2004), Stiglitz et al (2009), argue that GDP is biased against home production. Surely women have the main role in the home production process and a major producer of home production (Garibaldi & Wasmer, 2004; Pampel & Tanaka, 1986, Sen, 1976, 1999), but traditionally treating women with gender inequality and deprivation is a socially acceptable norm in an unequal society (Sen, 1976, 1999). Esteve-Volart (2004), Dunlop, et al. (1999) argues about the gender discrimination, that it does not include the work of women at home in the National Accounting System. Gender discrimination prevents women from working outside the home in the market while on the other side discrimination is not to count their work inside the house in the National Accounting System. It reduces talent in an economy by preventing female to enter into a market and its negative consequences are an increased discrimination in the wage rate. This may be normal because of social, religious and psychological point of view, but it reduces growth in an economy (Esteve-Volart, 2004; Dunlop et al, 1999; Sen, 1976, 1999). Macdonald (1995) writes about the measuring or valuing women unpaid work. The information is needed on subsisting bases for production or informal paid work (Home Production) and volunteer work to understand the economy as a whole and change in it

(Goldschmidt-Clermont, 1982, 1987, 1990, 1993; Beneria, 1981, 1992; Day, 1992). These issues of measurement took great attention and challenge individual researcher (Macdonald, 1995). Feminist economist work over two decades and made significant progress being made for accounting women unpaid work by national statistics agencies, ILO and INSTRAW take instrumental initiatives to revise national income accounts to include women unpaid work (Goldschmidt-Clermont, 1982, 1987, 1990 1993; Dixon-Mueller, 1985; Dixon-Mueller and Anker, 1988; Beneria, 1981, 1992; Beneria, and Roldan 1987). Many of the tasks have been done but still much more work is needed to collect data, design questionnaire, take into account cultural issues or training the interviewer (Beneria, 1992). Feminist economist and statisticians made effort to maintaining accounts for unpaid work and able to made a satellite account which is used for many purposes but not on aggregate level (Macdonald, 1995). Landefeld et all (2000, 2009) work on satellite account to introduce Home Production as a separate account rather in national income accounts as market activity. Goldschmidt-Clermont, 1982, 1987, 1990, 1993 said that the best way is to record and value unpaid work on output bases but Macdonald. (1995) argues about the input or replacement cost method. Pampel & Tanaka (1986) said it is a kind of tradeoff between home productions and market production while Garibaldi & Wasmer, (2004) said if we want this tradeoff we must introduce some policies like subsidies and taxes for part time and full time employment to increase female labor force participation rate (FLFP) in the market, it should increase women's incentives to substitute household production with market production, so as to increase the equilibrium level of employment and the size of official GDP. Garibaldi & Wasmer (2004), Pampel & Tanaka (1986) theories confirm a U-shaped relationship of industrial work and Female labor force participation and the results confirm the loss of women home

production after switching to the FLFP. While studies, like Nordhaus & Tobin (1972), Mehlum, et al (2002), Stiglitz, et al (2009), Ploeg (2011), Gylfason (2001), Auty (2001), Torvik (2002), Sachs & Andrew(1999), argue that GDP does not take into account the Resource Depletion and Nordhaus & Tobin (1972), Stiglitz et al (2009), about Debt.

2.2 Modifications in GDP and New Measures of welfare

2.2.1 Modifications in GDP

The discussion of welfare is not clearly defined by GDP while development economics allow for the welfare as considering liberty, freedom, social capabilities. Other than market activities are also included in this to gain a clearer picture of any country's economic welfare condition. People work on welfare approach to gain its fruits (Islam & Clarke, 2002; Stiglitz et al, 2009).

Based on these arguments several people have introduced a new measure of welfare and economic performance, e.g. Nordhaus & Tobin (1972) introduce "Measure of Economic Welfare" (MEW), Utility Approach for Home Production by Gronau (1980) and by Solberg & Wong (1992), HDI by Mehboobul Haq (2003) for health and education, Cost and Benefits approach by Islam & Clarke (2002), consumption based approach by Jones & Klenow (2010) and Mashup indices by Ravallion (2011), etc.

2.2.2 Non GDP welfare measures

The phenomenon of welfare approach started from MEW (Measure of Economic Welfare) by Nordhaus & Tobin in 1972 and still is a topic of hot debate. Many factors that are not included in GDP are incorporated into welfare approach.

MEW presents another concept of the NNP (Net National Product) and concludes that both grew up whilst the MEW grew at a slower rate than the NNP, both did grow over time and therefore NNP was an effective measure of social welfare. The work of MEW extended into the Index of Sustainable Economic Welfare (ISEW) and includes costs and benefits and environmental impact and enhanced the thought of welfare, which continues with Gronau's model (1980) Eric Gronau's model for two earners (1992), Cost benefits adjusted GDP (CBAGDP) approach with social welfare function (SWF), Consumption Equivalent welfare method (2010), Mashup Indices of development (2011), Substance based classification scheme (2012). They all worked to measure welfare for an economy relating to GDP and have some benefits and limitation as well.

Nordhaus & Tobin (1972) introduce MEW approach to explain welfare of individual in an economy with GNP; conceptually this is an overall and comprehensive measure of the real annual consumption of the households. It is proposed to include all goods and services, whether marketed or non-marketed, valued at prevailing market prices or at their comparable opportunity costs, public or private and allowance for negative externalities deducted from this, like environmental damage, urbanization and industrialization. Real consumption is evaluated by the flows of goods and services at prevailing constant prices. They distinguished sustainable welfare (MEW-S) from the actual welfare (MEW-A). MEW, whether actual or sustainable, can be expressed either in aggregate or in per capita terms. Islam & Clarke (2000, 2002) listed some GDP calculation methods like welfarism (utilitarian), the optimal distribution of income, inter-temporal separation of utility, the possibility for situational comparison, cardinal measurement, and consistency of taste and transaction. Market price approach and opportunity cost

approach were defined by Gronau (1980), and also explained the corner solution where household does not consume the market goods and opportunity. Marc. (2009) worked on different measurement indices and Bleys (2012) mentioned 23 alternative indices for policy making. This is a substance based classification scheme for measuring well-being, economic welfare, measuring of sustainability as some other issue besides GDP. Wellbeing estimates a single person life situation or group, utilitarian, human needs, capabilities approach is used to evaluate this. Economics welfare measure overall level of wellbeing enjoyed by its citizens', economic dimensions of well-being grouped according to different income groups. Economic income, sustainable income and psychic income approach have been used for the measurement. And finally, how much sustainable this well-being is, measures by the measure of sustainability. Ravallion (2011) describes in his mash up indices for the two main classifications of indices. One is where the theories and practices comprise only one indicator like GDP, which satisfied the aggregated need of any economy while indicators that reflect different directions of an economy and constructing by ranking component series are called Mash up indices. By extending MEW, Gronau, (1980) constructs a model based on a Utility approach to measure home production and family work for sole earner and also use the constant elasticity of substitutions for measuring marginal production function. He sets home production for two variables which are 1. Home Production using market goods as x_m and 2. Home Production using home goods x_h. Solberg & Wong (1992) uses Gronau's model to estimate the home production, leisure, Market works, works related travels, participation and time allocation for two earner families when husband and wife both are labor force participants. It also compares two earner family models with Gronau's single person model. Gronau, (1980) describes the wife's age and her education, the husband's

education and wage rate, the family's non-earned income, the number of children, the age of the youngest child, and the number of rooms in the house. Islam & Clarke (2000, 2002) use cost benefits adjusted GDP (CBAGDP) approach with social welfare function (SWF) to measure the exact level of growth in Thailand while they also measure GDP without adjustment to clear the difference between adjusted and unadjusted GDP approach. The result shows its significance for this CBA method.

Garibaldi & Wasmer (2004) said that North American and German women have same leisure time, but their allocation of time varies by 5.3 points because German women spend their time in home production while the American women spend it on market activities. The last thirty years have changed the trend from home production to market production and increased female labor force participation. This is a kind of tradeoff between home production and market production when we introduce policies to increase female labor force participation rate. Today's educated women have to choose not only between home production and leisure, but they have to choose between work at home work at markets and leisure, but it depends on income earned from the market, home production, wage rate and the price and availability to substitute among those (Leibowitz, 1974; Garibaldi & Wasmer, 2004; Pampel & Tanaka, 1986). Traditionally, unequal societies dealing women with gender inequality and deprivation. Women may, often work harder than men but receive less attention in nutrition and less medical and mental health care (Sen, 1999)[1].

2.3 Limitations in new measures

However, these studies have several limitations, e.g. Haq (2003)'s HDI is not a measure of economic performance, as it constitutes other social indicator e.g.

[1] Author discusses the role of women, strategies of development of women and social change in India.

Education and Health. MEW by Nordhaus & Tobin (1972) did not take into account environmental damage. Gronau, (1980), Solberg and Wong (1992) explained the variable of home production, but concluded that these variables are not ready to measure for welfare because of data limitations. The authors focus on white married families and exclude other society individuals. Islam & Clarke (2000, 2002) work is restricted only to the Thai economy. Jones & Klenow (2010) calculates welfare other than GDP, but he included home production and leisure as a one variable and concluded that people enjoy leisure time and it is standard welfare. Bleys (2012) listed the indices for measurement of welfare, but the author did not define any procedure to measure by those indices for welfare. Ravallion (2011), Mashup indices are made up by the different components and have limitation in theoretical base so widen the gap between theories and practices. A Table of Study Gap is given at the end of this Chapter.

2.4 How we differentiate our study

So all that above mentioned studies have some benefits as well as some limitations too and the present study attempts to calculate adjusted measure of economic performance. This study should provide a better picture of economic growth by providing the estimates of economic performance, which include both market and non-market activities and also adjust the performance for the Debt and resource depletion.

2.5 Study Gaps

Table 2.5 Study Gap & Limitations for Non-GDP or Welfare measures

Studies of Different Approaches	Authors and years of publications	Limitation and gap in the studies.
Measurement of Economic Welfare (MEW)	William D. Nordhaus and James Tobin (1972)	Author reclassified GNP, NNP (a Figure similar to GDP) into consumption, investment, intermediate, imputed services rendered by consumer capital items for both pleasure and the product of household work, and corrected the Figure for the "bad's of urbanization". However, they did not take into account environmental damage
Gronau's model 1980 Eric Gronau's model for two earners 1992.	Gronau Gronau. (Aug. 1980), Eric J. Solberg and David C. Wong (1992)	Based on MEW author explained two variables of home production i. uses market goods for production ii. home goods for production but concluded that these variables are not ready to measure for welfare because of data limitations. The authors focus on white married families and exclude other society individuals. After that Eric in 1992 extended that Granou model for two earner families. But still due to data limitation they were not able to calculate the true measures.
Cost benefits adjusted GDP (CBAGDP) approach with social welfare function (SWF)	Sardar M. N. Islam, Matthew Clarke (2002)	Author uses MEW for their standard measurement tool with Cost and Benefit Adjustment for the Thai economy. Though the work is good, but still it is restricted only to the Thai economy.
Consumption Equivalent welfare method	Charles I. Jones, Peter J. Klenow,2010	Based on MEW the author calculates welfare other than GDP, but he included home production and leisure as a one variable and concluded that people enjoy leisure time and it is standard welfare.
Substance based classification scheme	Brent Bleys (2012)	Bleys listed the indices for measurement of welfare, but the author did not define any procedure to measure by those indices for welfare.
Mashup Indices of Development	Ravallion, Martin. (2011),	Mashup indices are made up by the different components and have limitation in theoretical base so widen the gap between theories and practices.

Chapter 3

Data, Model and Methodology

This study calculates Home Production for 150 countries and three Modified measures of GDP adjusted for Home Production (HP), Debt stock, and Resource Depletion (RD). Economic Performance (EP) is introduced as a measure of growth in MGDP instead of Economic Growth (EG) to measures the performance of nations. The relation between the conventional Economic Growth (EG) and Economic Performance (EP) is calculated. This Chapter contains the methodology of calculation for the above mentioned variable and organized as follow: Section 3.1 contains Model and Methodology and Section 3.2 constitutes data and the details of variables.

3.1 Model and Methodology

This Section is further divided into four Sections. Section 3.1.1 introduces the calculation method for Modified GDP, Section 3.1.2 introduces the calculation method for Economic Performance, and Section 3.1.3 contains regressions for the analysis of Economic Performance (EP) and Economic Growth (EG) and Section 3.1.4 for Bias in GDP against HP.

3.1.1. Modified Gross Domestic Product. This study calculates three modified versions of GDP known as MGDP1, MGDP2 and MGDP3. Under the current heading, we introduce the method for the calculation of MGDP1, MGDP2 and MGDP3 with respect to HP, Debt stock and RD. The calculations are as follow:

$$MGDP1_{it} = GDP_{it} + HP_{it} \quad (1)$$

$$MGDP2_{it} = GDP_{it} + HP_{it} - RD_{it} - Debt_{it} \quad (2)$$

$$MGDP3_{it} = GDP_{it} - RD_{it} - Debt_{it} \quad (3)$$

Where i denote the ith country's observation and t denote the time. And

MGDP = Modified Gross Domestic Product

GDP = Gross Domestic Product

HP = Home Production

RD =Resource Depletion

$Debt$ = Foreign Debt

As discussed in Section 3.2 that HP has the positive contribution in economic production therefore MGDP1 measures the value of GDP after adding up the value of HP, Debt stock and Resource Depletion on the other hand has negatively contributed to the society therefore in MGDP3 we subtract it from GDP and in MGDP2 we add HP and subtract Debt stock and RD.

3.1.2. Economic Performance and Economic Growth

This study compares Economic Performance and Economic Growth for the same period of time and evaluates how the ranking of countries changes if the adjustment for the above mentioned factors meets. By the Economic Performance we mean improvement and growth in the Modified GDP, whereas the word Economic Growth is taken in its conventional meaning, i.e. growth in conventional GDP. On the other hand EP = % change in MGDP. Since we have three measures of MGDP, three EP could be calculated as follows:

$$EP1_{it} = \frac{MGDP1_{it} - MGDP1_{it-k}}{MGDP1_{it-k}} \quad (4)$$

$$EP2_{it} = \frac{MGDP2_{it} - MGDP2_{it-k}}{MGDP2_{it-k}} \quad (5)$$

$$EP3_{it} = \frac{MGDP3_{it} - MGDP3_{it-k}}{MGDP3_{it-k}} \quad (6)$$

Economic Growth and Economic Performance are calculated taking a five years lag i.e. k=5, for the year 2005 and 2010.

3.1.3. Exploring Relation between Economic Growth and Economic Performance

The relation between economic performance and economic growth will be investigated by following regression:

$$EP1_{it} = \alpha + \beta_1 logMGDP1_{it-k} + \beta_2 EG_{it} + \varepsilon \quad (7)$$

$$EP2_{it} = \alpha + \beta_1 logMGDP2_{it-k} + \beta_2 EG_{it} + \varepsilon \quad (8)$$

$$EP3_{it} = \alpha + \beta_1 logMGDP3_{it-k} + \beta_2 EG_{it} + \varepsilon \quad (9)$$

Where

EP = Economic Performance

EG = Economic Growth

ε = Error term

The model is estimated for the panel of 153 available countries to see how EP relates to EG and the percent change in EG has how much effect on EP.

3.1.4. Bias

And after that we compare these two, the EP & EG, to check the GDP in relation to which extent of biased against HP (home production).

$$Bias = \sqrt{(EG - EP1)^2} \tag{10}$$

To check the relation function for bias shows up to which extent the home production is essential to include in the basic measurement of the National Accounting System.

3.2 Home production and female labor force participation

Female participation in Home Production is an essential economic activity. Women work at home to provide different services to their families and of course to the society. Although it is hard to measure, but many studies followed to introduce home production value in monetary terms like Nordhaus & Tobin (1972), Garibaldi & Wasmer (2004), Pampel & Tanaka (1986), Gronau (1980), Solberg & Wong (1992) etc. We assume that women enjoy equal utility from home production and from market production. Women have a choice for unit of time to be spent in the market or in Home Production, two activities that we assume to be perfect substitutes. We made further two categories of employed and unemployed women, employed women are those who are working in the market and become a female labour force participant and unemployed women are those who do not work at market rather they provide services at home and giving Home Production . This is a strong assumption, but we maintain it throughout this study for analytical simplicity, since it implies that women will specialize in the activity in which they are most productive. Home production is calculated as follows

$f1 =$ % of adult female in total adult population

$f2$ = % of female active in job markets

$$f3 = f1 - f2$$

$f3$ =% of female active at home and giving home production

$$F = f3 * Population$$

F = represents the number of female active at home

We assume that the value of services provided by female at home is equal to value of services of male counterpart provided in market. Thus the per capita value added by the male household is approximate value of the services provided by the female at home. Let

Vm = Total value added of the manufacturing (whole industry) sector

Nm = Total Number of Employees in the manufacturing (whole industry) sector

Then

$$\text{Per capita value added} = \frac{Vm}{Nm} = Vmpc$$

$$Fm = \frac{Nm}{N} * F$$

N represents the total number of employees in manufacturing, agriculture and service sectors. Fm represent the number of females working at home whose services is to be valued at the rate of manufacturing value added per capita. Similarly

$$Fs = \frac{Ns}{N} * F \quad and \; Vspc = \frac{Vs}{Ns}$$

$$Fa = \frac{Na}{N} * F \qquad and\ Vapc = \frac{Va}{Na}$$

Where s represents the service sector and a for the agriculture sector. And the total value added by the female working at home is thus:

$$HP_{it} = Fm * Vmpc + Fs * Vspc + Fa * Vapc \tag{11}$$

3.3 Debt Stock

Foreign Debt is the major part of running an economy forward. (We are taking into account just foreign Debt and it does not include the domestic Debt). Foreign Debt is included in GDP as an additional income, but not as a liability. By using Foreign Debt the countries are either consuming the share of the future generations or leaving the burden for their generations. And one should not be confused with the positive growth of GDP if Debt stock is there. It is necessary to exclude the Foreign Debt stock from conventional GDP to gain the clear picture of an economy. For simplicity, we onward use Debt stock instead of Foreign or External Debt stock. Here we estimated foreign Debt by the following equations.

$$Debt_{it} = total\ intake_{it} - total\ disbursment_{it} \tag{12}$$

$total\ intake$ = All intakes whether in the form of foreign loan (grants+ aid) or in the form of Debt service receiving.

$total\ disbursment$ = All disbursement is included whether disbursed in the form loan to other countries or in the form of Debt servicing.

To change the data of foreign Debt from current US dollar to constant 2005 US dollar we used another equation.

$$Debt_{2005} = Debt_{Current} \times \frac{CPI_{2005}}{CPI_t} \quad (13)$$

3.4 Natural Resource Depletion (RD)

Natural resource depletion is like a cost of the economy, which include all the losses of natural resources their annual consumption, loss of forests, farmlands, consumption of non-renewable resources and long-term environmental damage with all the types of pollution during a year. These resources are fixed and non-renewable so depletion of these resources may cause depletion of reserves and have a negative impact on the welfare of any country in the future. Today's consumption of natural resources must sacrifice future consumption. The data for RD is available in WDI therefore we used this data for the further calculations.

3.5 Data sources and Availability

The data is used in the study is obtained from WDI (World Development Index)-2014 database sheet available on World Bank's website and the whole data used in this study is in US$ billion Unit, where we get the data on women force participation rate, Resource depletion (natural resource consumption) and Debt (foreign Debt) from different sample countries as on which data is available. Data of some variables is not available for some countries, so for this data limitation, we will exclude these countries from this study. This study calculates the EP (Economic Performance) as the main element of welfare at three points 2000, 2005 and 2010 with the lag of 5 years almost. After that we can implement these results of different countries. Home production, female labor force participation rate, Resource Depletion and Debt (both included whether disburse or intake) are the variables we used in this study. The data is further classified by WDI as Low income, Lower-Middle income, Upper-Middle income and High income group. This classification is used for understanding the

results of the different countries. We get data of variable 15+ female in percentage to get employed female population. The data is available for Debt Stock in WDI as the total change in external Debt stock and in current US $, we need to change it in constant US$. So we use data of consumer price index (2010=100) to get data for data for Debt stock constant US$. The data for RD is available in the percentage of GNI so we used also data of GNI.

3.6 Detail of Variables

HP

It represents value of the services provided by female at home. The calculation of HP is described in Section 3.2.

Debt Stock

Debt stock means the value of external or foreign debt taken from the foreign resources as loan or debt. This is available in WDI.

RD

RD means the value of depleted natural resources within a country every year. This is available in WDI.

MGDP

It represents the value of Modified GDP adjusted for HP, Debt stock and RD. the calculation of MGDP is describes in Section 3.1.1.

EP

It represents the value of growth in MGDP calculated by taking a lag of five years. The calculation of EP is describes in Section 3.1.2

EG

It represents the conventional growth or growth in GDP calculated by taking a lag of five years. This is available in WDI.

Chapter 4

Data Result-I

Modified GDP and Economic Performance

Following the methodology given in Chapter 3, three measures of Modified GDP are calculated which are summarized in Chapter 4 and 5. In Chapter 4, we summarized descriptive statistics for Modified GDP for years 2000 to 2012. In Section 4.1, we summarized and discussed the results for HP and Its comparison with GDP. In Section 4.2 we summarized the results for Debt stock and RD (Resource Depletion) which constitute the negative part of Modified GDP, Section 4.3 summarized the results for MGDP1 (Modified Gross Domestic Product) , MGDP2 and MGDP3. In Section 4.4 we summarized the results for Economic Performance (EP) and Economic Growth (EG). In last Section 4.5, we discussed the results for Bias, which shows that how much GDP is bias for HP.

4.1 Home production

The role and status of women is important in a society, not because they comprise and constitutes half of the population and human resource but also because they have to bear the whole burden for survival of life of human being. The role of women and development are strongly correlated with each other. Neglecting women in development strategy cannot pave the way for any progress in any country (Shareef, 2007).[2] Neglecting Home Production is a discrimination against contribution of women in a society. The Methodology for calculating HP is discussed in detail in

[2] Author writes about the status and role of women in Pakistan. He mainly works to differentiate the women in other region and women in Pakistan.

Section 3.3 which has given following final equation for calculation of Home Production (HP).

$$HP_{it} = Fm * Vmpc + Fs * Vspc + Fa * Vapc \quad (11)$$

After calculating Home Production we have summarized it using different classifications of Countries i.e. Low-income economies, Lower-Middle income economies, Upper-Middle income economies and High income economies. The results are summarized as under.

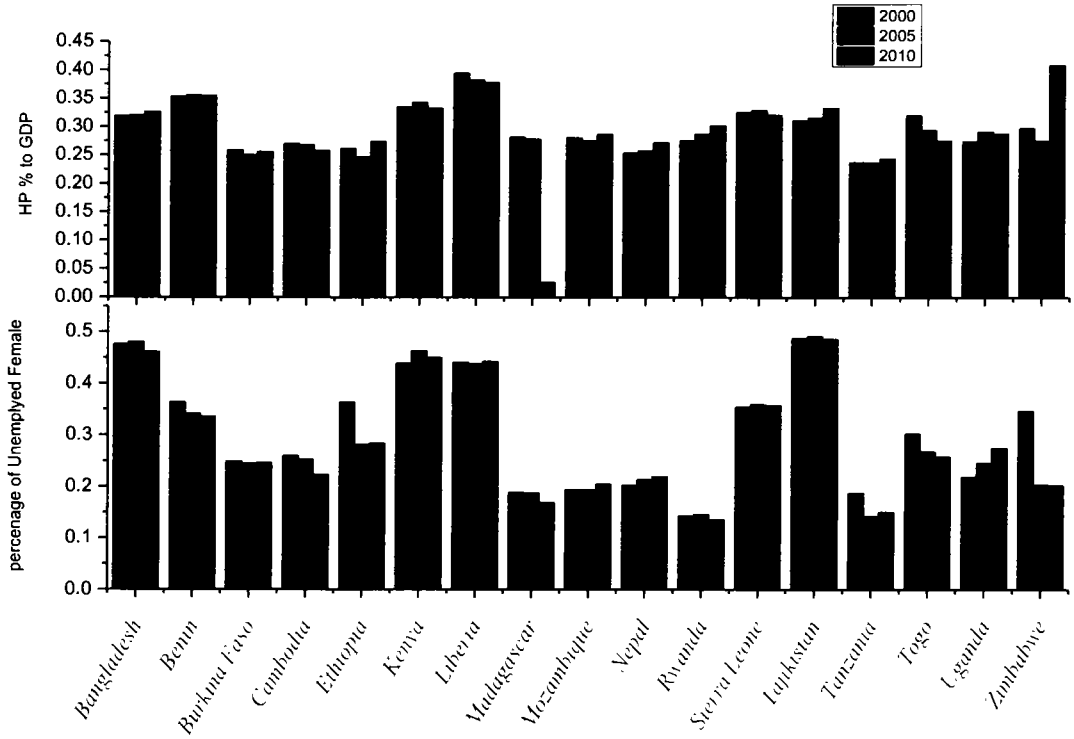
4.1.1 Home Production in Low-income economies

Our sample contains 24 countries falling in classification of low income economies. These countries have income of $1045 or less in WDI classification. As Gronau (1980) prescribed that the fraction of home production is presumably high in the less advance countries. [3] Female form approximately 50% of all nations and in low-Income economies majority of the female do not work in the labour market instead they provide services at home. Therefore the share of Home Production is expected to be high in these countries. Figure 4.1.1 bottom panel shows the percentage of unemployed female population to their working age population. This percentage ranges 15 % to 48% where Bangladesh and Tajikistan have 47%, 48% and 45%, 46% for 2000 and 2012 respectively.

GDP is neglecting the production of this sector what people called home production. Cambodia lies in the south East Asia and Nepal and Bangladesh lie near to this region (South East Asian belt) where gender gap is higher by applying a social rule to prevent the women working outside the home (Human Development Report

[3] Gronau (1980) write about the new measures of Home Production after Nordhaus and Tobins (1973) research about the inefficient use of GDP as a measure of welfare.

Figure 4.1.1 HP percentage to GDP and Percentage of unemployed female population

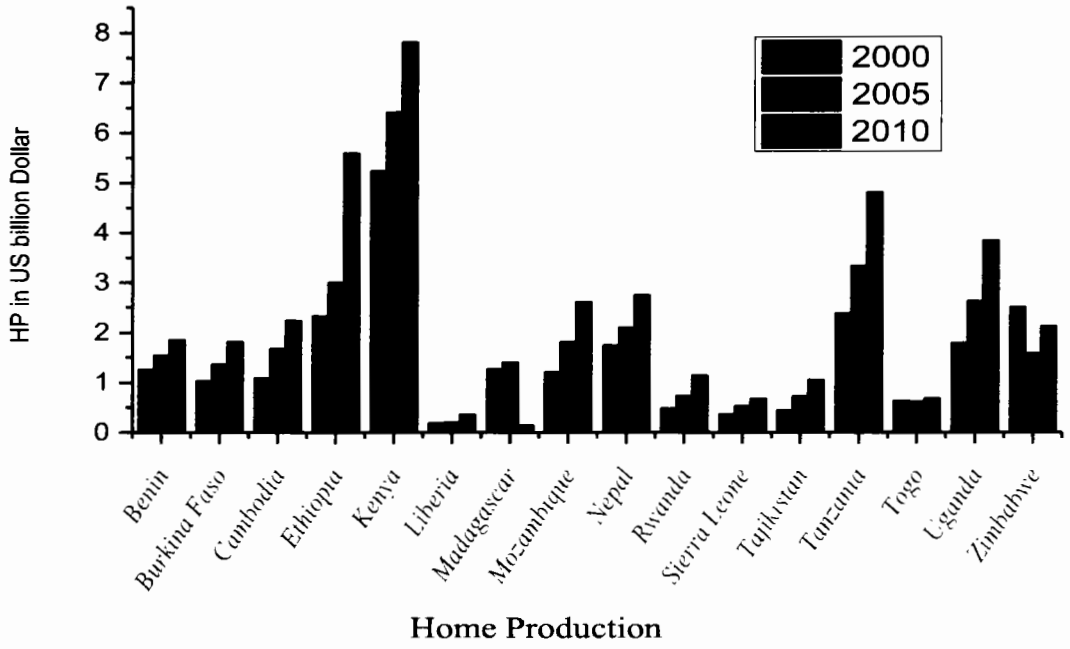


The data is in the percentage form

2014) and these countries are also female abundant population's economies. Bangladesh, Burkina Faso, Liberia, Sierra Leone and Tajikistan shows almost similar rate of unemployed female to working age population for ten years. This means that percentage of unemployed female is not varying for a decade and the changes are negligible. Rwanda and Tanzania have only 15 to 20% of their population unemployed. Table A.1.1 in appendix also shows the result for percentage of HP relative to GDP. There is only negligible change in the % of HP in the countries under consideration. Top panel in figure 4.1.1 shows HP as percentage of GDP.

Figure 4.1.2 shows total volume of HP for Low income countries. The figure shows that there is the significant growth in the HP. However as we saw in Figure

Figure 4.1.2 Home Production (HP)



Home Production

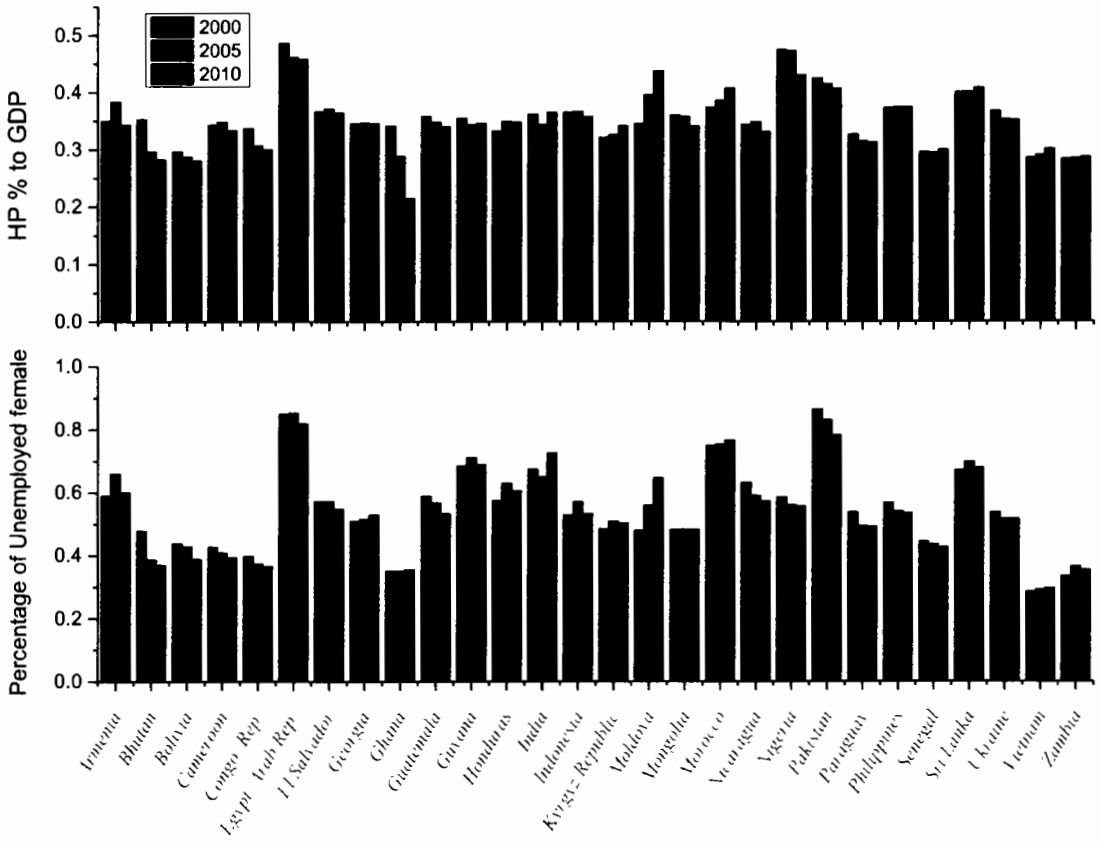
The data is in the US billion Dollar

4.1.1, the HP to GDP ratio does not vary that much, this implies that HP and GDP grow hand to hand in similar percentage. In low income economies the results of Bangladesh for HP is surprisingly very high therefore for the clearer picture of data for HP we exclude the data of Bangladesh from the Figure 4.1.2.As shown by the Table A.1 in appendix and top panel of the Figure 4.1.1 that the percentage of HP relative to GDP range from 25% to 40% for this classification. Mali, Niger, Liberia and Zimbabwe have values for Percentage of HP relative to GDP up to 40% following Bangladesh and Kenya with 32% to 33%. Ethiopia and Tanzania both show percentage higher than 20% but lesser than 30% while Benin, Burkina Faso, Cambodia, Madagascar, Mozambique, Nepal, Uganda, Rwanda, Sierra Leone and Tajikistan HP percentage to GDP is also lies in 20% to 30%. Although the values for HP are varying for these countries but their percentage of HP relative to GDP do not vary that much.

4.1.2 Home Production in Lower-Middle-income economies

WDI classifies the countries with income $1046 to $4125 as Lower-Middle income economies. And our sample contains 37 countries falling in this classification.

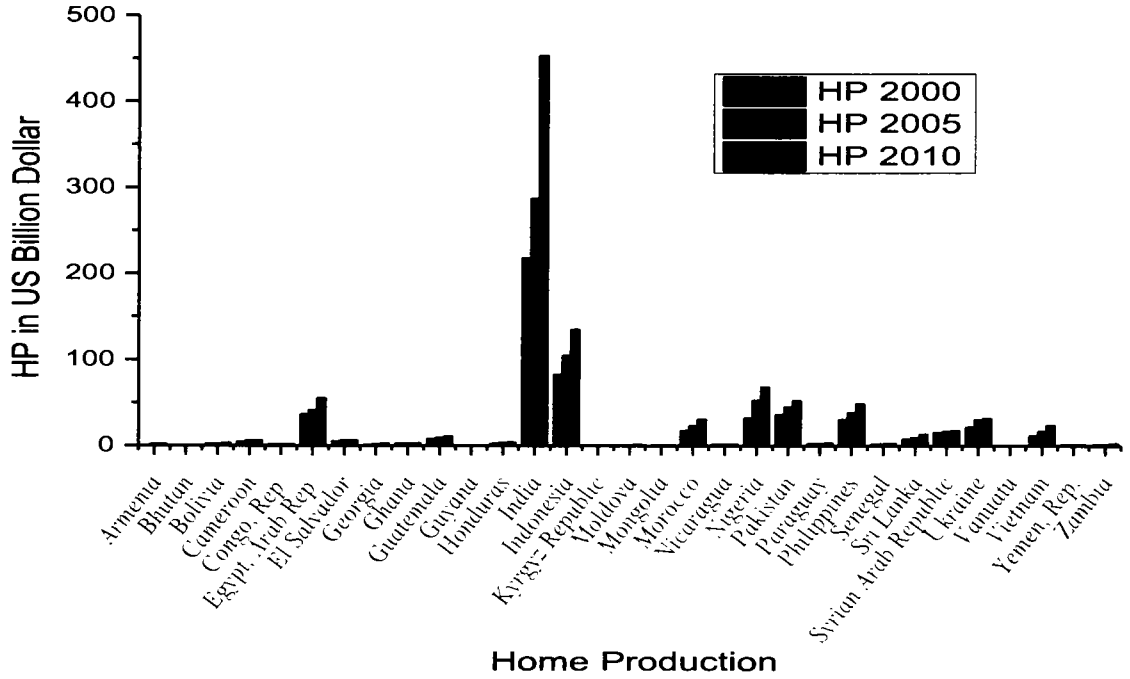
Table A.2 in appendix shows the data for HP (Home production) in US billions dollar and percentage of HP relative to GDP and Figure 4.1.3 panel 2 shows the percentage of unemployed female to their working age female population. The countries like Egypt Arab Rep. Nigeria and Pakistan show higher value for percentage of unemployed female to their working age female population. One of the major reasons for this higher percentage is the regional social values that force women to stay at home and create a gender discrimination As the Figure 4.1.3 shows percentage of unemployed female to the working age female population has a decreasing trend in Pakistan. As many reforms have been made in the last decade, for example, increasing number of seat and quota for women in government sector as well as in private sector, targeting higher School enrollment rate and by maintaining a goal to improve women position in the economies are the major causes that reduce the percentage of women from Home Production to market production. Many organizations are working on women empowerment that motivated female to work in labour market. And there is social accepted behavior that women have to stay at home and take care of their family. Also India and Pakistan are the countries where joint family system prevails, therefore all of the burden of house work like, health care, cooking food, child care and all others are directly related to house wife, she provided multiple tasks at home but we neglect to pay homage to those working ladies that are on 24 hours jobs. As our result shows for HP they consist a big amount of value added services that we do not consider as economic, and also we do not measure this in welfare. From Table A.2 in appendix



we noticed that mostly countries have 33% or 36% value of percentage of Home Production relative to GDP. Pakistan has higher value of percentage of unemployed female population but has lesser value of HP than India. But their overall percentage of HP relative to GDP shows that the results are normal and GDP neglect the 36% of this non-economical portion that contains Home Production. Sri Lanka also lies in that region having high value of percentage than that of India which is about 40%, it means 40% of the non-economic market activities do not include in national income accounts.

We see that volume of Home Production shows consistent growth but as we saw in Figure 4.1.3 the ratio of HP to GDP did not show such a significant variation.

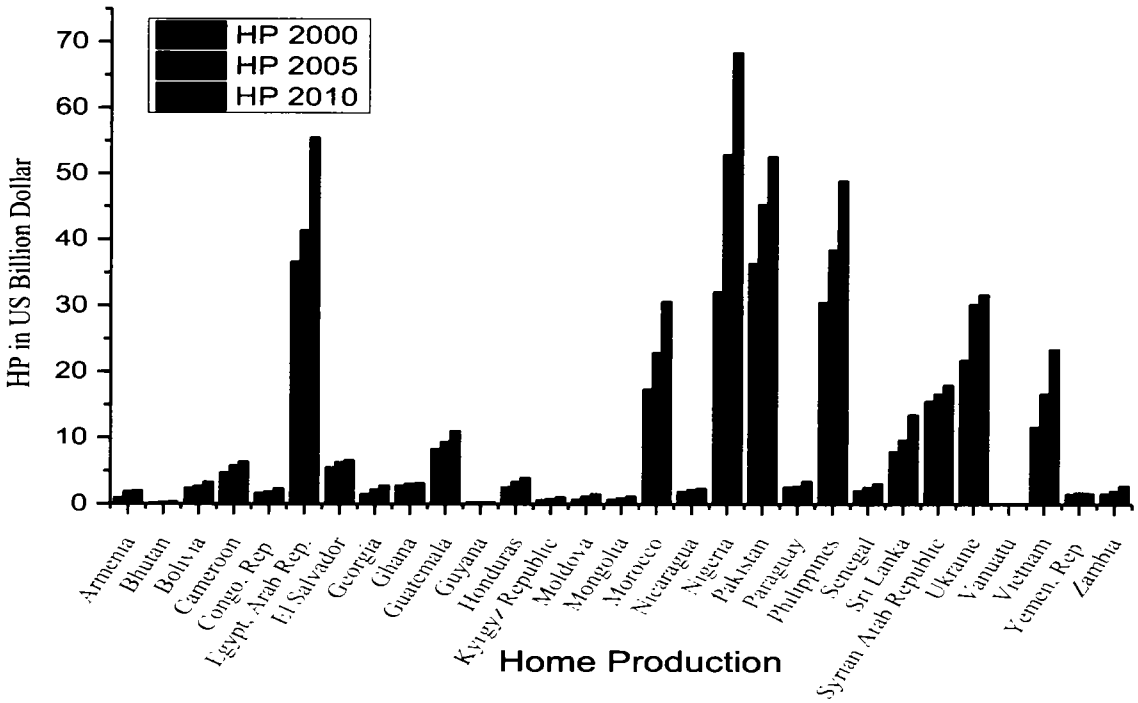
Figure 4 1 4 Home Production (HP)



The data is in the US billion Dollar

Figure 4 1 5 Home Production (HP)

TH- 16663



For the clearer picture of data for Home Production we exclude the data of [illegible] and Indonesia in the bottom panel

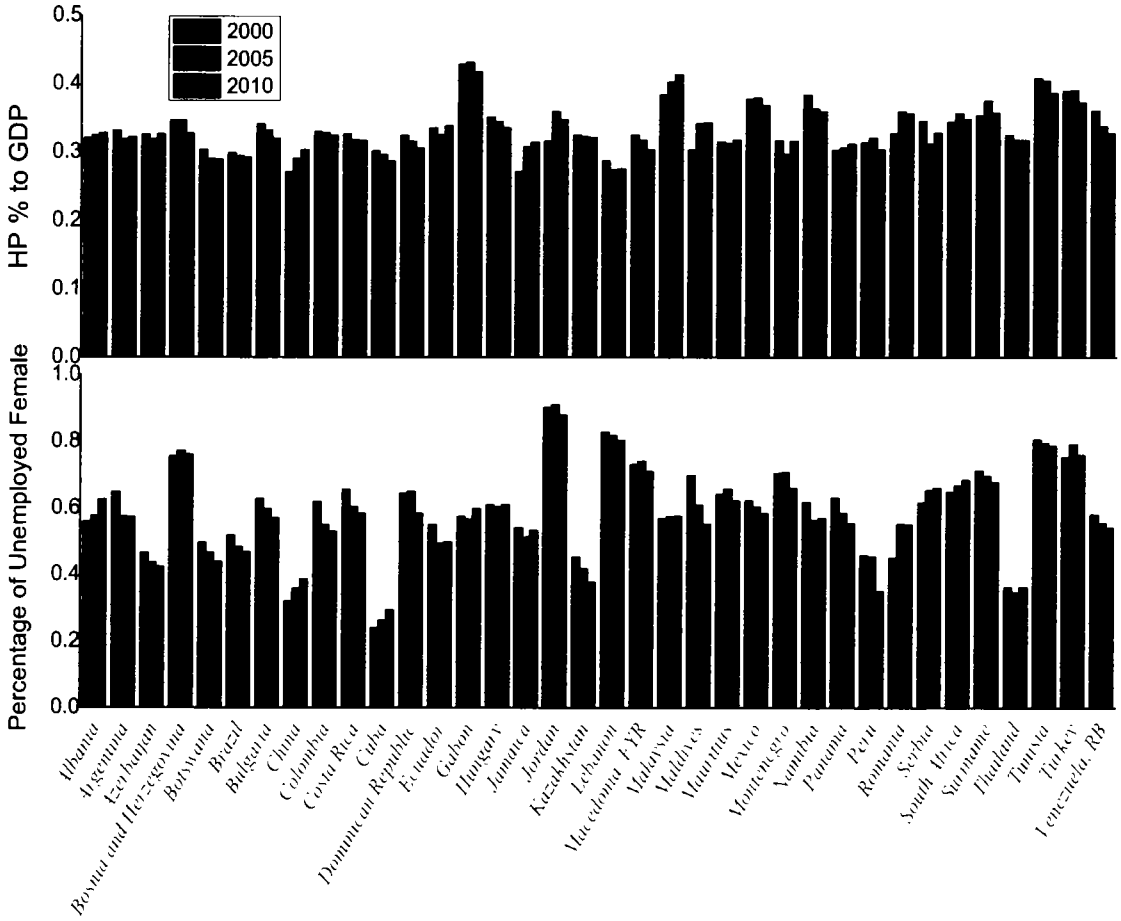
This means that the growth of GDP and growth of HP share same trend.

El Salvador, Georgia, Guyana, Indonesia, Philippines, Senegal, Sri Lanka, and Zambia, as shown by Figure 4.1.3, have values for percentage of HP relative to GDP remaining same for the whole period and do not show any fluctuations for more than a decade. Indonesia with the second largest value of home production has an increasing trend in HP. It is not due to their percentage of unemployed female as it constant throughout the 12 years which lies between 49 to 50% as shown by the Figure 4.1.3 but due to the increasing population and increased number of unemployed female population. The values of Armenia, Bhutan, Congo rep, Georgia, Ghana, Guyana, Kyrgyz Rep, Moldova, Mongolia, Vanuatu and Zambia have percentage of HP relative to GDP is almost same which is 33% to 36%, only Zambia has lower percentage as compared to other countries values as 28% to 29%. It is constant from 2000 to 2005 and then with 1% increases it remains constant for 2006 to 2012.

4.1.3 Home Production in Upper-Middle-income economies

43 countries fall in this Upper-Middle income group and the data of 43 countries is available for all of the variables therefore now onward we discuss these 43 countries. This group has income more than US$4126 billion to US$12,645 billion in WDI classification. Table A.3 in Appendix shows the data for HP and its percentage relative to GDP for this Upper-Middle-income group. Data for the countries like Argentina, Brazil, Iran Islamic Rep. South Africa and Turkey is in 10 billion US dollar while data for China and Mexico is in 100 billion dollar. Figure 4.1.6 bottom panel shows the results for the percentage of unemployed female to the

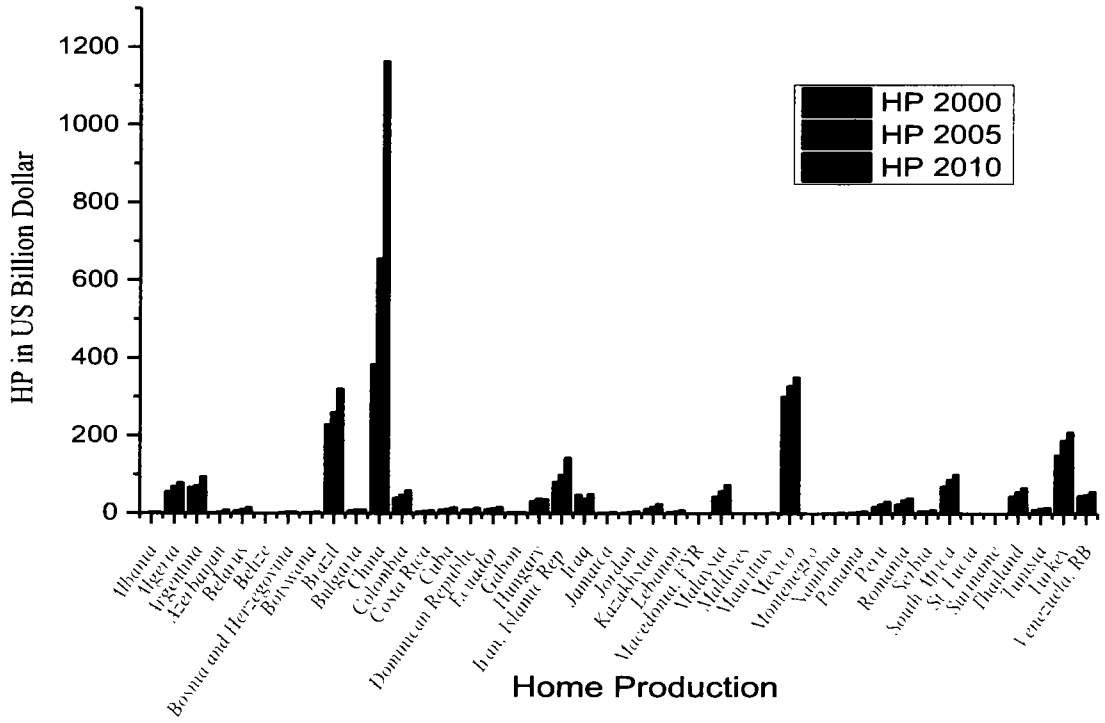
Figure 4.1.6 HP percentage to GDP and Percentage of unemployed female population



The data is in the percentage form

working age female population. Belarus has maximum value in this group as 53% population of female with increasing percentage value and china has minimum value with 48% but gradually decreasing over time. On the other hand percentage of unemployed female to the working age female population varies greatly as shown by the Figure 4.1.6 bottom panel. For example some of the countries like Cuba have the lowest value following China, Thailand, Kazakhstan and Azerbaijan. Jordan has the highest value following Lebanon, Tunisia, Turkey and Bosnia and Herzegovina. As the results show from Table A.3 and as well as by Figure 4.1.6 top panel that percentage of HP to GDP lies in between 30% to 40 % and it has very small

Figure 4.1.7 HOME PRODUCTION (HP)



The data is in the US billion Dollar

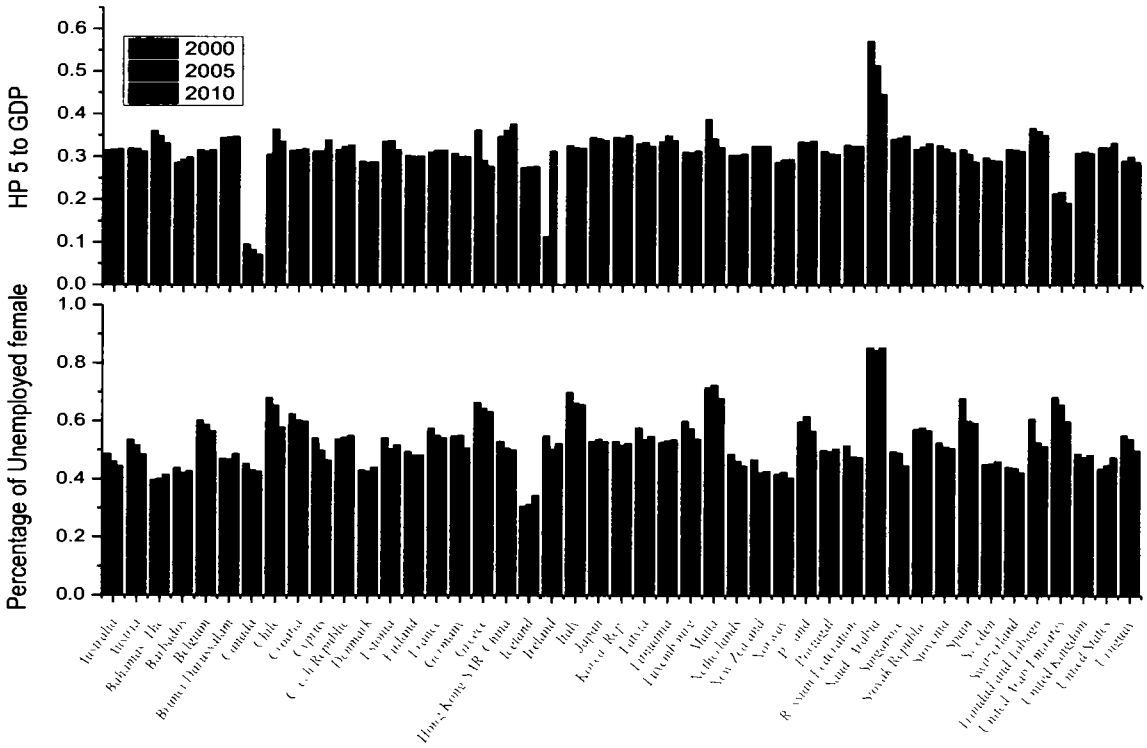
variation for these countries. Although their HP values are slightly different from each other's as Algeria and Iran, Islamic Rep. have the highest value but Algeria with downward and Iran, Islamic Rep. with upward trend for 2000 to 2005 and 2010 but their percentage of HP relative to GDP shows less variation in a decade. We see that volume of Home Production shows consistent growth as shown from the Figure 4.1.7 but as we saw in Figure 4.1.6 the ratio of HP to GDP did not show such a significant variation. This means that the growth of GDP and growth of HP share same trend. St. Lucia has the minimum value for HP percentage to GDP which is higher for2005 and after decreasing it remains same for 2005 and 2010. Only Gabon has the values higher than 40% for the percentage of HP relative to GDP and it is also shown from the Figure 4.1.6.

4.1.4 Home Production in High-income economies

Our sample contains 46 countries falling in this classification of High income group. Top panel of the Figure 4.1.8 shows percentage of HP relative to GDP and Bottom panel of the figure 4.1.8 shows the percentage of unemployed female to the working age female population. Table A.4 in appendix shows the results for HP and HP percentage relative to GDP, Where the data of HP for 15 countries is listed as in 10 billion US dollar and japan and United State of America's data lie in 100 billion US dollar. The values for HP are also very high for these countries as compared to the other group. Japan and USA have the highest value. These all countries have almost 50% of their population as female. Only UAE shows the value lower than standard and has only 32.51% of female population in 2000 which tend to decrease overtime and in 2012 it attained the lowest possible value of 29.65%. Remaining countries have almost similar trend not varying overtime.

On the other hand the percentage of the unemployed female to the working age female population is varying greatly in this classification as shown by the bottom panel of the Figure 4.1.8. Maximum countries in this classification range from 40% to 60% of this ratio, while some of the countries like Malta, Italy, Chile, Greece, UAE and Saudi Arabia have the values above 60%.this means that more than 60% of their working age female is unemployed so we can say that almost 60% of their female population is active at home production. Saudi Arabia has the maximum value in this classification and it attains the highest possible values as their rules and laws force women to stay at home and prevent them to contribute in market economy. Therefore from this higher value we can say that they have the maximum value for HP, as shown by the Table A.3 but although they have the higher value for Unemployed women but HP is lesser than many other countries lie in this high income group.

Figure 4.1.8 HP percentage to GDP and Percentage of unemployed female population

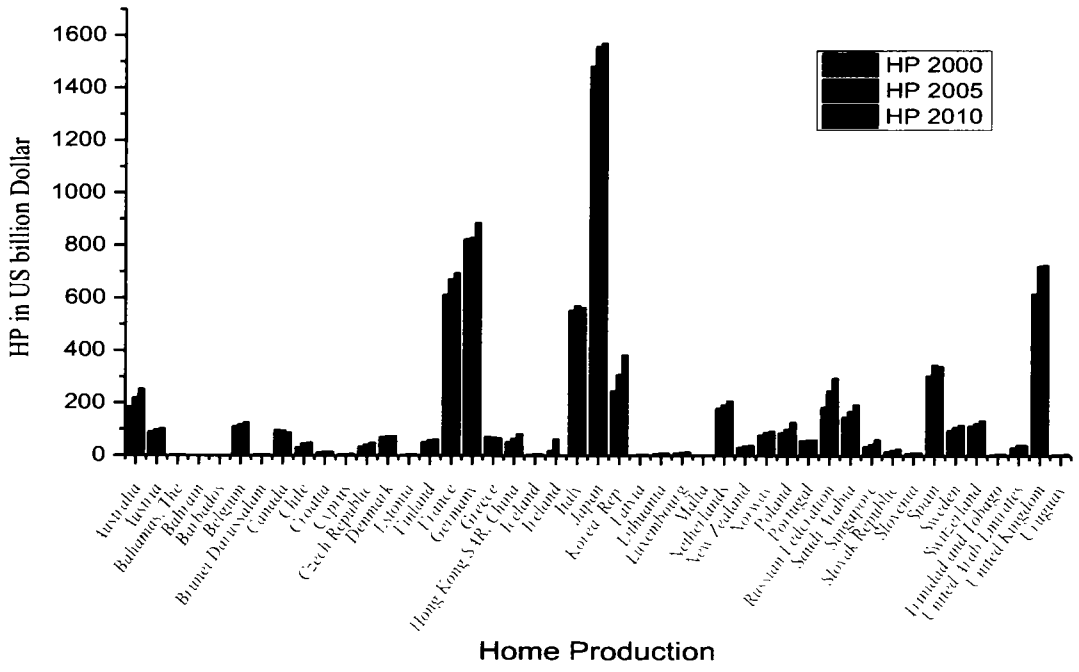


The data is in the percentage form

Percentage of unemployed female is very low in Iceland. It shows that only 30% women are not active at job market and their 70% women are contributing in labour force market. Italy and Greece from the European region shows value higher than 60% for unemployed female to the working age female group (Italy has value almost 70% in 2000) and Spain shows above 60% results for 2000 while in next decade it decreases to lower than 60%.

The data for Ireland is only available for 2005 for some of the variables like agriculture and service value added and therefore from this data we have only results for 2005. It shows that HP percentage to GDP is higher and lies between 30% in this time period. Figure shows that remaining countries have minimum value for HP percentage to GDP up to 40% except Iceland.

Figure 4.1.9 Home Production (HP)



The data is in the US billion Dollar

In comparison to the percentage of unemployed female population to the working age female population the top panel of the Figure 4.1.8 shows the percentage of HP relative to GDP. We see that volume of Home Production shows consistent growth as shown from the Figure 4.1.9 but as we saw in Figure 4.1.8 the ratio of HP to GDP did not show such a significant variation. This means that the growth of GDP and growth of HP share same trend. The maximum countries in this classification range from 30% to 40% for the percentage of HP relative to GDP except Canada and Saudi Arabia. Canada has minimum value while Saudi Arabia has maximum value up to 60% in this classification. Japan with the second largest highest values also shows an increasing trend in their HP values for HP percentage to GDP shows a mix trend with equally increasing and decreasing over time but their percentage of female population increases which resultantly increases the values for HP from 2000 to 2012.

4.1.5 Summary for HP as a percentages for Whole World at 2012

Table 4.1.5 Minimum and Maximum values for % of Unemployed female and % of HP relative to GDP at 2012

		Minimum	Q1	Q2	Q3	Maximum
Low-income economies	% of Unemployed female	13.80	13.80	27.80	13.80	61.60
	% of HP relative to GDP	2.80	2.80	28.93	2.80	40.36
Lower-Middle income economies	% of Unemployed female	28.80	28.80	53.85	28.80	100.00
	% of HP relative to GDP	1.09	1.09	33.77	1.09	45.40
Upper-Middle income economies	% of Unemployed female	29.64	29.64	57.30	29.64	100.00
	% of HP relative to GDP	13.69	13.69	32.24	13.69	78.50
High income economies	% of Unemployed female	33.50	33.50	50.30	33.50	85.60
	% of HP relative to GDP	18.64	18.64	31.00	18.64	43.82

The data is in the percentage form.

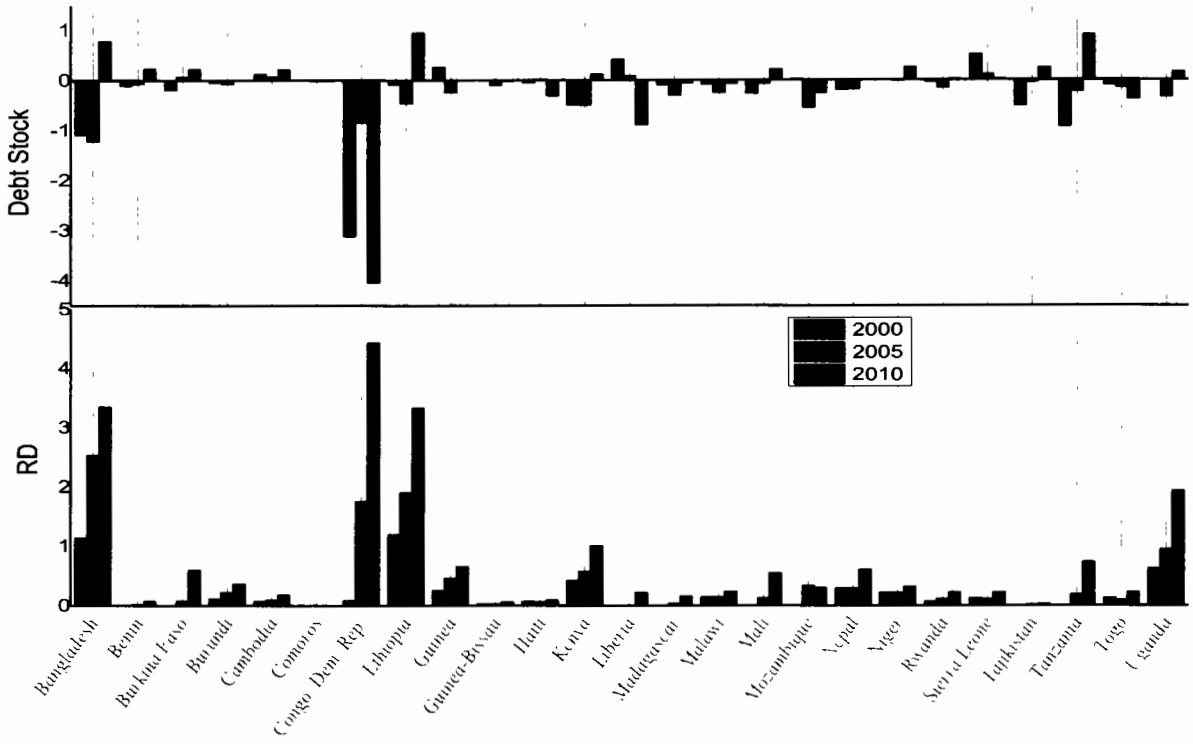
4.2 Debt Stock and Resource Depletion

Following the methodology given in Section 3.3 and 3.4 we calculated Debt Stock and RD for 153 countries. In this Section 4.2 we summarized the results of Debt Stock and RD with respect to the four classification of the world, i.e. Low-Income economies in Section 4.2.1, Lower-Middle income economies in Section 4.2.2, Upper-Middle income economies in Section 4.2.3 and High income economies in Section 4.2.4.

4.2.1 Debt stock and RD in Low-income economies

The data for Debt stock shows different results, as shown by the Table B.1 in appendix and from the top panel of Figure 4.2.1, for Low income countries it shows a mix trend. Countries like Benin, Burkina Faso, Burundi, Niger, and Togo show the value between US$0.5 billion to US$2 billion. We see that the volume of the total Debt stock shows consistent decrease over time within the country. It also shows from the negative value or the reduction in the Debt stock. These countries include Congo,

Figure 4.2.1 Debt Stock and RD

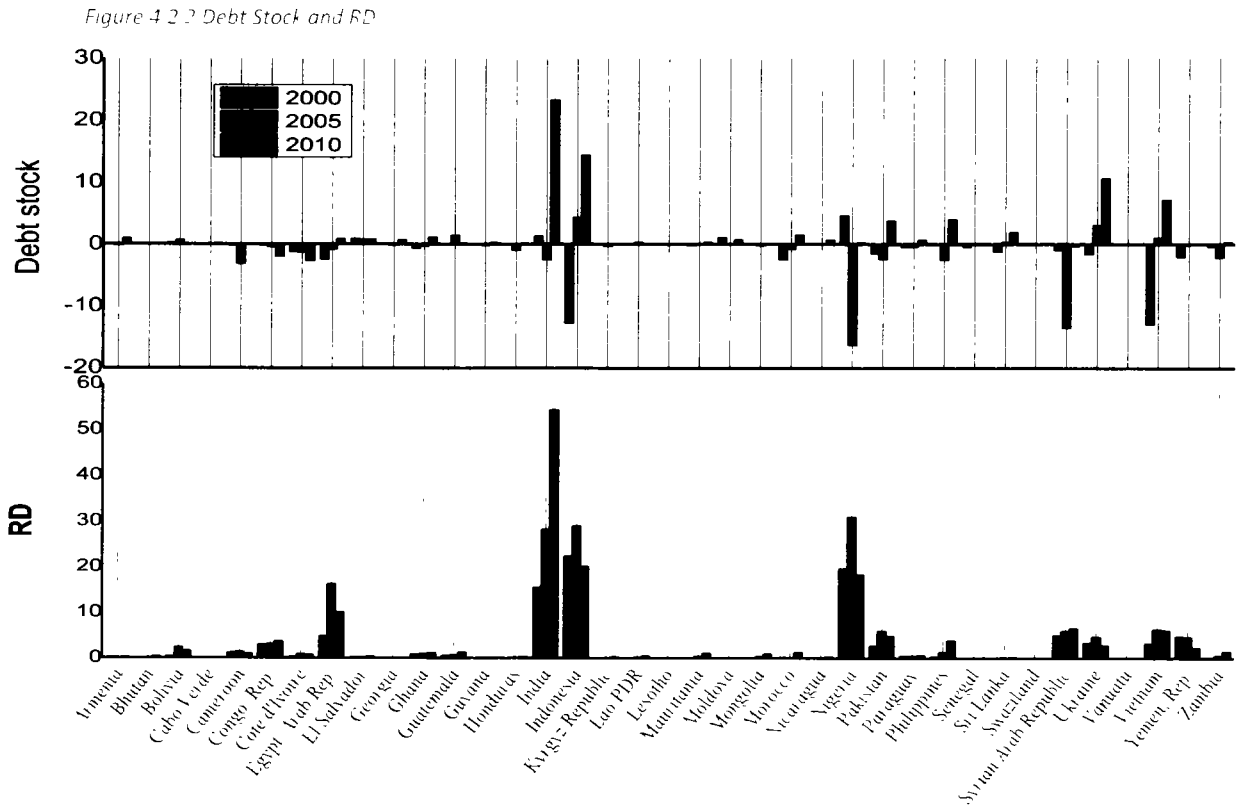


Dem. Rep. Haiti, Kenya, Tanzania, Uganda and Nepal. etc. Comoros has value less than one billion US$ for whole decade. Kenya and Tanzania have values lie in between US$1 billion to US$1.5 billion for the foreign Debt. On the other hand Zimbabwe shows a very high negative value (reductions in Debt stock) for 2000 in this group as it has US$171.16 billion in foreign Debt Stock but within three years it decreases in 2 digit rate but from 2006 to 2012 it remain between US$0 billion to US$1 billion, It means they maintain their economy and by increasing their progress they are able to decrease their burden for Debt and we can say that their GDP has only share of US$0 billion to US$1 billion as foreign Debt.

The results for Resource Depletion (RD) show very low for most of the countries and lie in between US$0 billion to US$1 billion as shown by the Figure 4.2.1 bottom panel but show a consistent growth with the passage of time. Only countries like Bangladesh, Ethiopia, Congo, Dem. Reb. Uganda results higher than

US$1 billion. The results for Bangladesh show that it is increasing over time, only for 2002 it deceases while it again shows higher value for 2012 which is US$3.38 billion, as shown in the Table C.1 in appendix. These all countries have values less than 1 billion. Burkina Faso has values for US$0.00 billion for 2000 to 2003 after that it increases. As shown by the Figure 4.2.1 panel 2 Benin, Guinea Bissau, Haiti and Tajikistan show very low results for RD for this Low income economies group.

4.2.2 Debt stock and RD in Lower-Middle-income economies



The data results from Table B.2 from appendix and from the top Panel of the Figure 4.2.2 for this Lower-Middle income economies group show higher than the low income economies group. Only five countries, Bhutan, Cabo Verde, Lesotho, Swaziland, and Vanuatu, have data for Debt is higher than US$0 and lower than US$1 billion and reduction in Debt stock is in only 2 to 3 years. Bolivia and Cameroon

show decreasing trend over these 13 years and have lesser values for foreign Debt stock in 2012 than in decade before. India and Indonesia have the highest value for the Debt stock in this group as the data for these two countries as shown in the Table B.2 is in US$100 billion and also India has an increasing trend with the passage of time, but Indonesia has a mix trend, it shows decreasing value from 2000 to 2008 but has an increasing trend from 2009 to 2012. It means for the last 5 to 6 years the statistics for Debt show that they have a high share of Debt stock in their GDP and their growth is also maximize not because real increase in gross domestic product but because of Debt stock.

Table C.2 in appendix and the bottom panel of the Figure 4.2.2 shows the summarized results for RD. Countries like Armenia, Bhutan, Cote d'Ivoir, El Salvador, Georgia, Guyana, Honduras, Kyrgyz Republic, Lao PDR, Lesotho, Moldova, Nicaragua, Paraguay, Senegal, Sri Lanka, show results less than US$1 billion. While Bolivia, Cameroon, Ghana, Guatemala, and Mauritania show results higher than US$1 billion and lesser than US$2 billion. Indonesia in this group shows very high values for Resource Depletion in 2000 with mix trend as for some of the years it is increasing and for some of the years it is decreasing. Nigeria has the second largest value for RD in this group in 2000. After Nigeria, India shows higher value for 2000 but with the passage of time it increases and attains the highest value for 2012 as US$54.63 billion in group. Overall results show that India has the Maximum value in this group. Pakistan also shows an increasing trend from 2000 to 2008 but after this it is decreasing. Egypt, Arab, Rep. shows decreasing value.

4.2.3 Debt stock and RD in Upper-Middle-income economies

Figure 4.2.3 Debt Stock and RD

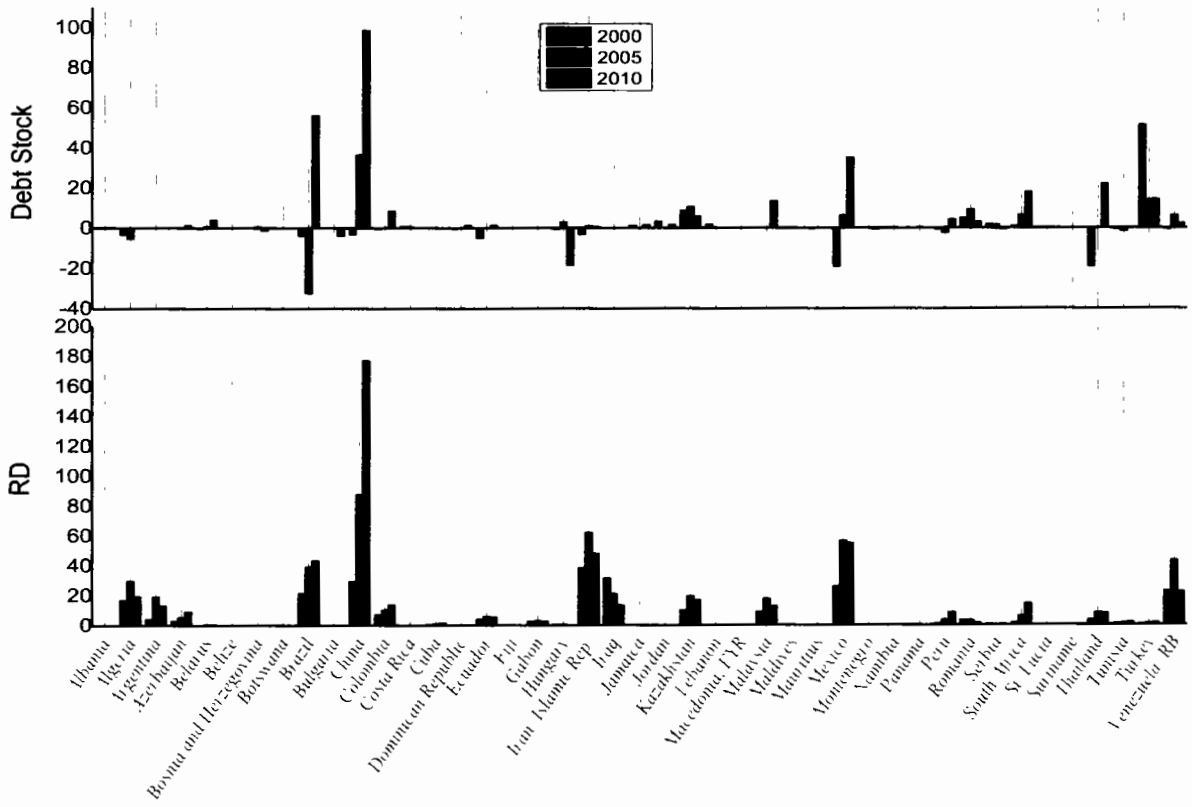


Table B.3 in appendix and top panel of the Figure 4.2.3 summarized the results for Debt stock for Upper-Middle income economies. Debt statistics shows that Brazil, China, Mexico, and Turkey are highly indebted countries in this classification. Turkey with the highest value US$51.25 billion of Debt stock in 2000 has an increasing trend. After Turkey Brazil has the second largest value for Debt stock in 2000 but Brazil's data shows that it is decreasing from 2000 to 2006 and from 2007 to onward it again shows higher value with increasing trend. China and Mexico show increasing trend in Debt stock values. Table B.3 in appendix shows that these countries also have very high values for Debt stock as they have the values for HP shown in Table A.3 in appendix. Azerbaijan, Botswana, Fiji, Maldives, shows the results for Debt stock lie in between US$0 billion to US$1 billion and shows less reduction in Debt stock

While Brazil, Venezuela, RB, Mexico, Algeria shows high reduction in Debt stock. Montenegro, Mauritius Belarus, Bosnia and Herzegovina, Costa Rica, Jamaica, Thailand, Peru and Serbia show a mix trend increasing and decreasing over the time.

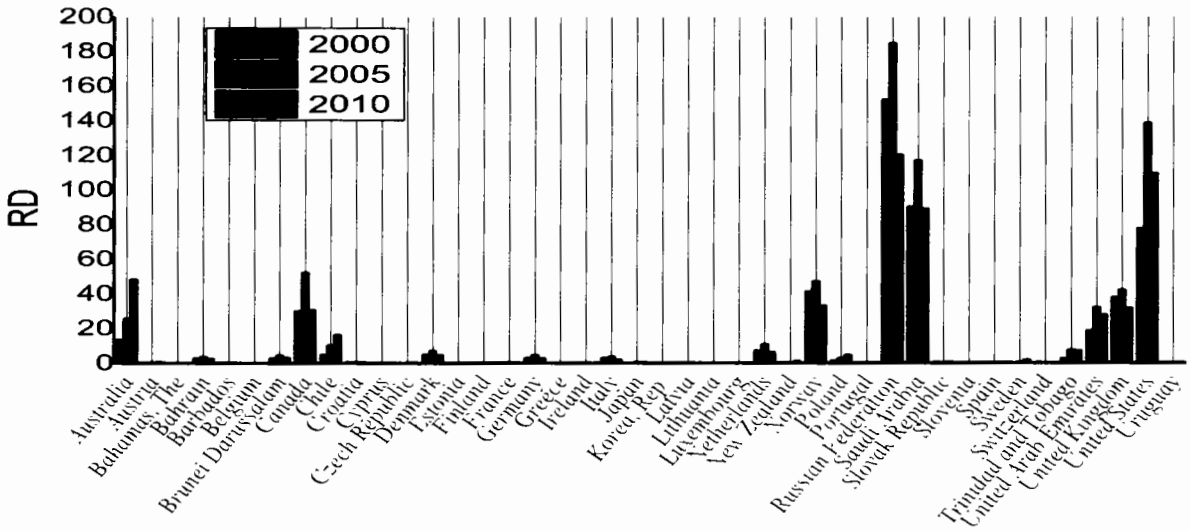
Tables C.3 in appendix and panel 2 of the Figure 4.2.3 summarized results for RD for this Upper-Middle income economies group. In the results for Resource Depletion (RD) for this upper middle income group China and Mexico shows higher results with increasing trend following Iran Islamic Rep. Brazil, Algeria, Colombia, Kazakhstan and Malaysia. All of these countries have increasing value of RD with the passage of time except Iran, Islamic Rep. which shows increment up to 2008 and then it has declining values from 2009 to 2012. Iraq on the other hand, has higher value but declining over time. Countries like Albania, Belarus, Botswana, Bulgaria, Costa Rica, Fiji, Hungry, Jamaica, Joan, Macedonia FYR, Montenegro, Serbia and Suriname have value from US$0 billion to US$1 billion, as shown by the bottom panel of the Figure 4.2.3. Remaining countries show value between US$2 billion to US$3 billion or US$4 billion value for Resource Depletion (RD.)

4.2.4 Debt stock and RD in High-income economies

The Debt statistics for High income economies is not available in WDI. Due to this reason we are unable to get the results of foreign Debt that burden GDP and play a role of externalities in national income accounts.

Data for resource depletion shows in the Table C. 4 in appendix and also shown in Figure 4.2.4. High income countries contains higher values in comparison to the other group as four countries in this group shows value higher than 100. Russian Federation in this group shows very high value, throughout higher than 100, it shows a mix trend increases and then decreases overtime. It starts from US$151.81

Figure 4.2.4 Debt Stock and RD



billion in 2000 to US$115.40 billion in 2012. After Russia Saudi Arabia has the highest value in 2000 with US$90.03 billion and it also shows a mix trend but overall it is increasing and it show higher value in 2008 then decreases and then attain the value US$99.17 billion. United State shows very high value in 2008 with US$242.16 billion and after that it decreases, Norway has value for RD in between US$30 billion to US$50 billion following United Kingdom, United Arab Emirate, Australia, Netherlands, and Denmark.

Rest of the countries show lesser values as shown by the Figure 4.2.3, almost 17 countries results show lesser than US$1 billion for example France, Spain, New Zealand Etc. it means that their GDP has only a little share of RD which has to be depleted overtime.

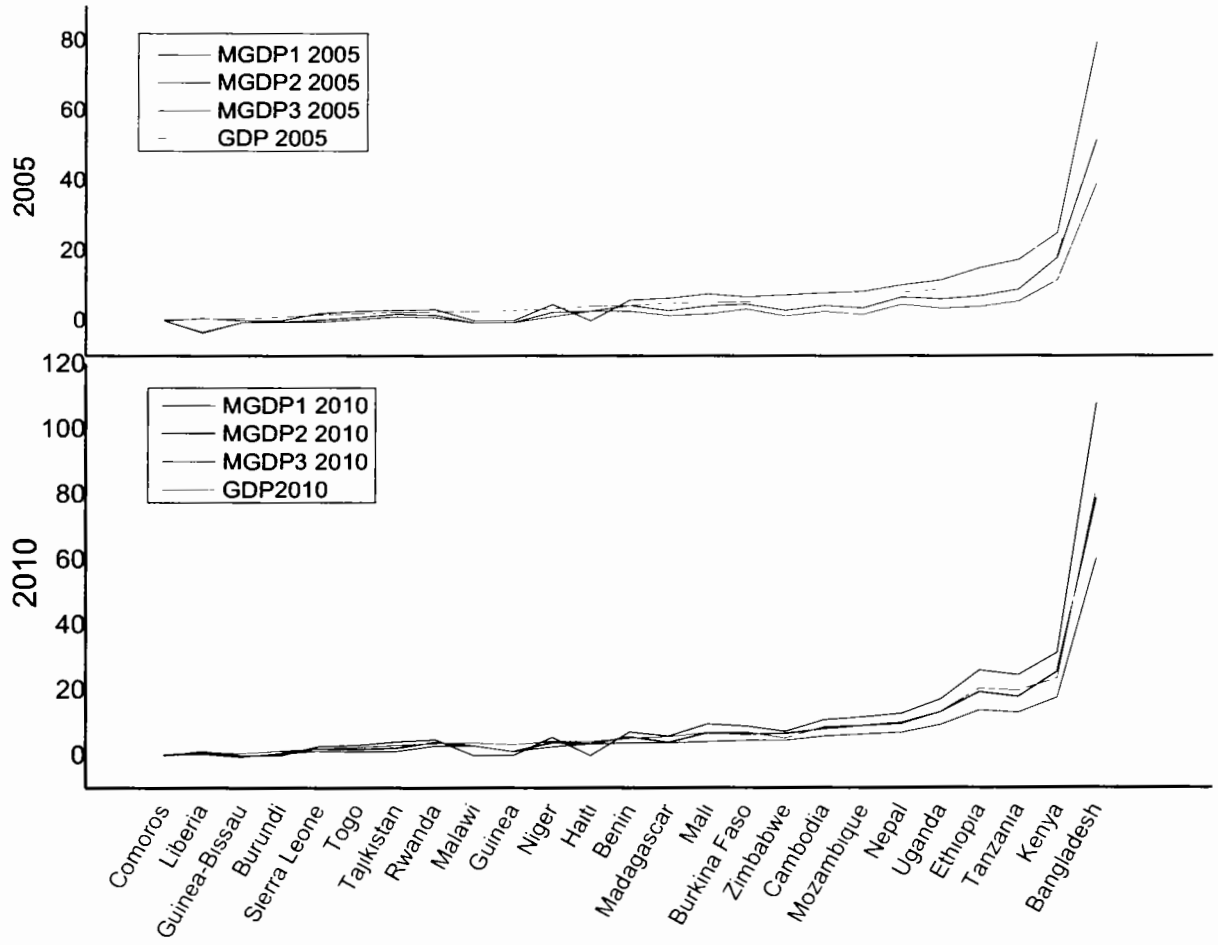
4.3 Modified GDP

Following the methodology given in Section 3.1 we have calculated three modified versions of GDP with respect to HP, Debt stock and RD and in this Section 4.3 we summarized the results for MGDP1, MGDP2 and MGDP3 and results are further classified into four Section as results for MGDPs for Low-Income economies in Section 4.3.1, Lower-Middle income economies in Section 4.3.2, Upper-Middle income economies in Section 4.3.3 and High income economies in Section 4.3.4. The details are as follow:

4.3.1 Modified GDP in Low-income economies

As shown by Table D.1 in Appendix the values for Modified GDP (MGDP) shows that the value for MGDP1 is higher than that of value for MGDP2 and MGDP3. MGDP1 Has shown higher value due to the higher amount of HP which we added up and in results we get higher value of MGDP1 than GDP, and on the other hand MGDP3 give lesser values than MGDP2 because subtracting the negative part of Debt Stock and RD from it and it is also shown by the results that MGDP2 is lesser than MGDP1 and is higher than MGDP3. Burundi has less than 1 value for MGDP3 for 2000 and 2005. This means that positive economic activity (new value added) is less than the Debt stock and Resource Depletion for Burundi. But as in 2010 and 2012 it Debt stock and RD value is decreasing therefore they show a positive Figure in MGDP3 in 2010 and onward but still the value of MGDP3 is lesser than GDP. Congo, Dem. Rep. and Liberia and Zimbabwe has the same trend in 2000 and 2005 while Madagascar and Malawi, shows lower value only for 2000 as their value for debt stock and RD is higher and by subtracting it from GDP it show less value for MGDP3 in 2000 as shown by the Table D.1in Appendix, Zimbabwe shows very

Figure 4 3 1 MGDP & GDP

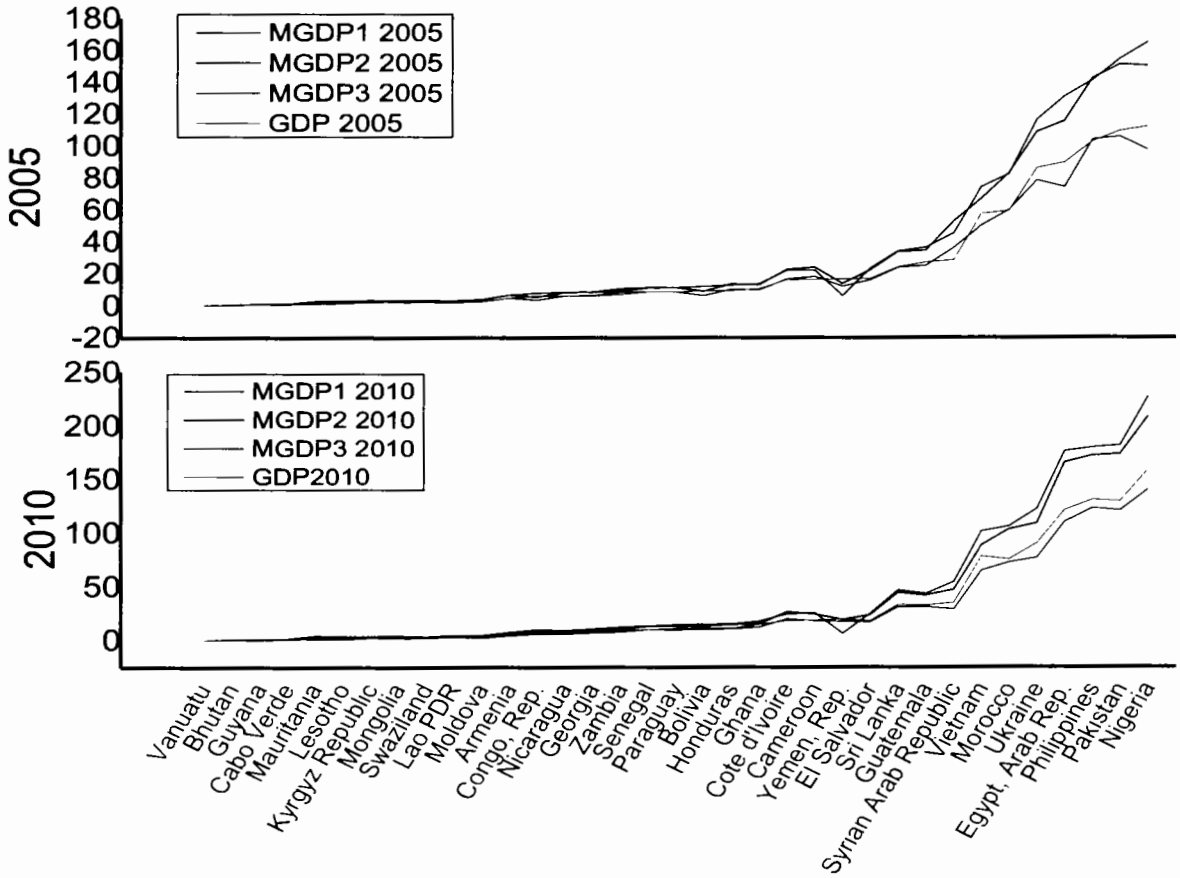


higher negative value of Debt Stock in 2000 therefore the value of MGDP3 2000 is very high for Zimbabwe. Kenya shows higher value for MGDP2 which is higher than the GDP in 2010, it means that their HP is high enough that after subtracting Debt stock and RD is show higher value rather lower than GDP. After Kenya, Rwanda shows the similar trends following Sierra Leone and Zimbabwe as it shows higher value for MGDP2 than GDP.

This section shows that in this income group, there are certain countries for which the Resource Depletion and Debt intakes supersede their GDP. Therefore showing a positive growth for countries on basis of GDP would be misleading.

4.3.2 Modified GDP Lower-Middle-income economies

Figure 4.3.2 MGDP & GDP



The results of Modified GDP for Lower-Middle income economies is shown in the Table D.2 in appendix and also shown from the Figure 4.3.2 for 2005 and 2010. As Figure 4.3.2 shows that the value for MGDP1 and MGDP2 is clearly high from GDP and MGDP3 for 2005 and 2010 as well. As Congo, Rep. Guyana, Lao, DPR. Mauritania, Show low values for MGDP2 and MGDP3 as their Debt stock and RD is higher it means that after subtracting from GDP and even in MGDP2 after adding up HP, theirs values show low results for 2000, 2005. But some countries like Ghana, Kyrgyz Republic, Nigeria, Syrian Arab, Rep. and Yemen Rep. Show negative results

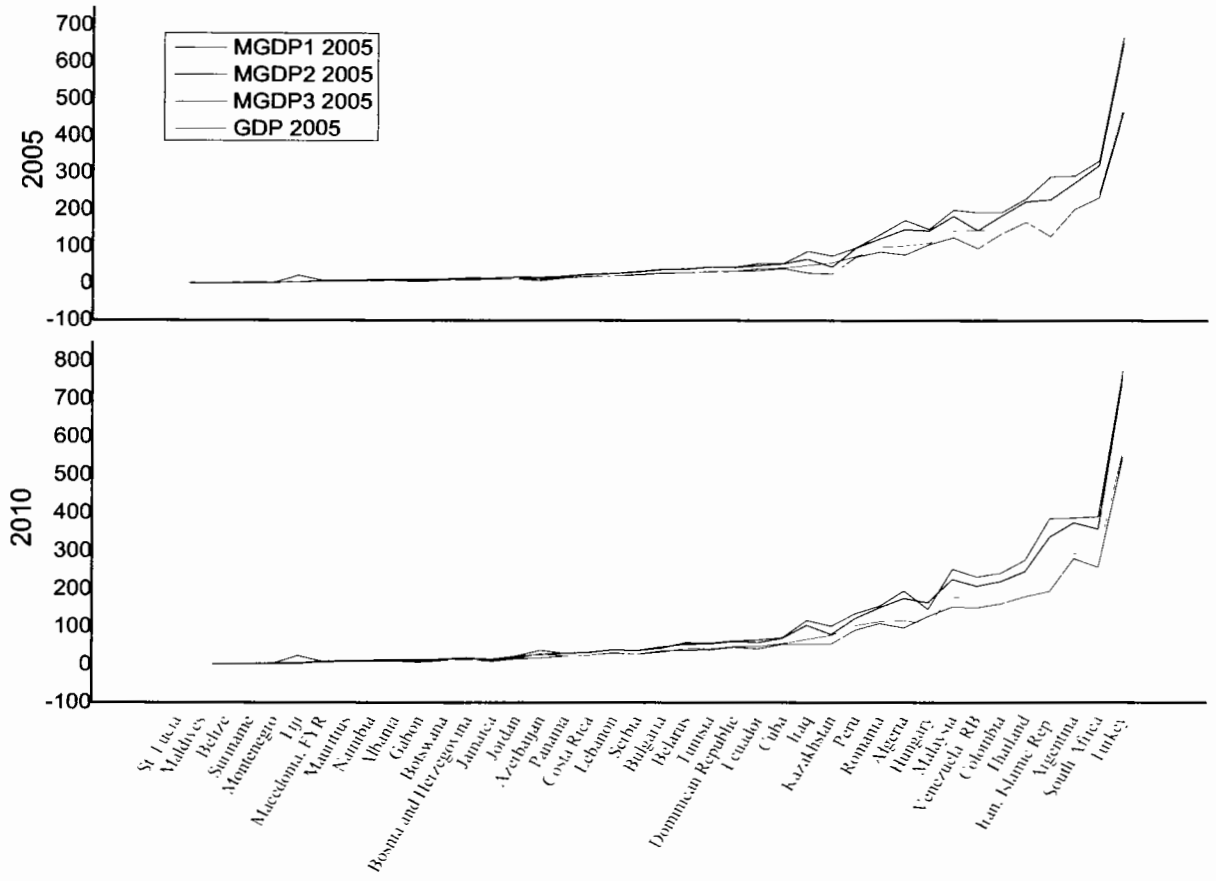
for MGDP3 only for 2000 and their as Debt stock is higher in 2000 from the rest of the years.

The results for the Lower-Middle income economies show that like the low income countries there are certain countries for which the Debt stock and Resource Depletion supersede the overall GDP of the economy. These countries include Indonesia, Mongolia, Philippines, Ukraine and Syrian Arab Rep. Furthermore, the results presented that the countries having low MGDP in 2005 have positive MGDP in 2010 which shows that the situation is improving and overall economic activity of these countries is having increasing trend. These countries include Egypt, Arab, Rep. Nigeria, Pakistan, Cameroon, Ghana, Honduras, Morocco, and Sri Lanka and from 2005 to onward these countries have higher values for Home production.

4.3.3 Modified GDP Upper-Middle-income economies

Table D.3 in Appendix and Figure 4.3.3 show results for Upper-Middle income economies. As Figure 4.3.3 shows that the value for MGDP1 and MGDP2 is clearly high from GDP and MGDP3 for 2005 and 2010. Algeria, Argentina, Botswana, China, Cuba, Iraq, Iran, Islamic Rep. Mexico, Namibia, South Africa shows higher results for MGDP1 due to higher value of HP adding up in GDP. It is also shown by the Table D.3 that the value of MGDP2 is also higher it means that the positive value of HP is higher than GDP which shows higher results even after subtracting the negative value of Debt stock and RD, therefore the effect of Debt Stock and RD is lesser than the effect of HP. These countries are HP abundant therefore they have higher values for HP. While Costa Rica, Dominican Rep. Suriname shows results lower in 2000 as MGDP3 is lower than GDP, and up to 2005

Figure 4 3 3 MGDP & GDP

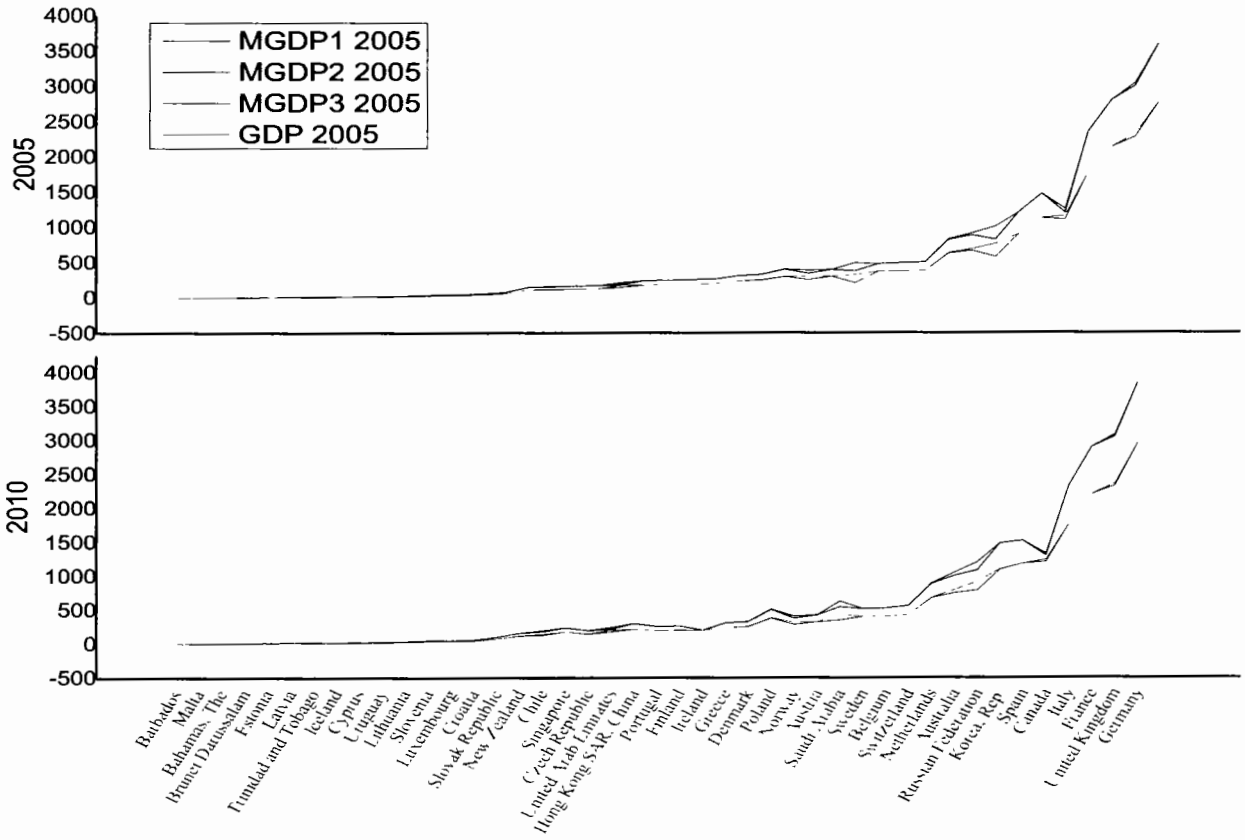


it shows results higher for MGDP1 and MGDP2 as well, it also means that their value for HP is higher and increases with the passage of time. Rest of the countries show lower result of MGDP2 and MGDP3 than GDP as the Debt Stock and RD values are high therefore by adding up high value of HP and Subtracting RD and Debt Stock the results shows lesser than value of actual GDP. Mexico, Brazil and China are excluded in Figure 4.3.3 due to very high value and invisibility of other countries data.

4.3.4 Modified GDP High-income economies

Table D.4 in Appendix D and Figure 4.3.4 show the results for GDP, MGDP1, MGDP2 and MGDP3 for High income economies. One of the important thing for high income countries is that the Debt statistics for this is not available so for MGDP2 and MDGP3 has only negative part contains RD, and we subtract only this part from GDP to gain MGDP2 and MGDP3. Therefore due to this reason the results show higher values for MGDP1 and MGDP2 from actual GDP as after adding up the value

Figure 4.3.4 MGDP & GDP



of HP and subtracting the value of RD. Belgium from the group show almost a similar results for MGDP1, MGDP2 and for MGDP3 and Actual GDP as the amount of RD is very low so by subtracting it from GDP (as MGDP3) it shows similar value also with

adding up HP for MGDP1 and MGDP2. We did not display the results for United State and Japan in the Figure 4.3.4 due to very high values and resultantly does no show the clear picture of others countries.

This section shows that the results for MGDP1 and MGDP2 are higher than the GDP and MGDP3 due to non-availability of Debt stock for this classification and higher values of HP. Therefore showing a positive growth for these countries on the bases of GDP would be misleading.

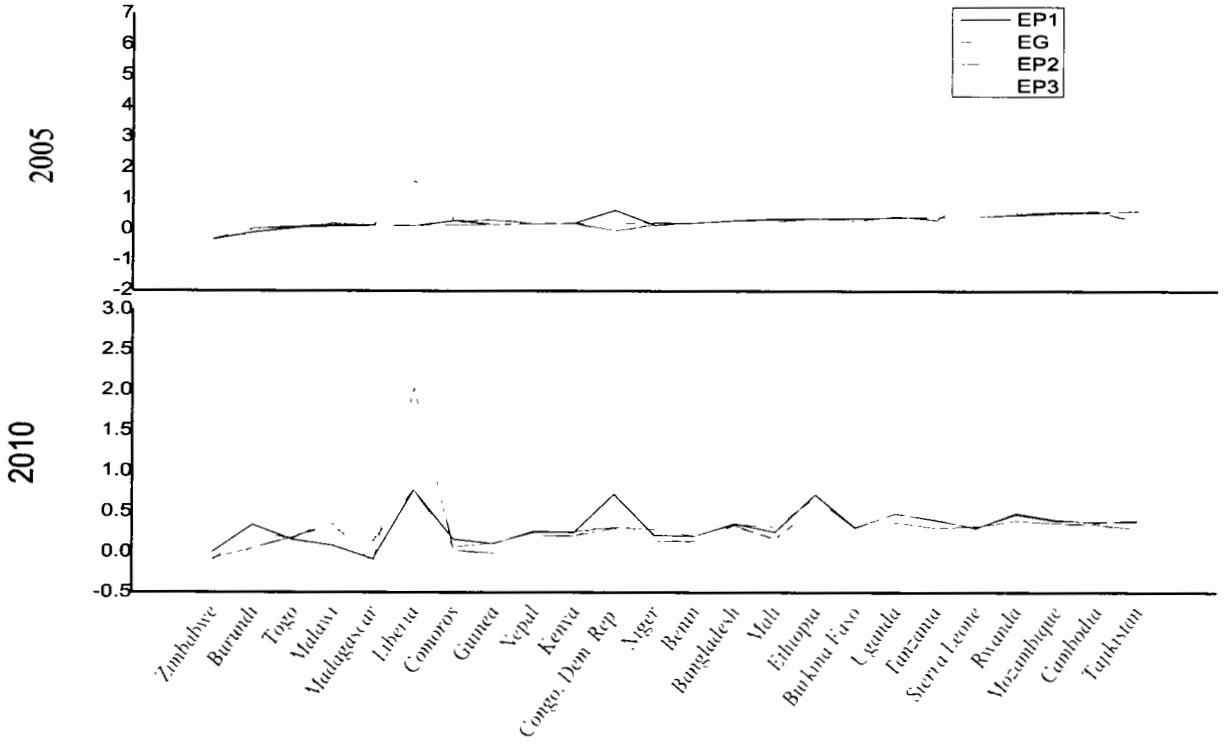
4.4 Economic Performance and Economic Growth

As discussed in Chapter 3.1.3, the term Economic growth is taken in its used meaning i.e. growth in GDP, whereas Economic Performance is used to refer growth in Modified measures of GDP. This Section 4.4 summarized the results for EG, EP1, EP2 and EP3 following the methodology given in Section 3.1.3. We further divided the results into four Sections, Section 4.4.1 contains results for Low income economies, Section 4.4.2 for Lower-Middle economies, Section 4.4.3 for Upper-Middle economies and in last Section 4.4.4 we summarized the results for High income economies group. The data for all of the income economies is sort at EG2005 so that the relationship between EG and EP is clearly examine.

4.4.1 EP1, EP2, EP3 and EG in Low-income economies

Both EG and EP are calculated for five years lag for 2005 and 2010. Therefore the results show at five year EP or EG. For 2005 the base year is 2000 and for 2010 the base year is 2005. Table E.1 in Appendix E and Figure 4.4.1 show the results for EG, EP1, EP2 and EP3 for Low income economies. The results show that the growth rate in EP3 is higher than EG, EP1, EP2; it means that the lag difference in EP3 is higher.

Figure 4.4.1 EP & EG



And the growth is higher in EP3. For most of the countries EP2 and EP3 are higher with the value of 0.15 or 0.2 points, like Burundi, Congo, Dem. Rep. Liberia, Rwanda and Sierra Leone and many others it is also shown by the Figure 4.4.1. Although the value shows that the MGDP2 and MGDP3 values are lesser than the actual values of GDP but the growth shows that the Economic Performance are higher in EP2 and EP3 when we subtract RD and Debt stock. Only Zimbabwe shows the negative growth in EG, EP1, EP2, and EP3 for 2005 and 2010. It is also shows that the Debt stock and RD is low in this Low income group so the growth rate is higher in Economic Performance as shown in the Table E.1 in appendix. This means that new intake of Debt stock and RD are smaller than the growth of GDP. As shown from the figure that some of the countries have shown negative growth in EP3 e.g Congo Dem. Rep.

Guinea, Madagascar, indicated that conventional growth results may mislead when it is used for country's welfare if the Debt stock and RD are there.

The Table 4.4.1 shows the correlation between EG and EP for Low income economies. The correlation between EP and EG at 2005 shows it is decreasing from EP1 to EP3 when the debt stock and RD is taken into account. Same relationship is repeated in 2010. Relationship is same as presented in other groups.

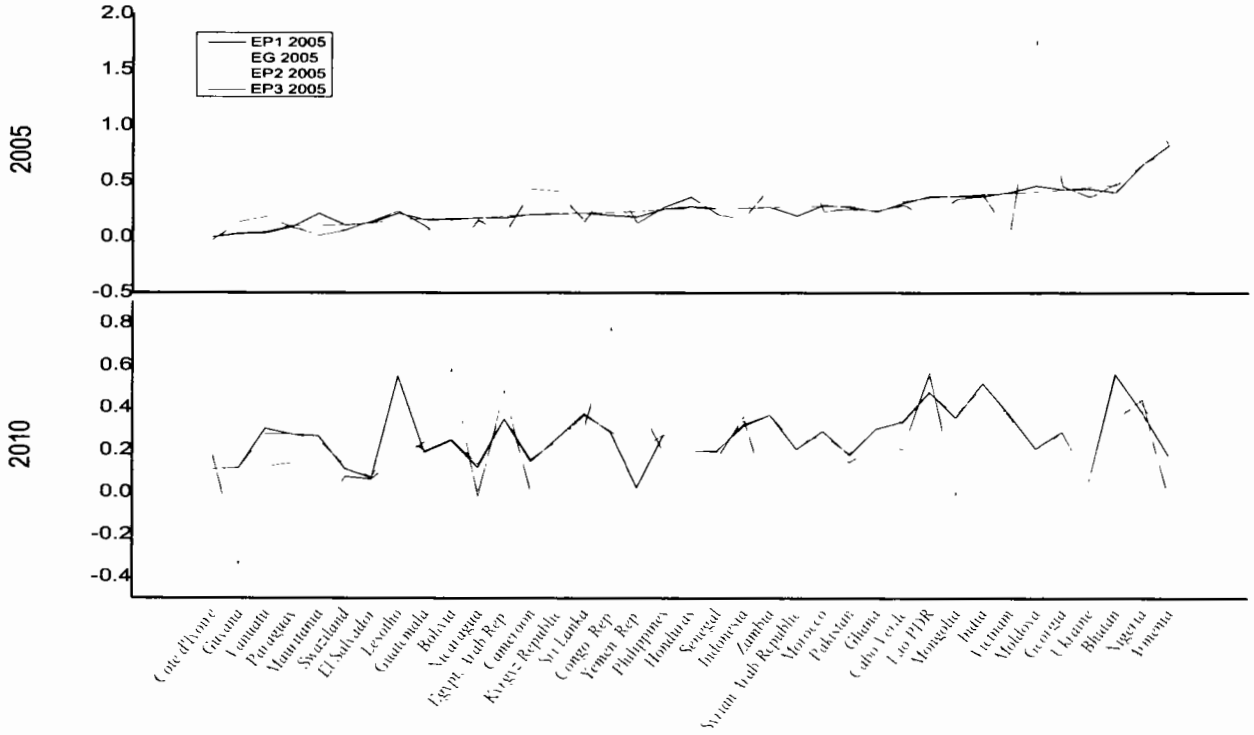
Table 4.4.1 correlation for EP and EG for Low income economies

	EG 2005	*EP1 2005*	*EP2 2005*	*EP3 2005*	*EG2010*	*EP1 2010*	*EP2 2010*	*EP3 2010*
EG 2005	1							
EP1 2005	0.898872	1						
EP2 2005	1	0.898872	1					
EP3 2005	0.529378	0.439526	0.529378	1				
EG2010	0.527175	0.4655	0.527175	0.694418	1			
EP1 2010	0.44464	0.518719	0.44464	0.512348	0.809216	1		
EP2 2010	0.135176	0.127285	0.135176	0.719398	0.794344	0.696609	1	
EP3 2010	0.054691	0.057854	0.054691	0.682437	0.729924	0.632117	0.980966	1

4.4.2 EP1, EP2, EP3 and EG in Lower-Middle-income economies

The countries in this group show a mix trend as in other results shown by the group it is also shown in the Table E.2 and Figure 4.4.2. Here, Table E.2 in appendix shows that Bolivia, Cote d'Ivoire, Guyana, Moldova, Mauritania, Syrian Arab, Republic and Zambia shows negative results for EP in 2005 but shows positive values for 2010. Most of the countries also show a higher and positive response for EP2 and EP3 for 2005 and also for 2010, like Cameroon, Congo, Rep. Honduras and Philippines. It means their Economic Performance is growing at higher rate than their traditional growth rate. It also means that the rate of change is higher in EP or Economic Performance than Economic Growth or Growth rate. Figure 4.4.2 shows higher fluctuation in the rate of Growth for 2005 but it is somehow smooth in 2010.

Figure 4 4 2 EP & EG



Georgia show higher negative value for 2005 while Bolivia shows higher positive value of EP3 in 2010.

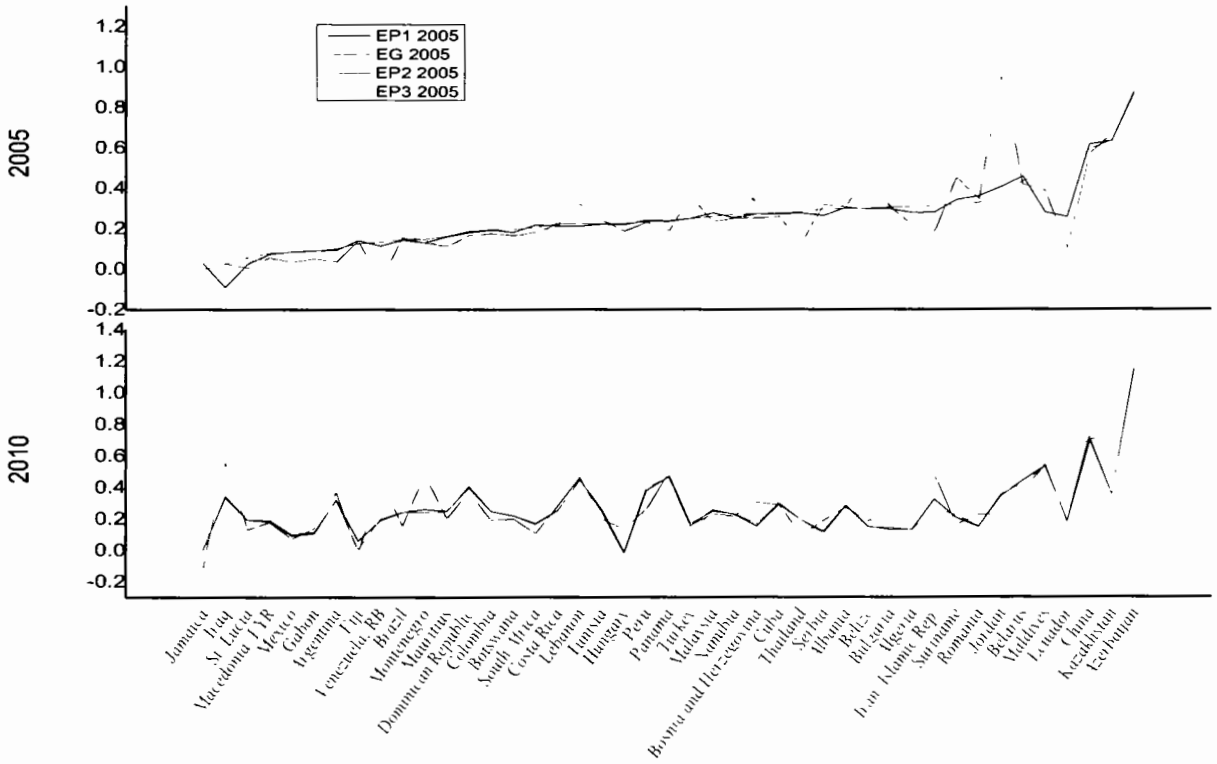
The Table 4.4.2 shows the correlation between EG and EP for Lower-Middle income economies. The correlation between EP and EG of 2005, show that it is decreasing from EP1 to EP3 when the debt stock and RD is taken into account. Same relationship is repeated in 2010. Relationship is same as presented in other groups.

Table 4.4.2 correlation for EP and EG for Lower-Middle income economies

	EG 2005	EP1 2005	EP2 2005	EP3 2005	EG 2010	EP1 2010	EP2 2010	EP3 2010
EG 2005	1							
EP1 2005	0.979366	1						
EP2 2005	0.72046	0.730477	1					
EP3 2005	0.601917	0.596013	0.976234	1				
EG 2010	0.376283	0.338698	0.103844	0.07316	1			
EP1 2010	0.251322	0.264012	0.088317	0.057601	0.9008	1		
EP2 2010	0.148962	0.108915	-0.1394	-0.15482	0.604538	0.508189	1	
EP3 2010	0.120833	0.068566	-0.16279	-0.17234	0.499398	0.388999	0.982941	1

4.4.3. EP1, EP2, EP3 and EG in Upper-Middle-income economies

Figure 4.4.3 EP & EG



As Table E.3 shows the countries like Algeria, Azerbaijan, Belize, Gabon, Lebanon, Montenegro, Panama, and Turkey shows higher growth in EP3 while some of the countries negative results in EP2 and EP3, for example, Fiji, Hungry, Iraq Jamaica and Venezuela, RB. As display in Figure 4.4.3 Venezuela, RB shows lower values in EP3 than all other countries in 2005 and Jamaica in EP3 for 2010. Negative growth for both of these countries indicated that there is a share of Debt stock and RD. Malaysia shows almost similar values in 2005 but show negative values of EP3 and has a positive value for EP2 in 2010. Other countries have almost similar trend for EP in 2005 and 2010 respectively.

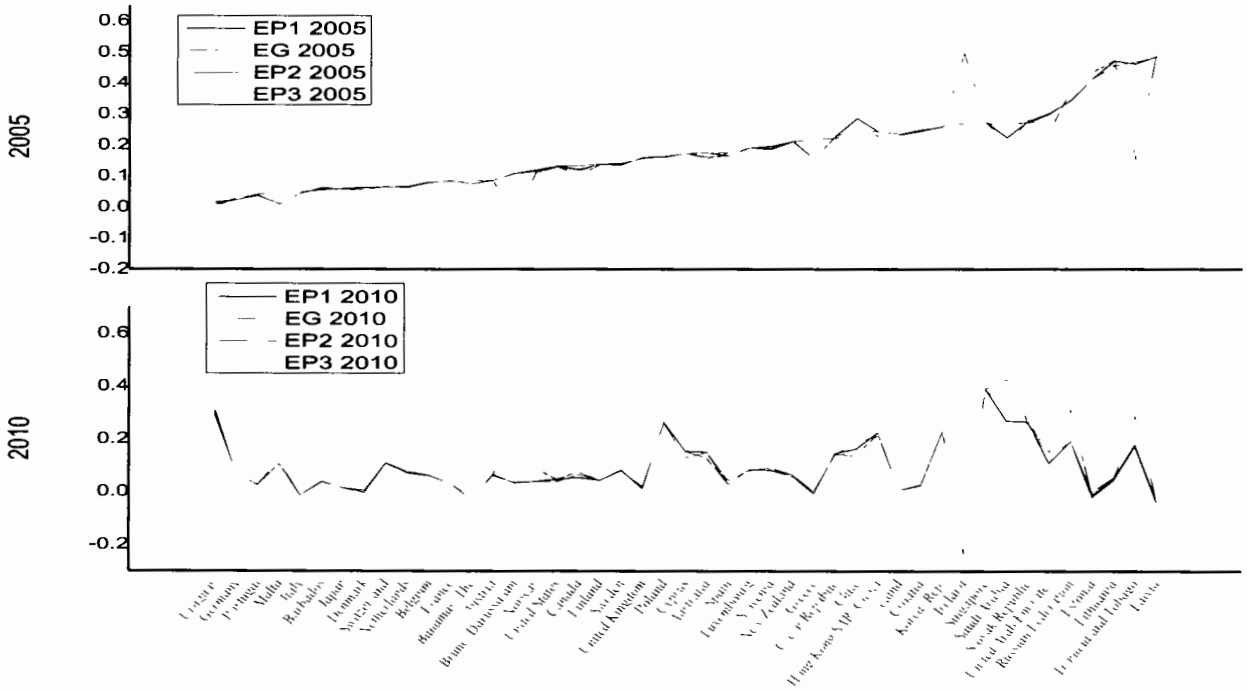
The Table 4.4.3 shows the correlation between EG and EP for Upper-Middle income economies. The correlation between EP and EG at 2005 shows that it is decreasing from EP1 to EP3 when the debt stock and RD is taken into account. Same relationship is repeated in 2010. Relationship is same as presented in other groups.

Table 4.4.3 correlation for EP and EG for Upper-Middle income economies

	EG 2005	EP12005	EP2 2005	EP3 2005	EG 2010	EP1 2010	EP2 2010	EP3 2010
EG 2005	1							
EP12005	0.953173	1						
EP2 2005	0.80599	0.867638	1					
EP3 2005	0.650368	0.673982	0.910412	1				
EG 2010	0.720007	0.635999	0.553575	0.529699	1			
EP1 2010	0.676813	0.656591	0.60151	0.578013	0.949545	1		
EP2 2010	0.68305	0.63622	0.539097	0.563055	0.834442	0.885027	1	
EP3 2010	0.599748	0.540321	0.460802	0.547442	0.721574	0.76993	0.97106	1

4.4.4. EP1, EP2, EP3 and EG in High-income economies

Figure 4.4.4 EP & EG



The Debt stock for High income group is not available. Therefore the growth in Economic Performance is only affected by the HP and RD. Although these

countries have higher HP and almost they have 30% to 40% of HP to GDP ratio but the growth rate shows almost similar results with and without HP. Bahamas, The and Latvia are the only two countries lie in this high income group which shows negative value for EG, EP1, EP2 and EP3 for 2010 while other countries show a mix trend. Some of the countries show similar values for EG, EP1, EP2 and EP3, for example, Austria, Barbados, Croatia, Belgium, Denmark, Finland, France, Korea, New Zealand, Poland, Portugal, Singapore, United Kingdom and United State. Malta shows very high value for EP3 in 2005 while Latvia shows very low value of EP3 in 2010 almost lower than -0.2, as shown in the Figure 4.4.4.

Table 4.4.4 correlation for EP and EG for High income economies

	EG 2005	*EP1 2005*	*EP2 2005*	*EP3 2005*	*EG 2010*	*EP1 2010*	*EP2 2010*	*EP3 2010*
EG 2005	1							
EP1 2005	0.956089	1						
EP2 2005	0.863758	0.921002	1					
EP3 2005	0.811959	0.788723	0.938724	1				
EG 2010	0.158323	0.107128	0.055769	0.083384	1			
EP1 2010	0.087291	-0.03215	-0.07759	0.022525	0.944915	1		
EP2 2010	0.158595	0.023072	-0.09546	-0.0227	0.896279	0.93623	1	
EP3 2010	0.240152	0.16037	0.00344	-0.00142	0.846668	0.780132	0.9252	1

The Table 4.4.4 shows the correlation between EG and EP for High income economies. The correlation between EP and EG at 2005 shows that it is decreasing from EP1 to EP3 when the debt stock and RD is taken into account. Same relationship is repeated in 2010. Relationship is same as presented in other groups.

4.5 Bias

Following the methodology given in Section 3.1.4 we calculate the bias in GDP relative to HP. In this Section 4.5 we summarized the results for Bias. It means that how much of our economic measures is bias against for the non-market activities especially HP. As Stiglitz et al (2009) report says that we are overstated the values if we shifted non-market activities to market activities. It means that before that services provided at home are now shifted to market economy. And by adding these values in national accounts we just overestimated the services provided a home for example food production at home now shifted to restaurant and people want to eat prepared food at market etc. But the value for this noneconomic portion is the services provided the women at home rather than market and it is not included in the market as well and conventional economic system does not valuing the services what she provided at home and also is neglecting their work at home. We calculate the bias in the growth rate of GDP and the growth in Economic Performance 1.

$$Bias = \sqrt{(EG - EP1)^2} \tag{10}$$

The organization of this Section is as follow; Section 4.5.1 contains results for Bias for Low income economies, Section 4.5.2 for Lower-Middle income economies, Section 4.5.3 for Upper-Middle income economies and in last Section the results for Bias for High income economies are discussed.

4.5.1 Bias against HP in GDP in Low-income economies

The results for bias show that up to which percent the GDP is bias for these countries. As the above Table 4.5.1 show the statistics for the bias for Low income countries those are having $1045 or less income. As we discussed above in result Section 4.1

Table 4.5.1 Bias at 2005 & 2010

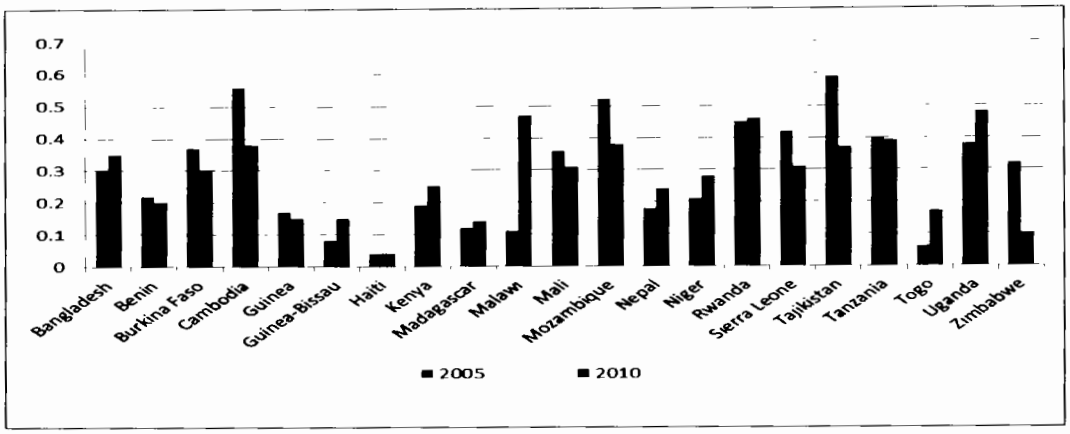
Country Name	Bias 2005	Bias 2010	Country Name	Bias 2005	Bias 2010
Bangladesh	30	35	Mali	36	31
Benin	22	20	Mozambique	52	38
Burkina Faso	37	30	Nepal	18	24
Cambodia	56	38	Niger	21	28
Ethiopia	36	67	Rwanda	45	46
Guinea	17	15	Sierra Leone	42	31
Guinea-Bissau	08	15	Tajikistan	59	37
Haiti	04	04	Tanzania	40	39
Kenya	19	25	Togo	06	17
Liberia	12	76	Uganda	38	48
Madagascar	12	14	Zimbabwe	32	10
Malawi	11	47			

The data is in the percentage form

that HP for these countries is high because almost 50 % of their populations are female and 25 to 45 percent of their working age female population is outside the labor market and provide home production. Now the question is that how much of the GDP is biased for that Home Production? The above Table show that Tajikistan with higher result of bias 59% while following Cambodia, Mozambique, Rwanda and Sierra Leone with values of 56%, 52%, 45% and 42% respectively for 2005. While Bangladesh Burkina Faso, Ethiopia, Mali, Uganda and Zimbabwe's bias values lies among the values 0.3 to 0.4 with respect to GDP growth or EG. They attain the values of 30%, 36%, 36%, 30%, and 32% respectively for 2005. Overall result show an increasing trend in result for bias except two to three countries like Benin, Guinea, Mozambique and Tajikistan.

It is shown by the Figure 4.5.1 Tajikistan, Cambodia, Mozambique, have the highest values for bias in 2005 but show a sharp decrease for 2010, it means that growth gap is lesser than 2005. On the other side Figure 4.5.1 shows for some countries which have an increase in 2010 for example Bangladesh, Guinea-Bissau, Kenya, Malawi, Niger, Togo and Uganda. Malawi has a highest rate of bias in 2010, a

Figure 4.5.1 Bias at 2005 & 2010



sharp increase, but has almost the same value as Uganda has in 2010. Haiti shows very low rate of bias in GDP growth and maintain a constant rate for 2005 and after five years in 2010. All of the countries which shown higher values for bias in 2010 are the countries which have increasing trend in their HP values and also have an increasing HP percentage to GDP over time.

4.5.2 Bias against HP in GDP in Lower-Middle-income economies

We can say that a country with bias value shows that the growth rate calculated by GDP may mislead us if we use them for measuring welfare across countries. The economic production may present a good picture of a country but still the non-economic activities have also contributed in the welfare of a country. HP is one of the non-market measures which may have a great positive value but cannot include in the measurement of welfare. Because GDP is an economic measure and used to calculate economic activities. Mostly countries lie in this group as developing countries and have values for bias is less than 40%.

As the above Table 4.5.2 and Figure 4.5.2 shows that Armenia in the Lower-Middle countries has a highest rate of bias in 2005 but has a sharp decline in 2010 and attains the lower value of 21%. Bhutan on the other side has highest maximum value

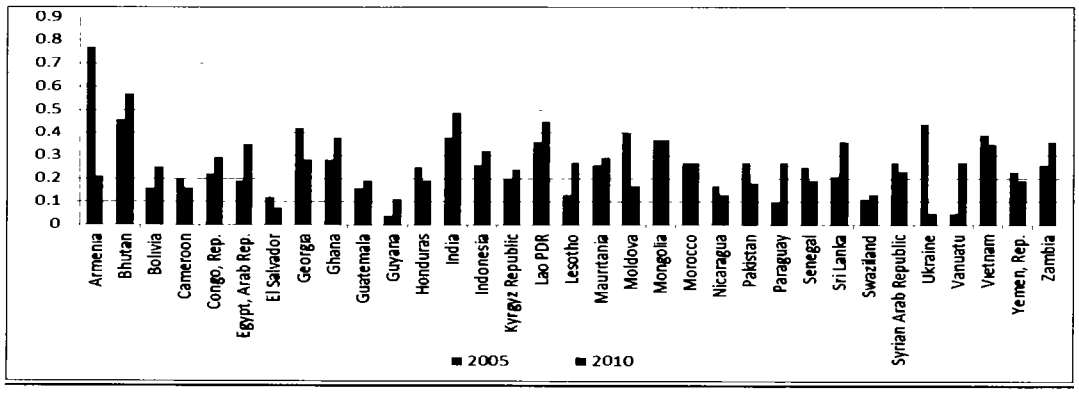
Table 4.5.2 Bias at 2005 & 2010

Country Name	Bias2005	Bias2010	Country Name	Bias 2005	Bias2010
Armenia	77	21	Mauritania	26	29
Bhutan	46	57	Moldova	40	17
Bolivia	16	25	Mongolia	37	37
Cameroon	20	16	Morocco	27	27
Congo, Rep.	22	29	Nicaragua	17	13
Egypt, Arab Rep.	19	35	Nigeria	65	41
El Salvador	12	07	Pakistan	27	18
Georgia	42	28	Paraguay	10	27
Ghana	28	38	Senegal	25	19
Guatemala	16	19	Sri Lanka	21	36
Guyana	04	11	Swaziland	11	13
Honduras	25	19	Syrian Arab Republic	27	23
India	38	49	Ukraine	44	05
Indonesia	26	32	Vanuatu	05	27
Kyrgyz Republic	20	24	Vietnam	39	35
Lao PDR	36	45	Yemen, Rep.	23	19
Lesotho	13	27	Zambia	26	36

The data is in the percentage form

for the bias but an increasing value from 46% to 57%. After Armenia Ukraine has the highest value for 2005 with decreasing in 2010 following Moldova, Georgia, Pakistan, Senegal, Vietnam and Yemen while Mongolia and Morocco have similar values for 2005 and 2010. After Bhutan India has increasing trend in this bias as their increasing HP must widen the gap between EP so results shows increasing bias for 2010. Bolivia, Congo, Rep. Egypt, Arab Rep. Ghana, Guatemala, Guyana, Indonesia, Kyrgyz Republic, Lao PDR, Paraguay, Sri Lanka, and Zambia have shown higher value for 2010 and it must be due to their increasing value for HP overtime. It means we are neglecting up to 40% values in the economic growth or EG.

Figure 4.5.2 Bias at 2005 & 2010



4.5.3 Bias against HP in GDP in Upper-Middle-income economies

Table 4.5.3 Bias at 2005 & 2010

Country Name	Bias 2005	Bias 2010	Country Name	Bias 2005	Bias 2010
Albania	30	28	Jordan	36	35
Algeria	31	13	Kazakhstan	63	35
Argentina	10	31	Lebanon	22	44
Azerbaijan	87	13	Macedonia, FYR	08	19
Belarus	43	42	Malaysia	26	24
Belize	30	14	Maldives	46	53
Bosnia and Herzegovina	27	17	Mauritius	16	24
Botswana	19	22	Mexico	08	10
Brazil	15	24	Montenegro	15	24
Bulgaria	30	14	Namibia	27	23
China	59	69	Panama	23	46
Colombia	19	25	Peru	23	39
Costa Rica	22	25	Romania	32	15
Cuba	27	30	Serbia	29	10
Dominican Republic	19	40	South Africa	20	17
Ecuador	18	40	St. Lucia	06	19
Gabon	09	12	Suriname	32	22
Hungary	22	01	Thailand	28	19
Iran, Islamic Rep.	31	26	Tunisia	22	26
Iraq	03	34	Turkey	25	17
Jamaica	00	00	Venezuela, RB	13	20

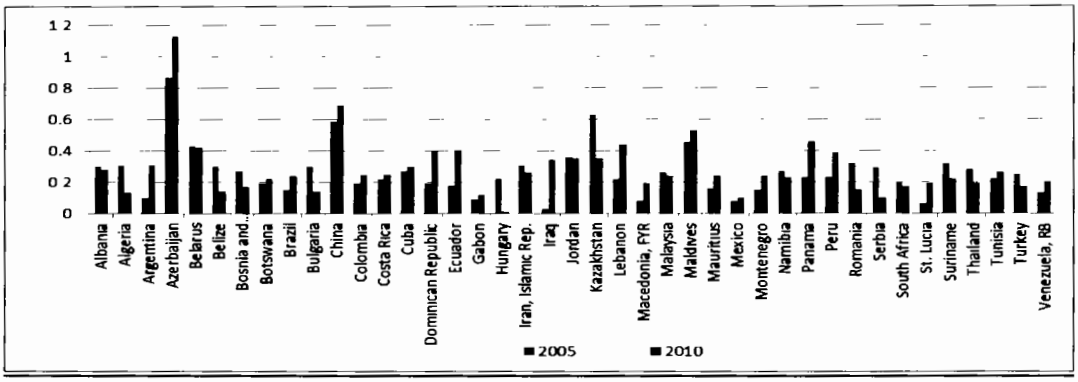
The data is in the percentage form

As shown in the Table 4.5.3 and in Figure 4.5.3 Azerbaijan has surprisingly very high value as it shows 87% for 2005 and 1.13 for 2010. China and Kazakhstan have the value up to 60%, it means in growth 60% bias lie for these countries. And maximum countries have value higher than 20% and lessor than 40% and also these countries show higher bias trend in 2010. Argentina, Dominican Republic, Ecuador, Lebanon, Panama, Peru, St. Lucia, Venezuela RB show almost double results in 2010 with respect to 2005.

Algeria, Belize, Bosnia and Herzegovina, Bulgaria, Iran, Islamic Rep. Jordan, Malaysia, Namibia, Romania, Serbia, South Africa, Suriname, Thailand and Turkey results showing less bias for 2010 irrespective of their higher values for HP. Country like Hungry shows 22% for 2005 but surprisingly show very low result 1%in 2010. As expected if their growth rate lies among 5 to 10 then they neglect only 0 to 1

percent portion of their non-economic activities. This group results show very high and also show very low values as compare to the other groups. As Azerbaijan with higher rate and Iraq and hungry with very low rate differentiate this group from others.

Figure 4.5.3 Bias at 2005 & 2010



4.5.4. Bias against HP in GDP in High-income economies

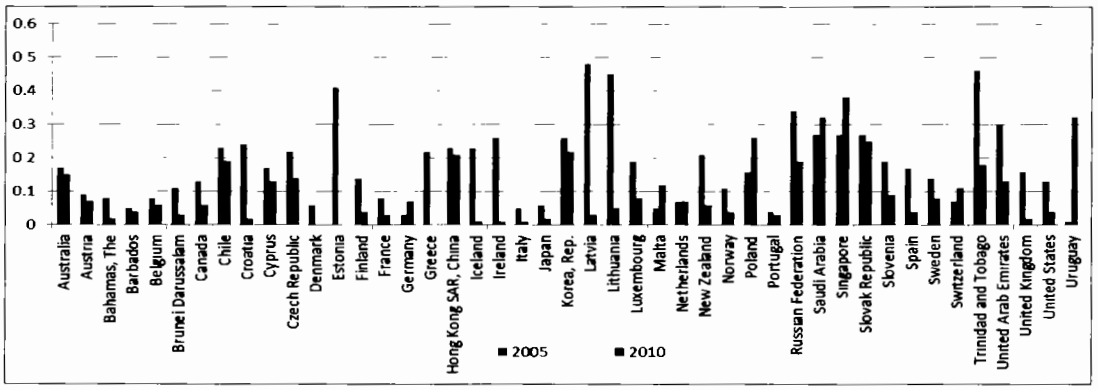
Table 4.5.4 Bias at 2005 & 2010

Country Name	Bias2005	Bias2010	Country Name	Bias2005	Bias2010
Australia	17	15	Latvia	48	03
Austria	09	07	Lithuania	45	05
Bahamas, The	08	02	Luxembourg	19	08
Barbados	05	04	Malta	05	12
Belgium	08	06	Netherlands	07	07
Brunei Darussalam	11	03	New Zealand	21	06
Canada	13	06	Norway	11	04
Chile	23	19	Poland	16	26
Croatia	24	02	Portugal	04	03
Cyprus	17	13	Russian Federation	34	19
Czech Republic	22	14	Saudi Arabia	27	32
Denmark	06	00	Singapore	27	38
Estonia	41	00	Slovak Republic	27	25
Finland	14	04	Slovenia	19	09
France	08	03	Spain	17	04
Germany	03	07	Sweden	14	08
Greece	22	00	Switzerland	07	11
Hong Kong SAR, China	23	21	Trinidad and Tobago	46	18
Iceland	23	01	United Arab Emirates	30	13
Ireland	26	01	United Kingdom	16	02
Italy	05	01	United States	13	04
Japan	06	02	Uruguay	01	32
Korea, Rep.	26	22			

The data is in the percentage form

The results for bias show that all countries have less than 0.5 values as shown from the Table 4.5.4. And it also shows from Figure 4.5.4 that 5 countries in the range of 45 show increasing results. And maximum countries like Croatia, Denmark, Estonia, Finland, Greece, Iceland, Latvia, Lithuania, New Zealand, Trinidad and Tobago, United Kingdom and United State show high values for 2005 but have sharp decline and show minimum result for 2010. Portugal, Italy, japan, and Barbados have very low value for whole period. Poland, Saudi Arabia, and Singapore, has increasing bias for 2010 and Uruguay has higher bias for 2010 as it has very low value of bias in 2005.

Figure 4.5.4 Bias at 2005 & 2010



Chapter 5

Data Result-II

Relationship between Economic Growth

and Economic Performance

The results for descriptive statistics are divided into four main Sections. In 5.1 the discussion contains for Low-Income-Economies group, proceeding Sections are 5.2 for Lower-Middle-Economies, 5.3 for Upper-Middle-Economies and in the last Section 5.4 we discuss the descriptive statistics for High-Income-Economies.

Descriptive statistics analysis of numerical analysis of dependent and independent variables, it comprises large number of data set of Mean, Median, Maximum, minimum, Jarque-Bera and its P-value etc. are to be examined.

5.1.1 EP in Low-income economies

Table 5.1.1. Descriptive statistics for EPs, & EG for Low Income Economies.

	EG_2010	EG_2005	EP1_2005	EP1_2010	EP22005	EP2_2010	EP3_2005	EP3_2010
Mean	0.31	0.26	0.27	0.32	0.31	0.30	0.42	0.31
Median	0.31	0.22	0.29	0.30	0.28	0.25	0.22	0.21
Maximum	0.77	0.60	0.62	0.77	1.58	2.04	6.08	2.63
Minimum	-0.10	-0.32	-0.33	-0.08	-0.96	-0.13	-0.97	-0.18
Std. Dev.	0.18	0.20	0.22	0.21	0.45	0.41	1.26	0.52
Skewness	0.36	-0.61	-0.67	0.44	0.37	3.38	3.99	3.95
Kurtosis	3.96	3.89	3.57	2.95	6.62	15.45	18.94	18.51
Jarque-Bera	1.45	2.28	2.13	0.78	13.63	200.64	317.94	302.86
Probability	0.49	0.32	0.35	0.68	0.00	0.00	0.00	0.00
Sum	7.56	6.17	6.56	7.62	7.37	7.12	9.97	7.35
Sum Sq. Dev.	0.77	0.95	1.15	1.05	4.62	3.79	36.27	6.18
Observations	24	24	24	24	24	24	24	24

The Table 5.1.1 analyze the results for EP and EG. It is show that the Mean value is lower than Median for EP1_2005 (Economic Performance) for example EP1_2005

(0.27<0.29). It means that the distribution in Economic Performance 1 is not normal and negatively skewed, also showed by the results for skewness. While for EG Mean is higher than the Median i.e EG_2010 (0.26>0.22) therefore the distribution for these two variables are positively skewed but in EG_2010 it shows same values for mean and median which show normal distribution. EP2_2005 and EP3_2010 show higher maximum value indicated that the growth in EP2_2005 and EP3_2010 is very high and significant that it attains the highest value while on the other hand the minimum value for all these variables has negative values except EG_2010. Jarque-bera test for normality has shown higher than 0.00 values for these variables, it means that the distribution is not normal and negative skewed. It shows that the volatility is higher in the growth of EP and EG.

5.1.2 EP in Lower-middle-income economies

Table 5.1.2. Descriptive statistics for Eps, & EG for Lower-Middle- Income Economies

	EG_2005	EG_2010	EP1_2005	EP1_2010	EP22005	EP2_2010	EP3_2005	EP3_2010
Mean	0.27	0.27	0.26	0.26	0.29	0.19	0.32	0.17
Median	0.26	0.27	0.23	0.27	0.23	0.17	0.23	0.15
Maximum	0.78	0.57	0.82	0.56	1.29	0.60	1.77	0.78
Minimum	0.00	0.05	0.00	0.02	-0.07	-0.24	-0.13	-0.34
Std. Dev.	0.16	0.12	0.16	0.13	0.27	0.19	0.36	0.24
Skewness	1.10	0.45	1.29	0.36	1.95	0.20	2.23	0.31
Kurtosis	4.81	3.01	5.60	2.77	7.31	2.68	8.68	3.11
Jarque-Bera	12.48	1.27	20.68	0.87	52.00	0.40	80.43	0.60
Probability	0.00	0.53	0.00	0.65	0.00	0.82	0.00	0.74
Sum	9.81	9.81	9.73	9.77	10.72	7.06	11.97	6.47
Sum Sq. Dev.	0.92	0.50	0.96	0.63	2.64	1.27	4.78	2.00
Observations	37	37	37	37	37	37	37	37

Descriptive statistics analysis contains Mean, Median, Maximum, and Minimum. The means is higher than median for all the variables except for EP1_2010 with high median (0.26<0.27). It show that the skewness for these variables. Skewness results also show positive value for all these variables. The distribution for EG_2005,

EG_2010, EP1_2005, and EP1_2010and EP3_2010 are positively skewed. Results for EP2 indicated that the country have negative growth rate if the Debt stock and RD is taken into account. Therefore showing a positive growth for countries on basis of GDP would be misleading. P-values of Jarque-Bera test for normality shows that distributions are not normal and the growth rate in these countries is varying and the data has high rate of volatility. As it has high value in some countries while some other countries it has low rate of growth in Economic Performance and Economic Growth in the time span of 13 years.

5.1.3 EP in Upper-middle-income economies

Table 5.1.3.Descriptive statistics for EPs & EG for Upper-Middle-Income Economies

	EG_2010	EG_2005	EP1_2005	EP1_2010	EP22005	EP2_2010	EP3_2005	EP3_2010
Mean	0.28	0.26	0.25	0.27	0.26	0.29	0.28	0.31
Median	0.24	0.23	0.24	0.24	0.22	0.22	0.21	0.22
Maximum	1.14	0.88	0.87	1.15	1.02	1.24	1.16	1.27
Minimum	-0.01	0.00	-0.09	-0.02	-0.05	-0.11	-0.10	-0.15
Std. Dev.	0.20	0.17	0.17	0.20	0.22	0.23	0.26	0.26
Skewness	2.06	1.48	1.45	2.35	1.76	1.88	1.83	1.69
Kurtosis	9.42	6.27	6.76	10.99	6.56	8.41	6.78	6.50
Jarque-Bera	104.40	34.79	40.46	154.01	44.86	77.88	49.63	42.49
Probability	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sum	11.89	11.28	10.68	11.52	11.16	12.51	12.06	13.39
Sum Sq. Dev.	1.68	1.17	1.17	1.62	2.05	2.19	2.80	2.91
Observations	43	43	43	43	43	43	43	43

Means of all variables is higher than Median for example EG_2005 (0.26>0.23) and EG_2010 (0.28>0.24), EP1_2005 (0.25>0.24) and EP2_2010 (0.26>0.22) as shown in Table 5.1.3, it shows that they are not normally distributed but has positive skewed. P-values of the Jarque-Bera normality test shows values of 0.00 for all these variables, it indicate the volatility in the data that shows mostly countries have low rate of growth while rest of the countries have high values in there group rate in Economic Performance. It is also because of the conversion of non-market activities to the

market activities and high value of Debt stock and RD that the growth results is not normal. It also indicates that the conventional growth may mislead us when there is Debt stock and resource depletion.

5.1.4 EP in High-income economies

Table 5.1.4. Descriptive statistics for EPs & EG for High- Income Economies

	EG_2005	EG_2010	EP1_2005	EP1_2010	EP22005	EP2_2010	EP3_2005	EP3_2010
Mean	0.18	0.10	0.19	0.09	0.17	0.10	0.17	0.12
Median	0.17	0.07	0.16	0.06	0.16	0.07	0.16	0.08
Maximum	0.48	0.38	0.50	0.39	0.51	0.42	0.51	0.64
Minimum	0.01	-0.03	0.01	-0.23	-0.03	-0.24	-0.10	-0.03
Std. Dev.	0.12	0.10	0.13	0.11	0.13	0.12	0.13	0.14
Skewness	0.84	1.14	0.89	0.35	0,97	0.50	0.73	1.69
Kurtosis	3.21	3.58	3.10	4.26	3.58	3.84	3.70	6.04
Jarque-Bera	5.38	10.30	6.01	3.87	7.73	3.24	4.92	38.63
Probability	0.07	0.01	0.05	0.14	0.02	0.20	0.09	0.00
Sum	8.22	4.33	8.35	3.94	7.83	4.56	7.48	5.38
Sum Sq. Dev.	0.63	0.44	0.75	0.53	0.74	0.68	0.69	0.84
Observations	45	45	45	45	45	45	45	45

Table 5.1.4 shows the results for descriptive statistics for EG and EP for High income economies. The mean values of these variables are very high as compare to the median indicate that there is skewness in the distribution of these growth variables. Skewness values are also positive which show that the distribution in growth of Economic Performance and Economic growth is not normal but show positively Skewed distribution. Maximum values have high positive for EP2_2005 and EP3_2005 with the same value of 0.51 and minimum values show negative value for these variables. P-values of Jarque-Bera Test for normality indicate that Growth rate for countries have volatility in values.

Relationship between Economic Performance and Economic Growth

Regression Results

Following the methodology given in Section 3.1.3 we model the relation between Economic Growth and Economic Performance. Following equations are used to model the relationship. The results are summarized for separately for each income group and for the complete data set.

Overall results (whole world)

5.2.1Results for EP1 regression for 2005, 2010

Table 5.2.1 for EP1_2005, EP1_2010

	EP1_2005			EP1_2010	
	Coefficient	P-Values		Coefficient	P-Values
C	-0.024	0.659	C	-0.029	0.676
(logMGDP1_2000)	0.001	0.624	(logMGDP1_2005)	0.001	0.672
EG_2005	0.988	0.000*	EG_2010	0.981	0.000*
R-squared	0.894		R-squared	0.859	
Adjusted R-squared	0.893		Adjusted R-squared	0.857	
F-statistic	617.939		F-statistic	443.380	
Prob(F-statistic)	0.000		Prob(F-statistic)	0.000	

*Note: * shows significant results.*

The relationship written in equation format as follow:

$$EP1_{2005} = -0.024 + 0.001logMGDP1_{2000} + 0.988EG_{2005} + \varepsilon$$

$$EP1_{2010} = -0.029 + 0.001logMGDP1_{2005} + 0.981EG_{2010} + \varepsilon$$

The regression for EP1_2005 shows a significant result as the P-value shows 0.00 percent results for EG_2005. This means that the relation between EP1 and EG is significant. The coefficient of EG_2005 is positive with value 0.988. This indicates that EP1 and EG has approximately same growth. And 1% rise in EG is associated with 0.9% rise in EP1.

The results for EP1_2010 also give the similar statistics. The small p-value for EG indicate a significant association. Coefficient of EG is 0.98 which shows that EP grows slower than EG. This might be because of conversion of non-market activities to the market activities. The results of the study are in line with Goldschmidt (1982, 1987, 1990, 1993), Nordhaus & Tobin (1972), Gronau (1980), Pampel & Tanaka (1986), Solberg & Wong (1992) Dunlop, et al. (1999), Sen (1976, 1999), Garibaldi & Wasmer (2004), Esteve-Volart (2004), (Macdonald, 1995). Landefeld et all (2000, 2009) that Economic Performance with Home Production or the non-economic sector has significant impact on Economic Growth in long time period.

5.2.2 Results for EP2 regression for 2005, 2010

Table 5.2.2 for EP2_2005, EP2_2010

	EP2_2005			EP2_2010	
	Coefficient	P-Values		Coefficient	P-Values
C	0.526	0.004*	C	-0.208	0.178
(logMGDP2_2000)	-0.022	0.002*	(logMGDP2_2005)	0.007	0.260
EG_2005	1.066	0.000*	EG_2010	1.113	0.000*
R-squared	0.500		R-squared	0.603	
Adjusted R-squared	0.493		Adjusted R-squared	0.597	
F-statistic	72.953		F-statistic	110.671	
Prob(F-statistic)	0.000		Prob(F-statistic)	0.000	

*Note: * shows significant results.*

The relationship written in equation format as follow:

$$EP2_{2005} = 0.526 - 0.022logMGDP2_{2000} + 1.066EG_{2005} + \varepsilon$$

$$EP2_{2010} = -0.208 + 0.007logMGDP2_{2005} + 1.113EG_{2010} + \varepsilon$$

Table 5.2.2 shows the results for the regression of EP2 at 2005 and 2010. The two regression for EP2_2005 and EP2_2010 shows that EP2 has strong relation with corresponding EG as indicated by low P-Values. The coefficient of EG in first regression is 1.066 which shows that EP2 increases 6% faster than EG. This implies

that reduction in the proportion of new Debt in-take and the conversion of non-market to market activities are increased. The coefficient of EG in second regression is also greater than 1. The results of the study are in line with Goldschmidt (1982, 1987, 1990, 1993), Nordhaus & Tobin (1972), Gronau (1980), Pampel & Tanaka (1986), Solberg & Wong (1992) Dunlop, et al. (1999), Sen (1976, 1999), Garibaldi & Wasmer (2004), Esteve-Volart (2004), (Macdonald, 1995). Landefeld et all (2000, 2009) that Economic Performance with Home Production or the non-economic sector has significant impact on Economic Growth in long time period. While the results of the study also in line with Nordhaus & Tobin (1972), Mehlum, et al (2002), Stiglitz, et al (2009), Ploeg (2011), Gylfason (2001), Auty (2001), Torvik (2002), Sachs & Andrew(1999), that Economics Performance with Resource Depletion has insignificant impact on Econmic Growth.

5.2.3 Results for EP3 regression for 2005, 2010

Table 5.2.3 for EP3_2005, EP3_2010

	EP3_2005			EP3_2010	
	Coefficient	P-Values		Coefficient	P-Values
C	1.666	0.001*	C	-0.217	0.323
(logMGDP3_2000)	-0.066	0.001*	(logMGDP3_2005)	0.007	0.408
EG_2005	0.804	0.003*	EG_2010	1.165	0.000*
R-squared	0.149		R-squared	0.453	
Adjusted R-squared	0.138		Adjusted R-squared	0.446	
F-statistic	12.740		F-statistic	60.129	
Prob(F-statistic)	0.000		Prob(F-statistic)	0.000	

*Note: * shows significant results.*

The relationship written in equation format as follow:

$$EP3_{2005} = 1.666 - 0.066 logMGDP3_{2000} + 0.804 EG_{2005} + \varepsilon$$

$$EP3_{2010} = -0.217 + 0.007 logMGDP3_{2005} + 1.165 EG_{2010} + \varepsilon$$

Table 5.2.3 shows regression results for 2005 and 2010. The regression result for EP3 at 2005 and 2010 shows EG shows significant results as it shows P-values lesser than 0.05. The Coefficient of EG give positive results for 2005 and in 2010, it indicated that in 2010 both have positive relation and one percent increase may cause an increase of 0.76 percent increase in the value of EP in 2005 and greater than 1% in 2010. This implies that EP3 grows slower than the corresponding EG in 2005 and grows higher than EG in 2010. This is due to the high value of Debt in-take and Resource Depletion. The results of the study are in line with Nordhaus & Tobin (1972), Mehlum, et al (2002), Stiglitz, et al (2009), Ploeg (2011), Gylfason (2001), Auty (2001), Torvik (2002), Sachs & Andrew(1999),that Economic Performance with Debt stock and Resource Depletion has insignificant impact on Economic Growth in long time period.

Results for All four classifications of the Countries

5.3.1 Results for regression EP1_2005 for Low-Income, Lower-Middle-Income, Upper-Middle-Income and High-Income economies.

Table 5.3.1 for Regression EP1_2005

	Low Income		Lower Middle Income		Upper Middle Income		High Income	
EP1_2005	Coefficient	P-values	Coefficient	P-values	Coefficient	P-values	Coefficient	P-values
C	-0.698	0.095	0.065	0.387	-0.099	0.345	-0.015	0.863
LOG(MGDP1_2000)	0,031	0.086	-0.003	0.370	0.004	0.351	0.000	0.909
EG_2005	1.027	0.000*	1.004	0.000*	0.957	0.000*	1.046	0.000*
R-squared	0.833		0.960		0.912		0.917	
Adjusted R-squared	0.817		0.958		0.908		0.913	
F-statistic	52.404		412.226		207.948		232.952	
Prob(F-statistic)	0.000		0.000		0.000		0.000	

*Note: * shows significant results.*

The relationship written in equation format for all four classifications is as follow:

$$EP1_{2005} = -0.698 + 0.031 logMGDP1_{2000} + 1.027 EG_{2005} + \varepsilon$$

$$EP1_{2005} = 0.065 - 0.003 logMGDP1_{2000} + 1.004 EG_{2005} + \varepsilon$$

$$EP1_{2005} = -0.099 + 0.004 logMGDP1_{2000} + 0.957 EG_{2005} + \varepsilon$$

$$EP1_{2005} = -0.015 + 0.000 logMGDP1_{2000} + 1.046 EG_{2005} + \varepsilon$$

Table 5.3.1 shows the results for the regression for EP1_2005. The regression for EP1 shows significant results for these four income groups for EG as indicated by the P-values. It means that the EP and EG approximately have the same growth. The coefficient of EG has positive value and one percent rise in EG_2005 may cause 1.02 percent rise in EP_2005 in low-income group, one percent change in lower-middle, 0.95 percent in Upper-Middle and 1.46 in High income group. This implies that the EP1_2005 has strong relationship with the corresponding EG and both grow with similar rate. This might be because of conversion of non-market activity to market activity.

5.3.2 Results for regression EP1_2010 for Low-Income, Lower-Middle-Income, Upper-Middle-Income and High-Income economies.

Table 5.3.2 for Regression EP1_2010

	Low Income		Lower Middle Income		Upper Middle Income		High Income	
EP1_2010	Coefficient	P-values	Coefficient	P-values	Coefficient	P-values	Coefficient	P-values
C	-0.776	0.038*	0.075	0.565	0.020	0.879	-0.016	0.840
log(MGDP1_2005)	0.034	0.032*	-0.003	0.532	0.000	0.942	0.000	0.958
EG_2010	0.993	0.000*	1.018	0.000*	0.931	0.000*	1.031	0.000*
R-squared	0.726		0.817		0.900		0.886	
Adjusted R-squared	0.700		0.806		0.895		0.881	
F-statistic	27.785		75.836		179.717		163.774	
Prob(F-statistic)	0.000		0.000		0.000		0.000	

*Note: * shows significant results.*

The relationship written in equation format for all four classifications is as follow:

$$EP1_{2010} = -0.776 + 0.034 logMGDP1_{2005} + 0.993 EG_{2010} + \varepsilon$$

$$EP1_{2010} = 0.075 - 0.003 logMGDP1_{2005} + 1.018 EG_{2010} + \varepsilon$$

$$EP1_{2010} = 0.020 + 0.000 logMGDP1_{2005} + 0.931 EG_{2010} + \varepsilon$$

$$EP1_{2010} = 0.016 + 0.000 logMGDP1_{2005} + 1.031 EG_{2010} + \varepsilon$$

The regression results in above Table 5.3.2 show coefficient and P-values of the different dependent and independent variables. EG_2010 on the other hand gives P-value as 0.00 indicate that results are significant for EG_2010 at 5 percent of level of significance in these entire four classifications. This means that the relation between EP1 and EG is significant and EP1 has a strong relationship with corresponding EG indicated by low P-Values.

The coefficient of EG_2010 gives positive values indicate that the EP1 and EG have approximately same growth. This implies that one percent rise in the value of EG_2010 is associated with increase of 0.99 percent in EP1 in low income, 1.01 percent in EP1 in lower-middle, 0.93 percent in EP1 in upper-middle and 1.03 percent in EP1 in high income group. It shows that EP1 increases faster than EG in

Lower-Middle and High income group. This might be conversion of non-market activities to the market activity.

5.3.3 Results for regression EP2_2005 for Low-Income, Lower-Middle-Income, Upper-Middle-Income and High-Income economies

Table 5.3.3 for Regression EP2_2005

	Low Income		Lower Middle Income		Upper Middle Income		High Income	
EP2_2005	Coefficient	P-values	Coefficient	P-values	Coefficient	P-values	Coefficient	P-values
C	4.166	0.000*	0.573	0.171	0.408	0.120	-0.138	0.343
LOG(MGDP2_2000)	-0.184	0.000*	-0.027	0.144	-0.018	0.099	0.005	0.330
EG_2005	0.936	0.005*	1.257	0.000*	1.060	0.000*	0.968	0.000*
R-squared	0.623		0.546		0.675		0.758	
Adjusted R-squared	0.588		0.519		0.658		0.747	
F-statistic	17.388		20.439		41.466		65.914	
Prob(F-statistic)	0.000		0.000		0.000		0.000	

*Note: * shows significant results.*

The relationship written in equation format for all four classifications is as follow:

$$EP2_{2005} = 4.166 - 0.184 logMGDP2_{2000} + 0.936 EG_{2005} + \varepsilon$$

$$EP2_{2005} = 0.573 - 0.027 logMGDP2_{2000} + 1.257 EG_{2005} + \varepsilon$$

$$EP2_{2005} = 0.408 - 0.018 logMGDP2_{2000} + 1.060 EG_{2005} + \varepsilon$$

$$EP2_{2005} = -0.138 + 0.005 logMGDP2_{2000} + 0.968 EG_{2005} + \varepsilon$$

Table 5.3.3 shows regression results for EP2_2005. EG_2005 shows significant results for Low income, Lower-middle, Upper-Middle and High income group. The four regressions show that EP_2005 has strong relationship with corresponding EG as indicating by low P-Values for all four classifications.

The coefficient for EG_2005 shows positive values indicating that EP2_2005 increases 100% faster than EG. This implies reduction in the proportion of new Debt intake.

5.3.4 Results for regression EP2_2010 for Low-Income, Lower-Middle-Income, Upper-Middle-Income and High-Income economies.

Table 5.3.4 for Regression EP2_2010

	Low Income		Lower Middle Income		Upper Middle Income		High Income	
EP2_2010	Coefficient	P-values	Coefficient	P-values	Coefficient	P-values	Coefficient	P-values
C	1.773	0.072	-0.608	0.073	0.038	0.883	0.067	0.558
log(MGDP2_2005)	-0.091	0.041*	0.023	0.103	-0.001	0.966	-0.003	0.524
EG_2010	1.797	0.000*	0.963	0.000*	0.953	0.000*	1.108	0.000*
R-squared	0.705		0.419		0.697		0.808	
Adjusted R-squared	0.677		0.385		0.682		0.799	
F-statistic	25.079		12.275		46.081		88.203	
Prob(F-statistic)	0.000		0.001		0.000		0.000	

*Note: * shows significant results.*

The relationship written in equation format for all four classifications is as follow:

$$EP2_{2010} = 1.773 - 0.091 logMGDP2_{2005} + 1.797 EG_{2010} + \varepsilon$$

$$EP2_{2010} = -0.608 + 0.023 logMGDP2_{2005} + 0.963 EG_{2010} + \varepsilon$$

$$EP2_{2010} = 0.038 - 0.001 logMGDP2_{2005} + 0.953 EG_{2010} + \varepsilon$$

$$EP2_{2010} = 0.067 - 0.003 logMGDP2_{2005} + 1.108 EG_{2010} + \varepsilon$$

Table 5.3.4 shows coefficient and P-value of these four groups for EP2_2010. EG_2010 shows significant results for Low income, Lower-Middle income, Upper-Middle income and High income economies. This means that the relation between EP3 and EG is significant as P-values are lesser than five percent level of significance.

The coefficient of EG give positive values indicated that one percent change may cause change in EP with the values of 1.79 percent for Low income group, 0.96 percent for Lower-Middle income group, 0.95 for Upper-Middle and 1.11 in for High income groups. This implies that the reduction of Debt intake, this might be because of conversion of non-market activity to market activity. Regressions show that one

percent increase in EG give 79%, 0.9%, 0.9% and 11% faster results than EG respectively for entire four classifications.

5.3.5 Results for regression EP3_2005 for Low-Income, Lower-Middle-Income, Upper-Middle-Income and High-Income economies.

Table 5.3.5 for Regression EP3_2005

	Low Income		Lower Middle Income		Upper Middle Income		High Income	
EP3_2005	Coefficient	P-values	Coefficient	P-values	Coefficient	P-values	Coefficient	P-values
C	12.340	0.001*	0.894	0.164	0.707	0.070	-0.195	0.228
LOG(MGDP3_2000)	-0.536	0.001*	-0.042	0.142	-0.029	0.074	0.008	0.199
EG_2005	-0.145	0.891	1.428	0.000*	0.993	0.000*	0.892	0.000*
R-squared	0.438		0.401		0.468		0.672	
Adjusted R-squared	0.381		0.366		0.441		0.656	
F-statistic	7.782		11.396		17.587		43.001	
Prob(F-statistic)	0.003		0.000		0.000		0.000	

*Note: * shows significant results.*

The relationship written in equation format for all four classifications is as follow:

$$EP3_{2005} = 12.340 - 0.536 logMGDP3_{2000} - 0.145 EG_{2005} + \varepsilon$$

$$EP3_{2005} = 0.894 - 0.042 logMGDP3_{2000} + 1.428 EG_{2005} + \varepsilon$$

$$EP3_{2005} = 0.707 - 0.029 logMGDP3_{2000} + 0.993 EG_{2005} + \varepsilon$$

$$EP3_{2005} = -0.195 + 0.008 logMGDP3_{2000} + 0.892 EG_{2005} + \varepsilon$$

Table 5.3.5 shows results for EP3_2005 for all four classifications. P-values of EG shows significant result for Lower-Middle and for Upper-Middle income group and High income group but for Low income group P-value shows insignificant results for this group. This means that the relation between EP3 and EG have not the same growth and shows insignificant relationship between them in Low income economies.

The coefficient of EG give positive values it means one percent change in EG resultantly -0.14 percent change EP3 for low income group, 1.42 percent for lower middle, 0.99 percent for upper-middle and 0.89 percent for high income. The coefficient indicates approximately 1 to 1 relationship between both EP3 and EG it

means when the value of EG increases the EP3 increase 42% faster in second regression. But coefficient of EG shows negative result for Low income and it implies that there is indirect relationship between EG and EP3 and rise in EG may cause decrease in EP3 by 14%.

5.3.6 Results for regression EP3_2010 for Low-Income, Lower-Middle-Income, Upper-Middle-Income and High-Income economies.

Table 5.3.6 for Regression EP3_2010

	Low Income		Lower Middle Income		Upper Middle Income		High Income	
EP3_2010	Coefficient	P-values	Coefficient	P-values	Coefficient	P-values	Coefficient	P-values
C	3.080	0.037*	-0.801	0.084	0.120	0.750	0.170	0.255
log(MGDP3_2005)	-0.154	0.022*	0.031	0.119	-0.003	0.847	-0.006	0.274
EG_2010	2.094	0.000*	0.996	0.001*	0.952	0.000*	1.158	0.000*
R-squared	0.650		0.307		0.523		0.725	
Adjusted R-squared	0.615		0.266		0.499		0.712	
F-statistic	18.572		7.515		21.937		55.495	
Prob(F-statistic)	0.000		0.002		0.000		0.000	

*Note: * shows significant results.*

The relationship written in equation format for all four classifications is as follow:

$$EP3_{2010} = 3.080 - 0.154 logMGDP3_{2005} + 2.094 EG_{2010} + \varepsilon$$

$$EP3_{2010} = -0.801 + 0.031 logMGDP3_{2005} + 0.996 EG_{2010} + \varepsilon$$

$$EP3_{2010} = 0.120 - 0.003 logMGDP3_{2005} + 0.952 EG_{2010} + \varepsilon$$

$$EP3_{2010} = 0.170 - 0.006 logMGDP3_{2005} + 1.158 EG_{2010} + \varepsilon$$

Table 5.3.6 shows the results for EP3_2010 for all four classifications. The results for EG show significant for Low income, Lower-Middle income, Upper-Middle income and High income as indicated by the P-values. This means that EG and EP3 have approximately same growth for three classifications.

The coefficient of EG_2010 shows positive value for low income, Upper-Middle and for High income and indicated 1% rise in EG associated with more than 1% rise EP3 and it also implies reduction in the debt intake.

Chapter: 6

Conclusion

6.1 Summary and conclusion

GDP ignores many practical indicators of welfare and it is a market phenomenon and it does not include non-market economic activities. It ignores the services provided by family member at home particularly females and the inflow of External Debt stock and the Resource Depletion etc. Therefore the GDP is underestimated actual level of economic activity and it is very important to adjust GDP for these factors to get a clear picture of actual state of welfare in an economy. The study presented Home Production and Bias against HP in GDP for 153 countries and three Modified measures of GDP adjusted for Home Production (HP), Debt stock, and Resource Depletion (RD). Economic Performance (EP) is introduced as a measure of growth in MGDP instead of Economic Growth (EG) to measures the performance of nations. The relation between the conventional Economic Growth (EG) and Economic Performance (EP) is calculated.

The women constitute about half of the human resource and the role of women is an important determinant in a society. Women work at home provides a variety of services at home but due to the non-market activities their works is not recognized and valued in National Income Accounts. We classified women into two categories either employed i.e. women whom work in the market or unemployed i.e women whom work at home and then calculated the percentage of unemployed female to the working age female population, Home Production and the percentage of HP relative to GDP. Further we assumed that the value of services provided by female at home is

equal to value of services of male counterpart provided in market. Thus the per capita value added by the male household is approximate value of the services provided by female at home.

It is concluded that the percentage of unemployed female to the working age population is varying from 20% to 90% and major reason for high rate of percentage is that the social norms that prevent women from working outside the home, while some of the countries have almost constant rate throughout the period of these 13 years. Most of the countries has increasing trend in their data for HP in these thirteen year, it means their female population is increasing and they are also switching their production from market to non-market economy and in results the HP is increasing with the passage of time. The Percentage of HP relative to GDP range from 25% to 40% for entire four classifications while in overall results Algeria has highest value up to 70% for this percentage.

The bias is calculated on the conventional Economic Growth and Economic Performance with respect to Home Production. The countries with high rate of HP has higher rate of Bias in GDP. The countries like Ethiopia, Liberia, Mozambique and Tajikistan from Low income economies, Armenia, Bhutan from Lower-Middle income economies, Azerbaijan and China from upper-Middle income economies and Latvia, Lithuania, Trinidad and Tobago from High income economies show higher rate of Bias in Conventional Economic Growth for Home Production.

It is concluded that the conversion of non-market activities to market activities has positive contribution in welfare of the country and the countries which have higher rate of HP than Debt stock and RD have higher MGDP1 than GDP and higher MGDP2 than MGDP3 and also their EP1 i.e. growth in Economic performance with

respect to HP is higher than EG, EP2 and EP3. While the countries which have higher value of Debt stock and RD than HP have lower rate or negative value for MGDP2 and MGDP3 than actual GDP and MGDP1 and also their EP3 is negative and lower than EP1, EP2 and EG. It means that addition of Debt stock and more RD have caused negative growth in general and may mislead the result if using GDP as for calculation of welfare in particular. It is also concluded from the regression results that Economic Performance has insignificant relationship with its corresponding Economic Growth if RD and Debt intake is taken into accounts. These countries are either consuming the share of the future generations or leaving the burden for their generations. And one should not be confused with the positive growth of GDP if Debt stock and RD are there.

Some of the countries have same trend in MGDP1, MGDP2, MGDP3 and GDP and have same growth in EP1, EP2, EP3 and EG. Most of the countries show results that EP3 is higher than EP1. EP2 and EG, it means that the Economic Performance is higher than the Economic Growth.

6.2 Policy Recommendation

1. Home Production forms a big proportion of Gross Domestic Product and it should not be neglected in National Income Accounts.
2. In National Income Accounts Debt stock and Resource Depletion must be included so that penalty could be applied for leaving a burden for future generations.

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Appendices

Appendix A

HP & HP percentage to GDP

Table A.1 (Low-income economies ($1,045 or less)

Country Name	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Bangladesh	14.77	15.57	16.29	17.18	18.2	19.29	20.7	22.15	23.54	24.96	26.56	28.35	30.13
	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.33	0.33	0.33
Benin	1.26	1.34	1.4	1.46	1.49	1.55	1.6	1.67	1.77	1.81	1.86	1.93	1.99
	0.35	0.35	0.35	0.36	0.35	0.36	0.35	0.35	0.36	0.35	0.35	0.36	0.35
Burkina Faso	1.03	1.07	1.14	1.2	1.27	1.37	1.51	1.58	1.65	1.71	1.82	1.9	2.05
	0.26	0.25	0.26	0.25	0.25	0.25	0.26	0.26	0.26	0.26	0.26	0.26	0.25
Burundi	0.21	0.23	0.24	0.24	0.26	0.27	0.29	0.32	0.35	0.36	0.38	0.39	0.40
	0.21	0.22	0.23	0.23	0.24	0.24	0.24	0.26	0.27	0.27	0.27	0.27	0.27
Cambodia	1.09	1.18	1.26	1.36	1.5	1.68	1.84	1.99	2.13	2.15	2.24	2.37	2.56
	0.27	0.27	0.27	0.27	0.27	0.27	0.26	0.26	0.26	0.26	0.26	0.25	0.26
Comoros	0.17	0.17	0.18	0.18	0.18	0.19	0.18	0.18	0.19	0.19	0.19	0.20	0.20
	0.49	0.50	0.49	0.49	0.49	0.48	0.46	0.46	0.47	0.47	0.46	0.46	0.46
Congo, Dem. Rep.	3.19	3.42	3.67	3.87	4.08	4.42	4.74	4.89	4.42	4.64	4.85	5.06	5.27
	0.32	0.32	0.33	0.32	0.32	0.33	0.33	0.33	0.28	0.28	0.27	0.27	0.26
Ethiopia	2.33	2.45	2.49	2.51	2.7	3.00	3.37	3.83	4.37	4.91	5.6	6.29	6.93
	0.26	0.25	0.25	0.26	0.25	0.25	0.25	0.25	0.26	0.27	0.27	0.28	0.28
Guinea	0.80	0.82	0.85	0.86	0.88	0.90	0.91	0.92	0.96	0.96	0.97	1.01	1.02
	0.32	0.31	0.31	0.31	0.31	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.29
Kenya	5.24	5.47	5.57	5.79	6.07	6.42	6.77	7.18	7.24	7.44	7.82	8.1	8.43
	0.33	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.33	0.33	0.33	0.33	0.33
Liberia	0.19	0.23	0.3	0.2	0.19	0.21	0.23	0.26	0.29	0.33	0.36	0.4	0.44
	0.39	0.39	0.39	0.39	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38
Madagascar	1.27	1.34	1.14	1.25	1.33	1.4	1.48	1.58	1.66	1.54	0.15	0.16	0.17
	0.28	0.28	0.27	0.27	0.28	0.28	0.28	0.28	0.28	0.27	0.03	0.03	0.03
Malawi	0.76	0.73	0.71	0.70	0.73	0.74	0.73	0.82	1.00	1.08	1.16	1.21	1.25
	0.30	0.31	0.29	0.27	0.27	0.27	0.26	0.27	0.30	0.30	0.30	0.30	0.30
Mali	1.87	2.12	2.19	2.33	2.31	2.35	2.42	2.54	2.56	2.57	2.61	2.7	2.68
	0.48	0.48	0.48	0.48	0.46	0.44	0.42	0.42	0.41	0.39	0.37	0.38	0.38
Mozambique	1.21	1.35	1.44	1.52	1.64	1.81	1.99	2.14	2.29	2.44	2.62	2.81	0.63
	0.28	0.28	0.27	0.27	0.27	0.28	0.28	0.29	0.29	0.29	0.29	0.29	0.06
Nepal	1.75	1.86	1.84	1.92	2.02	2.1	2.21	2.29	2.47	2.6	2.75	2.86	3
	0.25	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.27	0.27	0.27	0.27	0.27
Niger	1.27	1.27	1.26	1.25	1.24	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23
	0.45	0.42	0.41	0.38	0.38	0.36	0.34	0.33	0.3	0.3	0.28	0.27	0.25
Rwanda	0.49	0.53	0.6	0.62	0.67	0.74	0.82	0.9	1.01	1.07	1.14	1.22	1.34
	0.28	0.27	0.27	0.28	0.28	0.29	0.29	0.3	0.3	0.3	0.3	0.3	0.31
Sierra Leone	0.37	0.37	0.47	0.51	0.52	0.54	0.56	0.6	0.63	0.65	0.68	0.73	0.75
	0.33	0.35	0.35	0.35	0.33	0.33	0.33	0.32	0.32	0.32	0.32	0.32	0.29
Tajikistan	0.45	0.5	0.55	0.61	0.68	0.73	0.78	0.86	0.95	0.99	1.06	1.14	1.22
	0.31	0.31	0.31	0.31	0.31	0.32	0.32	0.32	0.33	0.33	0.33	0.33	0.33
Tanzania	2.39	2.54	2.71	2.9	3.11	3.34	3.6	3.86	4.18	4.46	4.81	5.17	5.56
	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.25	0.25
Togo	0.64	0.61	0.59	0.63	0.64	0.62	0.66	0.69	0.66	0.66	0.68	0.72	0.75
	0.32	0.31	0.3	0.31	0.31	0.29	0.3	0.31	0.29	0.28	0.28	0.28	0.27
Uganda	1.79	1.88	2.07	2.24	2.42	2.63	2.91	3.13	3.41	3.61	3.85	4.11	4.26
	0.27	0.27	0.28	0.28	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29
Zimbabwe	2.51	2.39	2.18	1.84	1.7	1.58	1.54	1.5	1.36	1.92	2.13	2.36	2.47
	0.3	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.31	0.41	0.41	0.4	0.4

Note: The data is in US billion dollars and first line show home production of the country and second line show the percentage to home production to the GDP of that country.

Table A.2 (Lower-Middle-income economies ($1,046 to $4,125))

The data of India is in 100 billion dollar and data of Indonesia is in 10 billion US dollar.

Country Name	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Armenia	0.96	1.08	1.23	1.46	1.64	1.88	2.11	2.43	2.58	2.11	2.03	2.09	2.2
	0.35	0.36	0.36	0.37	0.38	0.38	0.38	0.39	0.38	0.36	0.34	0.34	0.33
Bhutan	0.2	0.21	0.22	0.22	0.23	0.24	0.26	0.3	0.31	0.33	0.36	0.4	0.4
	0.35	0.34	0.32	0.31	0.3	0.3	0.29	0.29	0.29	0.29	0.28	0.28	0.27
Bolivia	2.43	2.46	2.5	2.57	2.65	2.74	2.85	2.96	3.11	3.24	3.35	3.5	3.63
	0.3	0.3	0.29	0.29	0.29	0.29	0.28	0.28	0.28	0.28	0.28	0.28	0.27
Cabo Verde	8.78	8.89	9.53	10.16	10.56	11.22	11.75	12.30	12.89	12.62	12.74	13.15	13.22
	0.37	0.36	0.36	0.36	0.35	0.35	0.35	0.32	0.32	0.34	0.36	0.36	0.37
Cameroon	4.74	4.96	5.14	5.37	5.59	5.79	5.95	6.01	6.14	6.27	6.41	6.55	6.69
	0.34	0.34	0.34	0.34	0.34	0.35	0.35	0.34	0.34	0.34	0.33	0.33	0.32
Congo, Rep.	1.68	1.69	1.73	1.7	1.73	1.87	1.98	1.89	1.99	2.16	2.35	2.4	0.09
	0.34	0.33	0.32	0.31	0.31	0.31	0.31	0.3	0.3	0.3	0.3	0.3	0.01
Cote d'Ivoire	5.91	5.90	5.81	5.70	5.79	5.88	5.91	6.01	6.15	6.38	6.53	6.19	6.82
	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36
Egypt, Arab Rep.	36.69	38.3	40.02	40.07	40.54	41.42	45.67	47.7	50.82	53.14	55.51	56.21	0
	0.49	0.49	0.5	0.49	0.47	0.46	0.48	0.46	0.46	0.46	0.46	0.46	0
El Salvador	5.58	5.74	5.95	5.96	6.16	6.34	6.56	6.78	6.82	6.61	6.68	6.85	6.98
	0.37	0.37	0.38	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.36	0.37	0.37
Georgia	1.55	1.57	1.7	1.86	2.02	2.22	2.48	2.77	2.78	2.65	2.85	3.02	3.23
	0.35	0.33	0.34	0.34	0.35	0.35	0.35	0.35	0.34	0.34	0.35	0.34	0.35
Ghana	2.86	2.92	2.99	3.01	3.07	3.1	3.18	3.18	3.18	3.18	3.17	3.16	3.14
	0.34	0.33	0.33	0.31	0.3	0.29	0.28	0.26	0.24	0.23	0.21	0.19	0.17
Guatemala	8.39	8.57	8.91	9.14	9.41	9.47	9.77	10.4	10.76	10.8	11.06	11.47	11.79
	0.36	0.36	0.36	0.36	0.36	0.35	0.34	0.34	0.34	0.34	0.34	0.34	0.34
Guyana	0.28	0.29	0.3	0.3	0.3	0.28	0.3	0.3	0.3	0.31	0.32	0.33	0.34
	0.35	0.36	0.36	0.36	0.36	0.34	0.34	0.36	0.35	0.35	0.35	0.34	0.33
Honduras	2.56	2.67	2.85	2.99	3.18	3.37	3.62	3.83	4.02	3.9	4.01	4.16	4.33
	0.33	0.34	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35
India	2.18	2.27	2.32	2.5	2.65	2.87	3.19	3.53	3.78	4.12	4.54	4.84	4.98
	0.36	0.36	0.35	0.35	0.35	0.34	0.35	0.35	0.36	0.37	0.36	0.36	0.36
Indonesia	8.29	8.7	9.15	9.55	9.96	10.47	10.99	11.58	12.22	12.71	13.51	14.33	15.22
	0.37	0.37	0.37	0.37	0.37	0.37	0.36	0.36	0.36	0.36	0.36	0.36	0.36
Kyrgyz Republic	0.65	0.69	0.7	0.75	0.81	0.8	0.84	0.92	1.02	1.04	1.04	1.11	1.09
	0.32	0.32	0.32	0.33	0.33	0.33	0.33	0.34	0.34	0.34	0.34	0.34	0.34
Lao PDR	0.50	0.53	0.57	0.60	0.65	0.71	0.77	0.83	0.90	0.97	1.05	1.13	1.22
	0.25	0.25	0.25	0.25	0.25	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26
Lesotho	0.36	0.38	0.39	0.41	0.43	0.44	0.47	0.50	0.54	0.55	0.59	0.60	0.64
	0.30	0.31	0.32	0.32	0.32	0.32	0.33	0.33	0.34	0.34	0.34	0.33	0.33
Mauritania	0.98	0.98	0.94	0.96	1.00	1.11	1.42	1.32	1.34	1.30	1.36	1.38	1.52
	0.56	0.55	0.52	0.51	0.50	0.51	0.55	0.50	0.49	0.48	0.48	0.47	0.49

Country Name	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Moldova	0.73	0.79	0.85	0.96	1.09	1.18	1.28	1.39	1.47	1.43	1.53	1.62	1.66
	0.34	0.35	0.35	0.37	0.39	0.4	0.41	0.43	0.42	0.44	0.44	0.43	0.45
Mongolia	0.66	0.67	0.7	0.76	0.84	0.9	0.96	1.06	1.18	1.14	1.17	1.3	1.48
	0.36	0.35	0.35	0.36	0.36	0.36	0.35	0.35	0.36	0.35	0.34	0.32	0.32
Morocco	17.44	19.49	20.34	21.71	22.5	22.93	25.37	25.37	27.04	29.3	30.69	32.15	32.13
	0.37	0.39	0.39	0.39	0.39	0.39	0.4	0.39	0.39	0.4	0.41	0.41	0.39
Nicaragua	1.86	1.92	1.94	1.97	2.11	2.2	2.2	2.31	2.36	2.29	2.37	2.53	2.6
	0.34	0.35	0.34	0.34	0.35	0.35	0.33	0.33	0.33	0.33	0.33	0.33	0.33
Nigeria	32.15	35.21	40.98	45.96	50.28	52.95	55.24	57.79	60.24	63.82	68.35	71.75	74.65
	0.47	0.5	0.56	0.57	0.46	0.47	0.45	0.45	0.44	0.43	0.43	0.43	0.43
Pakistan	36.4	36.92	37.64	39.04	42.19	45.37	46.92	50.04	52.9	51.82	52.6	54.31	56.16
	0.42	0.42	0.42	0.41	0.41	0.41	0.4	0.41	0.43	0.41	0.41	0.41	0.41
Paraguay	2.59	2.52	2.52	2.61	2.7	2.74	2.87	3	3.18	3.03	3.47	3.62	3.61
	0.33	0.32	0.32	0.32	0.32	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31
Philippines	30.61	30.29	31.92	33.21	35.64	38.45	40.95	44.04	45.51	45.69	48.92	50.3	53.73
	0.37	0.36	0.36	0.36	0.36	0.37	0.38	0.38	0.38	0.38	0.37	0.37	0.37
Senegal	2.04	2.11	2.12	2.27	2.42	2.56	2.62	2.76	2.88	2.97	3.1	3.15	3.28
	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.3	0.3	0.3	0.3	0.3
Sri Lanka	8.02	7.92	8.19	8.66	9.19	9.75	10.38	11.26	12	12.35	13.55	14.64	15.71
	0.4	0.4	0.4	0.4	0.4	0.4	0.39	0.4	0.4	0.4	0.41	0.41	0.41
Swaziland	0.85	0.86	0.88	0.89	0.91	0.93	0.95	0.98	0.99	0.98	0.98	0.98	0.11
	0.37	0.37	0.37	0.36	0.36	0.36	0.36	0.35	0.35	0.34	0.34	0.34	0.04
Syrian Arab Republic	15.64	15.79	15.86	15.87	16.31	16.7	17.1	17.27	17.44	18.13	18.06	17.99	17.99
	0.69	0.66	0.63	0.62	0.6	0.58	0.56	0.54	0.52	0.52	0.49	0.47	0.45
Ukraine	21.8	24.22	25.69	27.16	30.39	30.32	32.24	35.06	35.87	30.32	31.76	33.15	33.29
	0.37	0.37	0.38	0.36	0.36	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35
Vanuatu	0.08	0.07	0.07	0.07	0.08	0.08	0.09	0.09	0.09	0.1	0.11	0.11	0.11
	0.21	0.2	0.21	0.2	0.2	0.2	0.2	0.19	0.2	0.21	0.22	0.21	0.21
Vietnam	11.74	12.53	13.34	14.32	15.41	16.71	18.05	19.51	20.78	22.02	23.49	24.9	26.16
	0.28	0.29	0.29	0.29	0.29	0.29	0.29	0.3	0.3	0.3	0.3	0.3	0.3
Yemen, Rep.	1.55	1.41	1.31	1.47	1.64	1.72	1.56	1.47	1.34	1.6	1.66	2.08	2.3
	0.41	0.39	0.37	0.38	0.38	0.37	0.36	0.35	0.34	0.34	0.34	0.4	0.39
Zambia	1.6	1.67	1.74	1.83	1.94	2.04	2.18	2.32	2.47	2.61	2.8	3.01	3.23
	0.28	0.28	0.28	0.28	0.28	0.28	0.29	0.29	0.29	0.29	0.29	0.29	0.29

Note: Note: The data is in US billion dollars and first line show home production of the country and second line show the percentage to home production to the GDP of that country.

Table A.3 (Upper-Middle-income economies ($4,126 to $12,745)

The data of Argentina, Brazil, Iran, Islamic Rep. South Africa, Turkey, is in 10 billion dollar and data of China and Mexico is in the 100 billion dollar.

Country Name	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Albania	2.07	2.26	2.23	2.39	2.56	2.72	2.91	3.06	3.29	3.43	3.51	3.67	3.84
	0.32	0.33	0.31	0.32	0.32	0.32	0.33	0.33	0.33	0.33	0.33	0.33	0.34
Algeria	56.12	56.82	59.03	63.76	65.95	69.44	70.46	71.85	72.39	76.38	78.71	80.79	83.42
	0.71	0.69	0.68	0.68	0.68	0.67	0.67	0.66	0.65	0.68	0.68	0.67	0.67
Argentina	6.69	6.37	5.69	6.22	6.49	7.11	7.70	8.32	8.58	8.58	9.45	10.24	10.28
	0.33	0.33	0.33	0.33	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32
Azerbaijan	2.29	2.46	2.7	2.97	3.27	4.22	5.89	7.33	8.05	8.73	9.23	9.07	9.09
	0.33	0.32	0.32	0.31	0.31	0.32	0.33	0.33	0.33	0.32	0.33	0.32	0.31
Belarus	6.78	7.19	7.56	8.16	9.25	10.29	11.49	12.43	13.93	14.25	15.44	16.49	16.61
	0.32	0.33	0.33	0.33	0.34	0.34	0.35	0.34	0.35	0.36	0.36	0.36	0.36
Belize	0.26	0.27	0.28	0.31	0.33	0.33	0.36	0.36	0.37	0.39	0.39	0.39	0.4
	0.3	0.3	0.3	0.3	0.3	0.3	0.31	0.3	0.3	0.31	0.31	0.3	0.3
Bosnia and Herzegovina	2.98	3.02	3.1	3.22	3.54	3.79	3.93	4.16	4.38	4.24	4.19	4.23	4.37
	0.35	0.34	0.33	0.33	0.34	0.35	0.34	0.33	0.33	0.33	0.33	0.33	0.34
Botswana	2.52	2.57	2.77	2.84	2.78	2.88	3.12	3.32	3.43	3.18	3.5	3.76	3.93
	0.3	0.31	0.31	0.31	0.29	0.29	0.29	0.29	0.28	0.28	0.29	0.29	0.29
Brazil	22.93	23.33	23.94	24.16	25.43	25.97	27.18	28.82	30.28	29.98	32.08	33.04	33.35
	0.3	0.3	0.3	0.3	0.3	0.29	0.3	0.3	0.3	0.29	0.29	0.29	0.29
Bulgaria	7.54	7.59	8.15	8.72	9.03	9.58	9.95	10.4	10.88	10.55	10.55	10.87	10.77
	0.34	0.33	0.34	0.34	0.33	0.33	0.32	0.32	0.31	0.32	0.32	0.32	0.32
China	3.84	4.23	4.69	5.22	5.82	6.56	7.48	8.63	9.55	10.50	11.64	12.66	13.57
	0.27	0.28	0.28	0.28	0.29	0.29	0.29	0.3	0.3	0.3	0.3	0.3	0.3
Colombia	40.44	40.57	41.05	42.34	45.66	48.03	52.46	56.09	57.37	57.39	59.35	63.01	65.4
	0.00	0.33	0.32	0.32	0.33	0.33	0.34	0.34	0.33	0.33	0.32	0.32	0.32
Costa Rica	0.00	5.23	5.38	5.75	6.06	6.35	6.95	7.41	7.66	7.56	7.92	8.21	8.62
	0.33	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.31	0.31
Cuba	10.07	10.53	10.77	11.09	11.52	12.61	14.01	14.95	15.64	15.79	15.89	16.38	16.62
	0.3	0.31	0.31	0.31	0.3	0.3	0.29	0.29	0.29	0.29	0.29	0.29	0.29
Dominican Republic	9.25	9.47	10.02	9.95	9.97	10.7	11.67	12.33	13.03	13.38	14.62	15.16	15.61
	0.32	0.33	0.33	0.32	0.32	0.32	0.31	0.3	0.3	0.3	0.31	0.3	0.3
Ecuador	10.98	10.88	11.39	11.9	12.63	13.48	13.89	14.57	15.64	15.99	16.47	17.72	18.54
	0.34	0.32	0.32	0.33	0.32	0.32	0.32	0.33	0.33	0.34	0.34	0.34	0.34
Fiji	0.86	0.88	0.91	0.91	0.97	0.98	1.00	0.98	0.98	0.96	0.97	0.99	1.01
	0.32	0.32	0.32	0.32	0.33	0.33	0.33	0.32	0.32	0.32	0.32	0.32	0.32
Gabon	3.41	3.47	3.48	3.59	3.64	3.73	3.67	3.83	3.86	3.71	4.04	4.25	4.43
	0.43	0.43	0.43	0.43	0.43	0.43	0.42	0.41	0.41	0.41	0.42	0.41	0.4
Hungary	31.58	32.86	34.19	35.26	37.15	37.98	39.15	39.22	39.75	36.39	36.59	35.03	33.66
	0.35	0.35	0.35	0.35	0.35	0.34	0.34	0.34	0.34	0.34	0.33	0.32	0.31
Iran, Islamic Rep.	8.15	8.15	8.74	9.31	9.61	9.96	10.83	11.91	13.17	13.74	14.31	14.89	15.48
	0.56	0.54	0.54	0.53	0.52	0.52	0.53	0.54	0.6	0.6	0.59	0.6	0.6
Iraq	47.74	48.6	43.55	27.34	38.29	37.83	40.05	41.32	45.25	47.32	49.97	56.07	63.22
	0.98	0.98	0.94	0.88	0.8	0.76	0.73	0.74	0.76	0.75	0.74	0.76	0.78
Jamaica	3.01	3.08	3.13	3.3	3.37	3.41	3.55	3.61	3.56	3.52	3.48	3.52	3.49
	0.27	0.28	0.28	0.3	0.3	0.31	0.32	0.33	0.32	0.32	0.31	0.32	0.32
Jordan	2.92	3.13	3.61	3.77	4.27	4.51	4.98	5.28	5.69	5.69	5.92	6.19	6.31
	0.32	0.32	0.35	0.35	0.37	0.36	0.37	0.36	0.36	0.34	0.35	0.35	0.35
Kazakhstan	11.32	12.83	14.05	15.38	16.93	18.41	20.22	21.93	22.73	23.02	24.79	26.58	28.49
	0.32	0.32	0.32	0.32	0.33	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.33
Lebanon	4.99	5.08	5.07	5.1	5.61	5.83	6.04	6.6	7.28	7.73	8.46	8.81	9.02
	0.29	0.28	0.27	0.26	0.27	0.27	0.28	0.28	0.28	0.27	0.28	0.28	0.28
Macedonia, FYR	1.8	1.7	1.69	1.74	1.88	1.9	1.94	2.06	2.14	2.1	2.17	2.23	2.23
	0.32	0.32	0.32	0.32	0.33	0.32	0.31	0.31	0.31	0.3	0.3	0.3	0.31

Country Name	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Malaysia	43.66	44.17	46.9	50.32	54.35	57.74	61.56	65.84	69.37	68.45	73.82	77.35	81.34
	0.38	0.39	0.39	0.39	0.4	0.4	0.41	0.41	0.41	0.41	0.41	0.41	0.41
Maldives	0.24	0.27	0.29	0.32	0.37	0.34	0.4	0.45	0.5	0.48	0.52	0.55	0.56
	0.3	0.34	0.34	0.34	0.34	0.34	0.33	0.34	0.34	0.34	0.34	0.34	0.34
Mauritius	1.7	1.79	1.81	1.88	1.96	1.96	2.07	2.18	2.32	2.41	2.48	2.56	2.63
	0.31	0.32	0.32	0.32	0.32	0.31	0.32	0.32	0.32	0.32	0.32	0.32	0.31
Mexico	3.01	3.02	3.03	3.09	3.18	3.28	3.40	3.49	3.53	3.38	3.51	3.67	3.77
	0.38	0.38	0.38	0.38	0.38	0.38	0.37	0.37	0.37	0.37	0.37	0.37	0.37
Montenegro	0.62	0.65	0.66	0.65	0.66	0.67	0.74	0.83	0.89	0.85	0.89	0.98	0.88
	0.32	0.33	0.32	0.32	0.3	0.3	0.3	0.31	0.31	0.31	0.32	0.34	0.31
Namibia	2.19	2.18	2.26	2.38	2.59	2.64	2.8	2.94	2.85	2.85	3.21	3.43	3.84
	0.38	0.38	0.37	0.38	0.37	0.36	0.36	0.36	0.33	0.34	0.36	0.36	0.38
Panama	3.79	3.76	3.83	4.03	4.34	4.73	5.17	5.85	6.42	6.66	7.03	7.92	8.7
	0.3	0.3	0.3	0.3	0.3	0.31	0.31	0.31	0.31	0.31	0.31	0.32	0.32
Peru	18.82	18.34	19.68	21.31	22.39	23.74	25.02	25.91	28.08	28.99	31.37	33.5	35.64
	0.31	0.3	0.31	0.32	0.32	0.32	0.31	0.3	0.3	0.3	0.3	0.3	0.31
Romania	24.41	26.13	29.19	30.98	33.54	35.62	38.01	41.09	44.44	41.56	40.66	41.44	40.9
	0.33	0.33	0.35	0.36	0.35	0.36	0.35	0.36	0.36	0.36	0.36	0.36	0.35
Serbia	6.71	6.95	7.13	7.11	7.67	7.86	8.13	8.52	9.11	8.76	9.13	9.18	9.24
	0.34	0.34	0.33	0.32	0.32	0.31	0.31	0.31	0.32	0.32	0.33	0.32	0.33
South Africa	7.03	7.29	7.44	7.89	8.51	8.80	8.81	9.37	9.59	9.56	10.07	10.35	0.00
	0.34	0.35	0.34	0.35	0.36	0.36	0.34	0.34	0.34	0.34	0.35	0.34	0
St. Lucia	0.15	0.13	0.12	0.13	0.15	0.12	0.16	0.14	0.16	0.16	0.15	0.15	0.15
	0.17	0.16	0.15	0.15	0.16	0.14	0.16	0.13	0.15	0.15	0.14	0.13	0.14
Suriname	0.48	0.51	0.58	0.61	0.64	0.67	0.69	0.72	0.75	0.75	0.78	0.83	0.85
	0.35	0.36	0.39	0.39	0.37	0.37	0.37	0.37	0.37	0.36	0.36	0.36	0.36
Thailand	44.59	45.41	47.67	50.62	53.65	55.89	59.12	61.41	62.59	62.2	66.58	67.2	72.49
	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.31	0.32	0.32	0.32	0.32
Tunisia	10.74	11.17	11.27	11.93	12.73	13.03	13.63	14.54	14.96	15.28	15.71	15.7	16.23
	0.41	0.41	0.4	0.41	0.41	0.4	0.4	0.4	0.39	0.39	0.39	0.39	0.38
Turkey	15.03	14.07	14.96	16.00	17.48	18.83	20.28	20.96	20.79	19.42	21.01	22.59	23.11
	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.38	0.38	0.37	0.37	0.37
Venezuela, RB	46.19	45.38	40.48	38.2	44.88	49.07	53.57	57.41	59.75	57.91	57.12	59.24	62.43
	0.36	0.34	0.33	0.34	0.34	0.34	0.34	0.33	0.33	0.33	0.33	0.33	0.33

Note: The data is in US billion dollars and first line show home production of the country and second line show the percentage to home production to the GDP of that country.

Table A.4 High-income economies ($12,746 or more)

All of the data is in US billion dollar but some of the countries have the value of per capita value added so their HP values are also very high. For our own easiness we show some countries in $10 billion and some others in $100 billion. Australia, Austria, Belgium, France, Germany, Italy, Korea, Rep. Netherlands, Poland, Russian Federation, Saudi Arabia, Spain, Sweden, Switzerland, United Kingdom data is in the $10 billion and Japan and United State of America's data is in the $100 Billion.

Country Name	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Australia	18.63	19.08	19.82	20.39	21.30	21.95	22.60	23.45	24.34	24.83	25.29	25.84	26.84
	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32
Austria	8.92	9.07	9.15	9.20	9.49	9.69	10.01	10.28	10.46	9.99	10.17	10.43	10.47
	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.31	0.31	0.31	0.31	0.31	0.31
Bahamas, The	2.56	2.66	2.69	2.57	2.61	2.68	2.76	2.82	2.71	2.49	2.51	2.56	2.59
	0.36	0.37	0.36	0.35	0.35	0.35	0.35	0.35	0.35	0.33	0.33	0.33	0.33
Barbados	1.05	1.03	1.03	1.06	1.09	1.14	1.22	1.27	1.27	1.20	1.20	1.21	1.21
	0.29	0.29	0.29	0.29	0.29	0.29	0.30	0.30	0.30	0.30	0.30	0.30	0.30
Belgium	10.99	11.30	11.26	11.37	11.61	11.76	12.14	12.51	12.81	12.42	12.62	13.06	12.96
	0.32	0.32	0.32	0.32	0.31	0.31	0.31	0.31	0.32	0.32	0.32	0.32	0.32
Brunei Darussalam	2.96	3.00	3.14	3.25	3.27	3.29	3.45	3.44	3.37	3.31	3.42	3.55	3.58
	0.34	0.34	0.34	0.34	0.34	0.35	0.35	0.35	0.34	0.35	0.35	0.35	0.35
Canada	97.15	94.43	93.32	90.79	92.74	95.69	94.48	92.09	88.74	81.68	87.44	0.00	0.00
	0.09	0.09	0.09	0.08	0.08	0.08	0.08	0.08	0.07	0.07	0.07	0.00	0.00
Chile	30.79	32.09	32.80	41.68	43.59	45.30	46.55	48.16	48.64	48.11	49.57	51.98	54.76
	0.30	0.31	0.31	0.38	0.37	0.36	0.36	0.35	0.34	0.34	0.34	0.33	0.33
Croatia	11.29	11.50	12.38	13.04	13.48	14.12	15.00	15.56	16.06	15.09	14.58	14.42	13.86
	0.31	0.31	0.32	0.32	0.31	0.32	0.32	0.31	0.32	0.32	0.32	0.32	0.31
Cyprus	4.52	4.76	4.93	5.00	5.13	5.30	5.55	5.84	6.09	6.31	6.51	6.67	6.69
	0.31	0.32	0.32	0.32	0.31	0.31	0.31	0.31	0.32	0.33	0.34	0.35	0.36
Czech Republic	33.64	34.83	36.02	37.28	39.25	41.98	45.39	48.13	50.26	47.11	48.44	49.13	47.99
	0.32	0.32	0.32	0.32	0.32	0.32	0.33	0.33	0.33	0.33	0.33	0.32	0.32
Denmark	69.89	71.24	71.04	71.24	72.19	73.83	76.17	77.74	77.32	73.17	73.93	74.40	74.42
	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29
Estonia	3.31	3.51	3.82	4.00	4.25	4.68	5.05	5.38	5.11	4.29	4.39	4.82	5.01
	0.34	0.34	0.34	0.33	0.33	0.34	0.33	0.33	0.32	0.32	0.32	0.32	0.32
Finland	51.92	53.10	54.14	54.93	57.27	58.81	60.89	64.54	64.64	59.42	61.37	62.52	61.63
	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
France	61.27	63.07	63.72	64.27	65.80	67.17	68.99	71.27	71.57	68.54	69.37	70.81	70.35
	0.31	0.31	0.31	0.31	0.31	0.31	0.32	0.32	0.32	0.32	0.31	0.31	0.31
Germany	82.37	83.62	83.73	83.40	83.34	82.81	85.61	88.92	89.92	84.65	88.60	91.53	92.52
	0.31	0.31	0.31	0.31	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
Greece	71.15	72.13	71.78	71.73	71.06	69.71	73.18	74.92	74.52	72.02	66.85	60.31	53.68
	0.36	0.35	0.34	0.32	0.30	0.29	0.29	0.29	0.28	0.28	0.28	0.27	0.26
Hong Kong SAR, China	51.14	52.28	53.08	54.49	59.76	65.48	71.12	76.17	79.08	76.90	82.62	87.52	89.14
	0.35	0.35	0.35	0.35	0.35	0.36	0.37	0.37	0.37	0.37	0.38	0.38	0.38
Iceland	3.61	3.77	3.80	3.89	4.22	4.49	4.64	4.96	5.05	4.74	4.53	4.66	4.74
	0.27	0.27	0.28	0.28	0.28	0.28	0.27	0.27	0.28	0.28	0.28	0.28	0.28
Ireland	17.97	18.85	19.97	20.21	20.76	63.16	20.92	21.43	21.03	20.70	0.00	0.00	0.00
	0.11	0.11	0.11	0.11	0.11	0.31	0.10	0.10	0.10	0.10	0.00	0.00	0.00
Italy	55.26	56.17	55.90	55.19	56.25	57.04	58.62	60.04	58.96	55.05	56.24	56.56	54.05
	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.31
Japan	14.82	14.77	14.76	15.01	15.40	15.56	15.83	16.08	15.87	14.85	15.68	15.48	15.64
	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.33	0.34	0.33	0.33

Country Name	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Korea, Rep.	24.54	25.64	27.43	28.28	29.48	30.78	32.43	34.37	35.63	36.14	38.30	0.00	0.00
	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.35	0.35	0.35	0.00	0.00
Latvia	3.56	3.89	4.09	4.40	4.78	5.33	5.98	6.51	6.24	5.08	5.01	4.40	3.88
	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.32	0.27	0.23
Lithuania	5.99	6.43	6.90	7.46	8.25	9.08	9.99	10.97	11.20	9.31	9.25	8.75	8.50
	0.33	0.34	0.34	0.33	0.34	0.35	0.36	0.36	0.35	0.34	0.34	0.30	0.28
Luxembourg	9.77	10.11	10.42	10.67	10.96	11.61	12.28	13.36	13.03	12.13	12.71	12.89	12.84
	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.32	0.31	0.31	0.31	0.31	0.31
Malta	2.21	2.00	2.07	2.07	2.00	2.04	2.07	2.15	2.26	2.10	2.15	2.11	2.10
	0.39	0.35	0.36	0.36	0.35	0.34	0.34	0.34	0.34	0.33	0.32	0.31	0.31
Netherlands	18.08	18.49	18.44	18.53	18.90	19.31	20.00	20.80	21.24	20.53	20.84	21.08	20.63
	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.31	0.31	0.31	0.30
New Zealand	30.43	31.61	32.98	34.55	35.79	36.87	37.43	38.82	38.38	39.17	39.25	40.19	41.16
	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.33	0.33	0.32	0.32	0.32
Norway	78.10	80.07	80.98	82.86	86.26	88.68	90.82	92.56	91.60	91.37	92.49	94.04	96.44
	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29
Poland	8.71	8.75	8.87	9.24	9.78	10.09	10.91	11.84	12.42	12.49	12.85	13.09	13.33
	0.33	0.33	0.33	0.33	0.33	0.33	0.34	0.34	0.34	0.34	0.34	0.33	0.33
Portugal	57.39	58.50	58.50	57.83	58.72	58.71	59.41	60.82	61.07	59.61	60.05	58.76	56.57
	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.30	0.30	0.30
Russian Federation	18.49	19.72	20.48	22.01	23.33	24.67	26.65	28.76	30.24	28.16	29.42	30.49	31.67
	0.33	0.33	0.33	0.33	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32
Saudi Arabia	14.73	14.60	13.94	15.19	16.24	16.82	17.25	17.72	18.79	18.51	19.42	21.11	21.95
	0.57	0.56	0.54	0.54	0.53	0.51	0.50	0.48	0.47	0.46	0.45	0.45	0.44
Singapore	34.05	33.87	35.40	36.95	40.70	43.69	47.61	51.81	53.31	52.68	61.34	65.64	66.98
	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.35	0.34	0.35	0.35	0.35
Slovak Republic	15.29	15.91	16.72	17.47	18.41	19.74	22.09	24.61	26.08	24.62	25.41	25.29	25.12
	0.32	0.32	0.32	0.32	0.32	0.32	0.33	0.34	0.34	0.33	0.33	0.32	0.31
Slovenia	9.70	10.03	10.39	10.75	10.95	11.29	11.90	12.67	12.98	11.96	12.02	0.00	0.00
	0.32	0.33	0.33	0.33	0.32	0.32	0.31	0.31	0.31	0.31	0.31	0.00	0.00
Spain	30.35	32.21	32.52	32.90	33.51	34.44	35.62	36.79	36.52	34.35	33.84	33.73	32.59
	0.32	0.32	0.32	0.31	0.31	0.30	0.30	0.30	0.30	0.29	0.29	0.29	0.28
Sweden	9.62	9.78	10.02	10.25	10.67	10.76	11.25	11.64	11.60	10.97	11.58	11.95	12.05
	0.30	0.30	0.30	0.30	0.30	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29
Switzerland	11.39	11.51	11.60	11.53	11.81	12.11	12.55	12.99	13.31	13.05	13.30	13.50	13.62
	0.32	0.32	0.32	0.32	0.32	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31
Trinidad and Tobago	4.00	4.19	4.52	5.20	5.55	5.76	6.48	6.85	7.00	6.69	6.63	6.52	6.52
	0.37	0.37	0.37	0.37	0.36	0.36	0.35	0.36	0.35	0.35	0.35	0.35	0.34
United Arab Emirates	29.59	32.50	32.63	35.26	38.15	39.05	42.03	41.39	41.75	38.83	38.99	40.40	41.33
	0.21	0.23	0.23	0.22	0.22	0.22	0.21	0.20	0.20	0.19	0.19	0.19	0.19
United Kingdom	61.58	63.21	64.51	67.24	69.36	72.09	73.51	76.12	75.67	71.06	72.34	72.90	72.67
	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.30
United States	37.00	37.53	38.16	39.42	40.94	41.82	42.81	43.82	44.06	43.82	44.94	45.83	46.56
	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.33	0.33	0.33	0.33
Uruguay	4.97	4.76	4.52	4.63	4.81	5.17	5.19	5.57	5.93	6.06	6.55	7.03	7.25
	0.29	0.29	0.30	0.30	0.30	0.30	0.29	0.29	0.29	0.29	0.29	0.29	0.28

Note: The data is in US billion dollars and first line show home production of the country and second line show the percentage to home production to the GDP of that country.

Appendix B

Debt Stock

The data is in US billion dollars for all four Tables

Table B.1 (Low-income economies ($1,045 or less)

Country Name	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Bangladesh	-1.09	-0.84	2.08	2.02	1.36	-1.21	1.55	1.09	1.25	1.25	0.78	0.98	-0.70
Benin	-0.10	0.08	0.15	-0.13	0.13	-0.06	-0.87	0.12	0.18	0.30	0.24	0.22	0.14
Burkina Faso	-0.19	0.08	0.05	0.20	0.20	0.07	-0.85	0.33	0.19	0.20	0.22	0.20	0.08
Burundi	-0.04	-0.04	0.19	0.14	0.01	-0.07	0.08	0.03	-0.01	-0.51	0.01	-0.01	0.03
Cambodia	0.13	0.08	0.23	0.32	0.26	0.08	0.01	-0.64	0.32	0.18	0.22	0.37	0.80
Comoros	0.00	0.01	0.03	0.02	0.01	-0.02	0.00	0.00	-0.01	0.01	-0.01	0.00	-0.02
Congo, Dem. Rep.	-3.12	-0.33	-2.07	1.50	0.24	-0.84	0.57	0.85	-0.10	0.48	-4.04	-0.33	0.05
Ethiopia	-0.08	0.34	1.11	0.87	-0.71	-0.46	-3.50	0.26	0.14	1.13	0.95	0.42	0.51
Guinea	0.27	0.73	1.36	0.22	-0.04	-0.24	0.12	0.06	-0.03	-0.02	0.00	0.00	-0.62
Kenya	-0.49	-0.86	0.83	0.92	0.06	-0.49	0.17	0.67	0.05	0.57	0.12	0.72	0.57
Liberia	0.42	0.30	0.34	0.41	0.25	0.09	0.22	-0.35	-0.44	-0.87	-0.88	0.02	0.02
Madagascar	-0.09	-0.83	0.48	0.59	-1.37	-0.30	-1.81	0.62	0.15	0.21	-0.06	0.04	0.07
Malawi	-0.07	-0.20	0.43	0.27	0.38	-0.25	-2.04	0.00	0.09	0.10	-0.07	0.10	0.05
Mali	-0.27	-0.11	-0.09	0.29	0.23	-0.07	-1.58	0.23	0.18	0.13	0.22	0.39	0.11
Mozambique	0.03	-3.79	0.25	-1.38	0.99	-0.54	-1.41	0.21	0.33	0.47	-0.26	0.21	0.39
Nepal	-0.19	-0.16	0.30	0.24	0.16	-0.18	0.20	0.19	0.07	0.06	0.01	0.02	-0.01
Niger	0.00	-0.10	0.24	0.30	-0.14	-0.01	-1.19	0.32	-0.13	0.26	0.26	0.60	0.07
Rwanda	-0.03	0.01	0.20	0.13	0.13	-0.15	-1.01	0.15	0.06	0.12	0.03	0.12	0.10
Sierra Leone	0.52	0.16	0.48	0.31	0.14	0.12	-0.21	-0.66	0.05	0.12	0.04	0.05	0.03
Tajikistan	-0.51	0.03	0.12	0.02	-0.11	-0.04	-0.05	0.22	0.77	0.11	0.24	0.13	0.16
Tanzania	-0.92	-0.83	0.74	0.20	1.37	-0.23	-4.01	0.84	0.75	1.14	0.90	0.56	0.83
Togo	-0.11	-0.03	0.19	0.14	0.11	-0.15	0.11	0.17	-0.29	0.08	-0.38	-0.54	0.10
Uganda	0.00	0.28	0.30	0.62	0.22	-0.33	-2.95	0.31	0.50	0.33	0.16	0.16	0.25
Zimbabwe	-171.56	-46.67	24.20	8.81	1.23	-0.55	0.03	0.10	-0.01	0.02	0.04	0.05	0.09

Note: The data is in US billion dollars.

Table B.2 (Lower-middle-income economies ($1,046 to $4,125))

Country Name	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Armenia	-0.02	0.45	0.35	0.30	0.11	-0.14	0.16	0.84	0.43	1.22	0.93	0.81	0.16
Bhutan	0.02	0.05	0.10	0.09	0.11	0.06	0.06	0.07	-0.09	0.05	0.11	0.10	0.25
Bolivia	0.27	-1.26	0.36	0.84	0.44	0.68	-1.06	-0.38	0.40	0.06	0.02	0.28	0.28
Cabo Verde	-0.01	0.03	0.04	0.05	0.02	0.01	0.04	0.05	0.04	0.08	0.14	0.12	0.17
Cameroon	-0.23	-0.86	0.56	1.15	-0.56	-3.16	-4.07	-0.31	-0.23	0.36	-0.04	-0.10	0.48
Congo, Rep.	-0.15	-0.40	0.70	0.40	1.18	-0.44	0.40	-1.28	0.18	-0.44	-1.95	0.18	0.14
Cote d'Ivoire	-1.21	-0.62	0.22	0.42	1.07	-1.29	0.83	1.06	-0.87	1.38	-2.60	1.26	-2.62
Egypt, Arab Rep.	-2.41	-2.37	1.94	1.20	0.90	-0.81	0.65	3.04	-0.47	0.96	0.86	-0.73	2.38
El Salvador	0.91	0.92	0.47	2.55	0.49	0.74	0.87	-0.34	0.69	-0.24	0.81	0.54	1.01
Georgia	-0.03	0.11	0.15	0.13	0.18	-0.17	0.39	0.27	3.61	0.69	0.67	1.19	1.35
Ghana	-0.62	0.57	1.07	0.88	-0.52	-0.26	-3.15	1.16	0.40	0.88	1.13	0.96	0.51
Guatemala	0.11	0.58	0.18	0.74	3.20	1.41	1.35	1.52	0.90	0.78	0.16	0.88	-0.89
Guyana	-0.06	-0.07	0.07	0.07	-0.07	-0.15	-0.07	-0.34	0.07	0.24	0.23	0.25	0.09
Honduras	0.05	-0.63	0.42	0.20	0.63	-0.93	-1.09	-0.90	0.39	0.24	0.12	0.28	0.38
India	1.30	-1.91	7.01	14.22	4.96	-2.45	36.11	39.44	18.85	21.53	23.26	27.33	23.38
Indonesia	-12.69	-15.82	-5.29	6.65	4.10	4.33	-5.18	9.88	7.61	15.52	14.34	16.02	18.79
Kyrgyz Republic	0.10	-0.13	0.15	0.21	0.43	-0.31	0.32	0.24	0.52	0.32	0.00	0.70	0.27
Lao PDR	-0.04	-0.02	0.77	-0.86	0.31	0.28	0.54	1.00	0.48	0.46	-0.06	0.37	0.15
Lesotho	-0.01	-0.12	0.07	0.05	0.07	-0.11	-0.01	0.02	0.01	0.05	0.01	0.01	0.04
Mauritania	-0.22	-0.13	-0.02	0.10	-0.02	-0.02	-0.65	0.08	0.23	0.23	0.31	0.12	0.33
Moldova	1.07	-0.08	0.25	0.19	0.00	0.11	0.36	0.59	0.20	0.07	0.71	0.38	0.39
Mongolia	-0.03	-0.02	0.20	0.54	0.06	-0.20	0.11	0.21	0.10	0.20	0.17	0.03	1.19
Morocco	-2.43	-2.01	-0.83	0.23	-1.33	-0.72	1.59	2.59	0.25	3.33	1.50	2.48	4.14
Nicaragua	-0.07	-0.57	0.07	0.49	-1.93	-0.09	-0.75	-0.06	0.42	0.75	0.70	0.54	0.53
Nigeria	4.59	-2.70	-0.18	5.72	3.01	-16.21	-15.16	-0.18	0.22	1.90	0.26	0.97	0.53
Pakistan	-1.44	-1.29	2.28	3.11	-0.11	-2.33	2.92	4.16	5.38	4.29	3.77	0.98	-1.47
Paraguay	-0.45	-0.41	0.25	0.23	0.41	-0.38	0.18	0.13	0.45	-0.04	0.67	0.56	0.26
Philippines	-0.03	-0.07	1.90	3.01	-1.72	-2.46	-1.14	1.49	-0.77	-2.04	3.98	0.19	0.27
Senegal	-0.37	0.05	0.43	0.29	-0.47	-0.08	-1.89	0.60	0.23	0.78	0.15	0.35	0.48
Sri Lanka	-1.15	-0.59	1.31	0.87	0.72	0.32	0.47	1.94	0.80	1.31	1.92	1.57	0.70
Swaziland	-0.09	0.00	0.06	0.06	0.06	0.02	-0.03	-0.01	0.02	0.04	0.14	-0.04	-0.10
Syrian Arab Republic	-0.89	-1.33	-1.14	-1.04	-0.17	-13.44	-0.02	0.11	-0.23	0.22	-0.29	-0.20	-0.11
Ukraine	-1.57	10.88	1.62	2.88	5.61	3.03	17.23	21.50	12.56	3.37	10.56	4.90	-0.11
Vanuatu	0.01	0.00	0.02	0.01	0.03	-0.04	0.00	0.02	0.02	0.00	0.02	0.02	0.14
Vietnam	-12.94	-0.30	0.88	3.05	2.20	1.05	-0.36	3.99	2.24	4.30	7.09	4.12	2.80
Yemen, Rep.	-1.96	0.06	0.20	0.23	0.10	-0.12	0.19	0.37	0.12	0.28	-0.03	-0.14	0.50
Zambia	-0.36	0.78	0.82	0.28	0.79	-2.08	-2.83	0.40	0.16	0.45	0.39	0.30	0.23

Table B.3 (Upper-middle-income economies ($4,126 to $12,745)

Country Name	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Albania	0.41	0.04	0.03	0.39	0.06	0.50	0.36	0.41	1.23	0.06	0.60	0.87	0.74
Algeria	-3.17	-3.02	0.31	0.77	-1.37	-5.33	-10.93	0.21	0.10	0.99	-0.13	-0.94	-0.29
Argentina	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Azerbaijan	0.32	-0.08	0.20	0.29	0.16	0.10	0.53	0.82	0.48	0.19	1.43	0.72	0.75
Belarus	-0.31	0.42	1.00	0.50	0.91	0.70	1.18	5.12	1.98	4.61	3.91	2.23	0.06
Belize	0.18	0.08	0.11	0.23	0.02	0.06	0.03	0.02	0.18	0.02	0.01	-0.02	-0.02
Bosnia and Herzegovina	0.47	-0.13	0.53	1.39	1.11	0.80	0.71	1.97	0.49	1.31	-1.18	0.19	0.33
Botswana	-0.08	-0.07	0.11	0.03	0.00	-0.06	-0.06	0.03	0.02	0.87	0.06	0.36	0.05
Brazil	-3.94	-17.79	2.59	4.52	-16.26	-32.33	5.70	40.88	21.48	15.63	56.26	38.56	25.79
Bulgaria	0.20	-0.89	1.19	2.17	2.48	-0.05	5.05	10.29	11.93	3.66	-3.96	-1.24	2.38
China	-3.12	40.78	1.22	22.57	38.71	36.57	39.11	47.91	6.00	60.39	98.62	123.66	35.05
Colombia	-0.71	2.93	-3.61	4.19	1.05	-0.05	0.43	5.25	2.42	5.54	8.58	9.99	1.69
Costa Rica	0.82	0.29	0.26	0.74	0.07	0.77	0.46	1.16	0.58	-0.73	0.25	1.31	2.16
Cuba	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dominican Republic	-0.33	1.27	2.78	1.01	0.56	-0.07	1.37	1.34	-0.11	0.69	1.45	1.33	0.93
Ecuador	-4.81	0.98	2.40	0.46	0.91	-0.14	-0.01	0.45	-1.80	-2.13	1.37	1.18	0.32
Fiji	-0.02	-0.01	0.01	0.02	0.06	-0.06	0.16	0.01	0.01	0.12	0.01	0.22	-0.09
Gabon	-0.09	-0.51	0.10	0.25	0.32	-0.19	0.31	-1.27	-0.67	0.15	0.17	0.23	0.07
Hungary	-0.56	0.90	12.02	17.26	26.54	3.10	45.23	36.85	40.68	13.75	-18.48	-3.84	-4.89
Iran, Islamic Rep.	-3.18	-0.69	2.13	6.60	7.39	0.93	-0.87	0.66	-3.47	1.35	0.87	-1.82	-1.27
Iraq	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jamaica	1.32	0.99	0.17	0.15	0.92	0.07	1.41	2.02	-0.05	0.46	1.72	0.09	0.00
Jordan	3.33	0.91	1.23	-0.39	0.41	-0.14	1.01	0.90	-0.79	0.36	1.71	0.45	0.87
Kazakhstan	8.83	3.17	3.79	5.51	10.76	10.62	28.15	18.13	7.45	1.99	5.81	2.95	6.88
Lebanon	1.99	2.99	5.18	2.00	3.72	0.20	1.74	0.50	-1.21	0.43	-0.19	0.15	3.26
Macedonia, FYR	0.02	0.05	0.10	0.09	0.11	0.06	0.06	0.07	-0.09	0.05	0.11	0.10	0.25
Malaysia	-0.03	3.45	3.36	0.30	3.70	-0.18	3.48	7.03	4.11	1.88	13.45	7.94	7.93
Maldives	-0.02	0.04	0.05	0.03	0.08	0.02	0.19	0.25	0.06	0.05	0.02	-0.02	0.02
Mauritius	-0.42	-0.12	0.07	0.08	-0.06	-0.14	-0.12	0.04	-0.03	0.23	0.18	1.31	0.87
Mexico	-18.98	16.32	-7.55	5.27	5.65	6.37	-2.38	23.91	6.64	-5.81	35.28	33.28	51.23
Montenegro	0.00	0.00	0.00	0.00	0.00	0.00	0.44	0.39	0.17	0.71	-0.62	0.60	0.37
Namibia	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Panama	-0.28	0.47	0.15	0.34	0.15	0.43	0.81	-0.14	0.43	1.66	0.11	0.93	-0.21
Peru	-0.58	-1.20	0.76	1.84	1.61	-2.22	-0.21	2.84	2.26	2.36	4.15	2.41	7.43
Romania	4.98	2.55	5.68	7.26	7.58	9.19	14.16	27.21	15.07	13.79	3.16	3.83	1.40
Serbia	1.96	1.53	-1.40	3.57	0.35	1.60	3.34	5.32	3.20	2.30	-0.57	-0.71	1.48
South Africa	1.17	-0.99	7.39	5.87	5.16	6.47	7.60	11.93	-1.05	6.89	17.96	8.73	14.40
St. Lucia	0.04	0.03	0.04	0.05	0.02	0.06	-0.05	0.10	0.32	-0.36	0.13	-0.11	0.02
Suriname	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Thailand	-19.09	-13.80	-4.78	-4.80	-0.04	0.18	3.69	0.26	3.40	9.48	21.95	4.22	21.54
Tunisia	-0.63	1.74	2.80	3.07	1.19	-1.63	0.73	1.68	0.77	1.12	-0.18	0.30	1.96
Turkey	51.25	-8.53	25.32	15.93	17.14	13.97	34.17	40.99	23.20	-8.37	14.43	3.90	18.18
Venezuela, RB	-0.73	-3.20	-2.42	0.97	1.09	6.16	-1.44	4.80	5.16	5.93	2.30	2.53	0.71

Table B.4 High-income economies ($12,746 or more)

The foreign Debt statistics for high income countries is not available.

Appendix C

Resource Depletion

The data is in US billion dollars for all four Tables.

Table C.1 (Low-income economies ($1,045 or less)

Country Name	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Bangladesh	1.15	1.23	0.90	1.56	1.76	2.54	3.21	3.39	4.58	2.61	3.35	3.30	3.38
Benin	0.01	0.02	0.02	0.03	0.02	0.03	0.04	0.05	0.06	0.06	0.08	0.08	0.08
Burkina Faso	0.00	0.00	0.00	0.00	0.02	0.09	0.14	0.19	0.27	0.35	0.61	0.90	1.15
Burundi	0.12	0.17	0.23	0.31	0.26	0.23	0.28	0.37	0.42	0.37	0.37	0.37	0.35
Cambodia	0.07	0.08	0.09	0.15	0.16	0.10	0.11	0.12	0.18	0.16	0.19	0.22	0.25
Comoros	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Congo, Dem. Rep.	0.09	0.20	0.17	0.25	0.42	1.76	2.42	2.91	3.55	3.57	4.43	5.08	4.52
Ethiopia	1.20	1.35	1.82	2.16	2.00	1.91	2.27	2.75	2.82	2.43	3.33	4.00	2.98
Guinea	0.26	0.29	0.30	0.32	0.30	0.47	0.67	0.56	0.63	0.62	0.67	0.79	0.69
Kenya	0.43	0.44	0.54	0.61	0.55	0.58	0.69	0.86	0.96	0.91	1.01	1.11	0.89
Liberia	0.00	0.01	0.03	0.01	0.00	0.01	0.05	0.10	0.18	0.16	0.23	0.26	0.28
Madagascar	0.00	0.00	0.00	0.00	0.02	0.04	0.10	0.12	0.13	0.13	0.16	0.19	0.24
Malawi	0.15	0.16	0.13	0.18	0.14	0.15	0.18	0.22	0.26	0.22	0.24	0.26	0.33
Mali	0.02	0.03	0.09	0.11	0.10	0.13	0.30	0.31	0.33	0.45	0.55	0.71	0.74
Mozambique	0.00	0.00	0.00	0.00	0.14	0.34	0.39	0.38	0.54	0.27	0.31	0.32	0.34
Nepal	0.30	0.27	0.20	0.36	0.33	0.30	0.44	0.48	0.43	0.42	0.61	0.51	0.47
Niger	0.22	0.21	0.24	0.25	0.21	0.22	0.27	0.32	0.32	0.30	0.33	0.33	0.29
Rwanda	0.08	0.10	0.14	0.16	0.13	0.12	0.14	0.17	0.25	0.21	0.23	0.24	0.22
Sierra Leone	0.13	0.07	0.10	0.13	0.12	0.12	0.15	0.17	0.18	0.18	0.23	0.23	0.00
Tajikistan	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.04	0.06	0.05
Tanzania	0.00	0.00	0.03	0.07	0.12	0.19	0.36	0.35	0.43	0.51	0.74	1.17	1.11
Togo	0.14	0.13	0.14	0.16	0.11	0.10	0.13	0.17	0.31	0.20	0.23	0.25	0.24
Uganda	0.63	0.73	0.94	1.24	0.96	0.95	1.28	1.54	1.84	1.76	1.94	2.36	1.78
Zimbabwe	0.03	0.05	0.04	0.08	0.20	0.17	0.28	0.39	0.29	0.08	0.14	0.17	0.11

Table C.2 (Lower-middle-income economies ($1,046 to $4,125))

Country Name	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Armenia	0.01	0.01	0.01	0.01	0.03	0.03	0.06	0.05	0.08	0.09	0.15	0.21	0.24
Bhutan	0.09	0.08	0.05	0.09	0.10	0.09	0.14	0.15	0.16	0.16	0.27	0.24	0.22
Bolivia	0 41	0.43	0.43	0.75	1.16	2.32	2.49	2.50	2.89	1.29	1.56	1.97	1.71
Cabo Verdi	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0 00	0.00
Cameroon	1.17	0.89	0.89	0.84	1.00	1.31	1.57	1.49	1.80	1 01	0.91	1 01	1.10
Congo, Rep.	2.83	2.68	2.49	2.57	2.37	3.04	3.74	2.48	2.91	2.96	3.61	2.49	2.07
Cote d'Ivoire	0.26	0.23	0.24	0.32	0.40	0.82	1.26	0.97	1.15	0.71	0.67	0.80	0.86
Egypt, Arab Rep.	4.72	4.56	5.08	7.65	10.08	16.18	15.76	15.36	20.11	9.36	9.99	12.55	10.57
El Salvador	0.15	0.16	0.17	0.20	0.18	0.16	0.18	0.24	0 26	0.25	0.32	0.28	0.27
Georgia	0.06	0.04	0.04	0.05	0.05	0.05	0.06	0.06	0.06	0.06	0.06	0.06	0.05
Ghana	0.84	0.85	1.02	1.17	1.00	0.90	0.73	0.83	0.96	1.17	1.17	1.56	1.55
Guatemala	0.45	0.54	0.57	0.78	0.74	0.68	0.79	1.03	1.02	1.02	1.27	1.31	1.28
Guyana	0 03	0.02	0.01	0.02	0.03	0.03	0.02	0.03	0.04	0.05	0 07	0.09	0 09
Honduras	0.01	0.00	0.00	0.01	0.02	0.19	0.27	0.32	0.28	0.27	0.34	0.32	0.30
India	15.46	16.04	12.88	17.62	24.00	28.19	35.51	41.14	63.34	36.62	54.28	62.33	54.63
Indonesia	22.31	20.32	16.24	17.29	20.99	28.91	27.20	28.63	35.56	17.85	20.01	23.38	19.23
Kyrgyz Republic	0 03	0.03	0.04	0.07	0.08	0.07	0.08	0.08	0.14	0.17	0.26	0.31	0.35
Lao PDR	0.06	0.07	0.07	0.10	0.10	0.13	0.28	0.28	0.33	0.31	0.44	0.54	0.54
Lesotho	0.04	0.05	0.06	0.06	0.05	0.04	0.06	0.07	0.10	0.09	0.08	0.08	0.08
Mauritania	0.14	0.15	0.14	0.15	0.18	0 36	0.34	0.74	0.84	0.58	1.02	1.10	1.07
Moldova	0 01	0.01	0 01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02
Mongolia	0.06	0.06	0.07	0.10	0.23	0.30	0.58	0.61	0.65	0.54	0.90	1.14	0.80
Morocco	0 21	0.21	0.19	0.10	0.11	0.14	0.30	0.64	3.73	0.83	1.26	2.16	2.29
Nicaragua	0.03	0.03	0.04	0.07	0.07	0.15	0.17	0.24	0.23	0.24	0.33	0.35	0.33
Nigeria	19.50	19.57	13.45	18.44	26.09	30.84	30.09	29.40	33.14	25.04	18.26	21.64	19.15
Pakistan	2.71	2.76	2.19	3.71	4.02	5.91	5.41	5.79	7.33	4.13	4.82	4.48	3.95
Paraguay	0.44	0.43	0.59	0.67	0.49	0.47	0.49	0.52	0.53	0.51	0.61	0.48	0.48
Philippines	0.33	0.34	0.54	0.87	0.96	1.28	1.96	4.24	2.52	2.36	3.83	4.63	3.81
Senegal	0 01	0.01	0.01	0.00	0.00	0.00	0.01	0.01	0.09	0.09	0.11	0.15	0.22
Sri Lanka	0.10	0.09	0.07	0.12	0.11	0.10	0.15	0.17	0.14	0.13	0.21	0.18	0.17
Swaziland	0 02	0.03	0.04	0.03	0.03	0.03	0.03	0.04	0.07	0.05	0.05	0.05	0.03
Syrian Arab Republic	5.03	4.29	4.89	5.69	4.77	5.90	5.88	5.56	6.13	6.32	6.51	6.69	6.87
Ukraine	3 35	3.38	2.26	3.34	4.50	4.62	4.27	3.83	4.93	2.68	2.83	3.41	2.49
Vanuatu	0 00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vietnam	3 20	2.93	2.76	3.26	5.37	6.27	6.30	6.58	8.49	4.80	6.04	7.33	6.56
Yemen, Rep.	4.70	3.76	3.40	3.64	3.83	4.60	4.26	2.92	2.96	1.79	2.25	2.72	1.77
Zambia	0 06	0.02	0.02	0.06	0.37	0.51	1.01	1.02	0.92	1.08	1.42	1.56	1.35

Table C.3 (Upper-middle-income economies ($4,126 to $12,745)

Country Name	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Albania	0.07	0.05	0.06	0.06	0.08	0.11	0.16	0.23	0.23	0.14	0.25	0.40	0.44
Algeria	16.89	15.25	14.59	20.51	21.51	29.81	29.28	27.90	31.04	19.45	19.33	19.91	18.56
Argentina	4.25	3.75	7.85	9.50	14.14	19.30	19.74	17.82	21.38	12.57	13.23	14.21	13.06
Azerbaijan	3.08	2.77	2.22	2.70	3.28	5.39	7.37	8.62	9.96	8 07	9.27	8.44	7.46
Belarus	0.41	0.37	0.33	0.35	0.40	0.49	0.52	0.50	0.55	0.37	0.46	0.59	0.52
Belize	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bosnia and Herzegovina	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Botswana	0.06	0.01	0.01	0.08	0.21	0.24	0.61	0.77	0.48	0.25	0.38	0.38	0.31
Brazil	21.32	22.42	28.27	33.30	32.44	39.23	41.55	48.69	56.13	32.66	43.47	46.85	45.77
Bulgaria	0.12	0.09	0.09	0.08	0.18	0.26	0.48	0.42	0.39	0.24	0.39	0.51	0 44
China	29.39	30.47	24.67	32.81	71.12	87.59	111.32	144.46	225.07	103.14	177.16	234.05	178.16
Colombia	7.14	5.42	5.32	6.95	8.74	10.21	12.26	11.75	16.31	10.66	13.82	19.30	17.64
Costa Rica	0.05	0.06	0.06	0.07	0.07	0.15	0.18	0.24	0.25	0.21	0.23	0.19	0.18
Cuba	0.52	0.36	0.48	0.69	0.92	1.16	1.71	2.75	2.16	1.14	1.72	2.23	0.00
Dominican Republic	0.15	0.06	0 09	0.26	0.44	0.40	0.72	1.11	0.30	0.03	0.04	0.27	0.23
Ecuador	4.06	2.67	2.36	2.76	4.44	6.04	7.06	7.14	8.02	4.64	5.63	7.25	6.85
Fiji	0.01	0.01	0.02	0.02	0.02	0.01	0.02	0.01	0.01	0.02	0.04	0.04	0.05
Gabon	2.44	2.13	2.03	2.23	2.54	3.11	2.93	2.98	2.89	2.26	2.76	2.99	3.16
Hungary	0.73	0.59	0.37	0.47	0.49	0.69	0.71	0.53	0.69	0.38	0.39	0.42	0.37
Iran, Islamic Rep.	38.53	29.10	30.05	38.57	44.62	62.04	67.73	64.48	79.74	48.10	48.01	49.12	50.08
Iraq	31.45	29.48	27.51	25.54	23.57	21.02	20.34	17.01	17.21	12.74	13.29	15.03	14 52
Jamaica	0.15	0.16	0.13	0.12	0.14	0.15	0.14	0.18	0.13	0.12	0.13	0.20	0.19
Jordan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Kazakhstan	10.10	9.61	11.02	11.81	15.91	19.43	20.06	17.42	20.95	14.88	16.87	18.71	17.15
Macedonia, FYR	0.04	0.03	0.03	0.04	0.07	0.07	0.20	0.35	0.20	0.13	0.22	0.26	0.20
Malaysia	9.01	8.22	7.40	10.34	12.76	17.73	17.08	16.21	20.38	12.69	12.89	13.40	12.78
Maldives	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mauritius	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mexico	25.79	21.27	21.59	30.78	41.10	56.43	63.70	64.09	77.33	46.62	55.07	69.15	67.64
Montenegro	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02
Namibia	0.01	0.01	0.01	0.02	0.02	0.04	0.12	0.32	0.13	0.09	0.15	0.15	0.13
Panama	0.00	0.00	0.01	0.01	0.01	0.01	0.03	0.02	0.02	0.06	0.07	0.10	0.12
Peru	0.93	0.63	0.60	0.90	1.91	3.36	7.37	8.70	8.22	6.13	8.56	10.57	9.18
Romania	3.18	2.74	2.29	2.65	2.76	3.10	2.76	2.07	2.78	1.42	1.50	1.93	1.76
Serbia	0.61	0.33	0.21	0.23	0.33	0.38	0.45	0.52	0.59	0.63	0.69	0.75	0.79
South Africa	1.40	3.54	2.95	3.08	6.56	5.90	7.76	10.60	22.11	10.52	14.34	17.43	14.96
St. Lucia	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Suriname	0.17	0.07	0.03	0.02	0.03	0.04	0.05	0.06	0.06	0.11	0.16	0.24	0.28
Thailand	3.35	3.46	3.08	5.16	5.36	8.20	8.77	8.88	12.53	7.29	7.97	8.40	8.79
Tunisia	0.84	0.69	0.65	0.67	0.80	1.21	1.30	1.85	3.42	1.53	1.85	2.10	2.03
Turkey	0.65	0.61	0.53	0.53	0.66	0.93	1.26	1.38	1.81	1.10	1.65	2.52	2.20
Venezuela, RB	22.57	18.55	20.33	22.84	32.48	43.27	44.10	37.80	40.26	20.91	22.20	38.18	34.27

Table C.4 High-income economies ($12,746 or more)

Country Name	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Australia	13.40	13.82	13.91	15.64	19.11	25.69	31.41	43.77	52 72	32.25	48.26	53.26	41.54
Austria	0.42	0.37	0.31	0.42	0.44	0.60	0.75	0.86	1.06	0.46	0.65	0.68	0.68
Bahamas, The	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barbados	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Belgium	0.03	0.03	0.06	0.07	0.07	0.08	0.11	0.10	0.11	0.08	0.12	0.11	0.14
Brunei Darussalam	2.97	2.96	2.74	3.56	3.53	4.47	4.50	4.09	4.75	2.94	3.07	2.69	2.31
Canada	30.08	26.40	20.43	30.53	35.11	52.19	53.99	52.25	65.90	26.49	30.66	38.37	33.49
Chile	4.84	4.29	4.16	5.08	8.74	10.26	17.23	17.95	17.02	12.52	16.30	17.79	16.02
Croatia	0.69	0.62	0.56	0.60	0.50	0.68	0.80	0.74	0.91	0.49	0.56	0.62	0.62
Cyprus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Czech Republic	0.09	0.07	0.07	0.10	0.32	0.21	0.27	0.38	0.85	0.21	0.49	0.69	0.42
Denmark	4.89	3.85	3.61	3.77	4.82	7.13	7.34	6.40	8.14	3.87	4.53	4.98	4.69
Estonia	0.21	0.31	0.28	0.22	0.08	0.02	0.02	0.03	0.07	0.03	0.13	0.16	0.15
Finland	0.02	0.01	0.02	0.02	0.04	0.05	0.15	0.18	0.23	0.15	0.30	0.42	0.42
France	0.52	0.46	0.36	0.37	0.38	0.50	0.57	0.49	0.62	0.31	0.38	0.45	0.41
Germany	2.99	2.97	2.15	2.85	3.23	4.53	4.94	5.31	6.53	2.53	2.74	3.66	2.55
Greece	0.09	0.05	0.04	0.06	0.12	0.16	0.31	0.47	0.33	0.10	0.28	0.39	0.22
Hong Kong SAR, China	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Iceland	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ireland	0.15	0.10	0 07	0.07	0.11	0.11	0.79	0.67	0.21	0.11	0.26	0.23	0.17
Italy	2.97	2.47	1.97	2.38	2.37	3.65	3.49	3.05	3.57	1.54	1.99	2.41	2.41
Japan	0.27	0.28	0.25	0.39	0.42	0.73	0.87	0.98	1.24	0.57	0.56	0.63	0.59
Korea, Rep.	0.00	0.03	0.03	0.06	0.04	0.14	0.13	0.12	0.21	0.15	0.18	0.19	0.16
Latvia	0.31	0.22	0.28	0.28	0.16	0.15	0.18	0.13	0.03	0.06	0.14	0.11	0.13
Lithuania	0.10	0.12	0 13	0.13	0.09	0.09	0.09	0.08	0.06	0.03	0.10	0.09	0.09
Luxembourg	0.00	0 00	0 00	0.00	0.00	0.00	0.00	0.00	0.06	0.02	0.01	0.02	0.03
Malta	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Netherlands	7.19	7.27	4.79	6.30	7.78	10.78	10.09	9.17	13.85	5.64	6.30	5.92	5.05
New Zealand	0.42	0.33	0.27	0.22	0.28	0.33	0.43	0.72	1.46	0.96	1.15	1.28	1.14
Norway	41.42	35.05	30.68	33.95	38.11	47.20	46.99	43.53	53.89	32.60	33.16	34.41	30.52
Poland	1.48	1.68	1.21	1.54	3.30	2.92	4.04	3.98	5.50	3.16	4.52	5.70	5.00
Portugal	0.00	0.00	0.00	0.00	0.04	0.08	0.22	0.26	0.20	0.12	0.21	0.27	0.23
Russian Federation	151.87	122.91	99.90	136.31	144.50	184.78	174.11	157.78	186.57	109.32	120.13	130.28	115.40
Saudi Arabia	90.03	77.43	69.08	86.62	98.94	116.89	119.20	114.28	131.52	85.01	89.00	104.39	99.17
Singapore	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Slovak Republic	0.48	0.47	0.43	0.36	0.26	0.34	0.39	0.37	0.54	0.38	0.53	0.00	0.00
Slovenia	0.11	0.14	0.12	0.10	0.07	0.07	0.10	0.10	0.16	0.11	0.14	0.16	0.16
Spain	0.08	0.15	0.11	0.09	0.19	0.16	0.22	0.29	0.37	0.19	0.42	0.46	0.52
Sweden	0.04	0.03	0.03	0.04	0.13	0.57	1.04	1.63	1.63	0.64	1.87	2.03	1.53
Switzerland	0.34	0.18	0.09	0.10	0.07	0.08	0.11	0.12	0.11	0.08	0.10	0.08	0.08
Trinidad and Tobago	2 51	2.20	2.19	4.19	4.96	7.52	9.22	8.32	9.74	7.15	7.15	7.86	6.83
United Arab Emirates	18.55	16.71	14.91	20.16	24.91	31.93	35.47	34.00	40.43	23.65	27.74	33.98	33.05
United Kingdom	37.78	31.74	26.15	30.66	30.59	41.90	39.97	37.06	53.22	28.80	31.68	30.99	24.56
United States	77.43	64.50	45.84	75.98	97.12	138.55	146.63	152.78	242.16	87.58	109.52	147.91	121.27
Uruguay	0.00	0.00	0.03	0.07	0.12	0.15	0.23	0.28	0.53	0.31	0.53	0.38	0.39

Appendix D

MGDP1, MGDP2, MGDP3, GDP

The data is in US billion dollars for all four Tables.

Table D.1 (Low-income economies ($1,045 or less)

Country Name	GDP 2000	MGDP1 2000	MGDP2 2000	MGDP3 2000	GDP 2005	MGDP1 2005	MGDP2 2005	MGDP3 2005	GDP 2010	MGDP1 2010	MGDP2 2010	MGDP3 2010
Bangladesh	46.27	61.04	55.83	46.21	60.28	79.57	71.40	58.95	81.47	108.03	95.75	77.34
Benin	3.56	4.82	4.91	3.65	4.36	5.91	5.94	4.39	5.23	7.09	6.77	4.92
Burkina Faso	3.98	5.02	5.20	4.17	5.46	6.83	6.67	5.31	7.11	8.92	8.10	6.28
Burundi	1	5.64	1.13	0.92	1.12	5.06	0.96	0.96	1.39	6.78	1.01	1.01
Cambodia	4.03	5.11	4.92	3.83	6.29	7.98	7.81	6.12	8.69	10.94	10.53	8.29
Comoros	0.34	132.04	0.33	0.33	0.39	169.71	0.40	0.40	0.41	197.24	0.41	0.41
Congo, Dem. Rep.	9.93	13.19	16.14	12.95	11.96	17.81	15.47	11.05	15.67	22.79	20.12	15.27
Ethiopia	8.91	11.24	10.12	7.79	12.17	15.18	13.72	10.72	20.4	26.00	21.72	16.13
Guinea	2.52	3.32	2.79	2.00	2.94	3.83	3.60	2.71	3.27	4.24	3.57	2.60
Kenya	15.67	20.91	20.98	15.74	18.74	25.16	25.07	18.65	23.53	31.35	30.22	22.40
Liberia	0.48	0.67	0.25	0.06	0.54	0.75	0.65	0.45	0.96	1.32	1.98	1.62
Madagascar	4.5	5.77	5.86	4.59	5.04	6.44	6.70	5.30	5.76	5.91	5.80	5.65
Malawi	2.51	41.35	3.19	2.43	2.75	49.25	3.59	2.85	3.87	53.41	4.86	3.70
Mali	3.9	5.77	6.02	4.15	5.31	7.66	7.59	5.24	6.97	9.58	8.81	6.20
Mozambique	4.31	5.52	5.49	4.28	6.58	8.39	8.59	6.78	9.13	11.75	11.70	9.08
Nepal	6.88	8.63	8.52	6.77	8.13	10.23	10.11	8.01	10.1	12.85	12.23	9.48
Niger	2.8	4.07	3.85	2.58	3.41	4.64	4.43	3.20	4.38	5.61	5.02	3.80
Rwanda	1.77	2.26	2.21	1.72	2.58	3.32	3.35	2.61	3.79	4.93	4.67	3.53
Sierra Leone	1.14	1.52	0.87	-0.65	1.63	2.16	1.93	-0.24	2.13	2.81	2.55	-0.26
Tajikistan	1.45	1.90	2.40	1.95	2.31	3.04	3.07	2.34	3.18	4.24	3.96	2.90
Tanzania	10.06	12.45	13.37	10.98	14.14	17.48	17.52	14.18	19.72	24.53	22.89	18.08
Togo	2	2.64	2.61	1.97	2.12	2.74	2.79	2.17	2.48	3.16	3.31	2.62
Uganda	6.52	8.30	7.68	5.89	9.01	11.64	11.02	8.39	13.36	17.21	15.12	11.27
Zimbabwe	8.45	10.96	182.48	179.97	5.76	7.34	7.72	6.14	5.2	7.33	7.16	5.03

Table D.2 (Lower-middle-income economies ($1,046 to $4,125))

Country Name	GDP 2000	MGDP1 2000	MGDP2 2000	MGDP3 2000	GDP 2005	MGDP1 2005	MGDP2 2005	MGDP3 2005	GDP 2010	MGDP1 2010	MGDP2 2010	MGDP3 2010
Armenia	2.75	3.72	3.73	2.76	4.9	6.78	6.89	5.01	5.92	7.95	6.87	4.84
Bhutan	0.56	0.76	0.65	0.46	0.82	1.06	0.92	0.67	1.29	1.65	1.27	0.91
Bolivia	8.2	10.63	9.95	7.52	9.55	12.29	9.28	6.54	11.95	15.31	13.73	10.37
Cabo Verde	0.74	1.01	1.01	0.74	0.97	1.31	1.30	0.96	1.29	1.75	1.61	1.15
Cameroon	13.83	18.57	17.62	12.88	16.59	22.37	24.22	18.43	19.21	25.62	24.75	18.34
Congo, Rep.	4.99	6.67	3.99	2.31	6.09	7.95	5.35	3.48	7.85	10.21	8.55	6.20
Cote d'Ivoire	16.36	22.28	23.23	17.32	16.36	22.25	22.72	16.84	18.17	24.71	26.64	20.11
Egypt, Arab Rep.	75.4	112.10	109.79	73.09	89.69	131.11	115.74	74.32	121.04	176.54	165.69	110.19
El Salvador	15.22	20.79	19.73	14.16	17.09	23.44	22.53	16.19	18.34	25.02	23.90	17.21
Georgia	4.5	6.06	6.03	4.48	6.41	8.63	8.75	6.53	8.24	11.09	10.36	7.51
Ghana	8.39	11.26	11.03	8.16	10.73	13.83	13.19	10.09	14.8	17.97	15.68	12.51
Guatemala	23.44	31.83	31.27	22.88	27.21	36.68	34.59	25.12	32.56	43.62	42.19	31.13
Guyana	0.8	1.08	1.12	0.83	0.82	1.11	1.23	0.95	0.92	1.24	0.94	0.62
Honduras	7.7	10.26	10.20	7.65	9.67	13.04	13.78	10.41	11.55	15.56	15.10	11.09
Indla	602.65	820.56	803.80	585.89	834.22	1120.94	1095.20	808.47	1243.68	1697.27	1619.73	1166.13
Indonesla	226.92	309.78	300.16	217.30	285.87	390.60	357.36	252.63	377.9	512.98	478.63	343.55
Kyrgyz Republic	2.04	2.70	2.56	1.91	2.46	3.26	3.49	2.69	3.06	4.10	3.84	2.80
Lao PDR	2.02	2.52	2.50	2.01	2.74	3.44	3.03	2.33	4.02	5.07	4.69	3.65
Lesotho	1.19	2.50	1.52	1.16	1.37	3.03	1.87	1.43	1.75	4.69	2.24	1.65
Mauritania	1.74	2.72	2.80	1.82	2.18	3.29	2.95	1.85	2.81	4.17	2.84	1.48
Moldova	2.12	2.85	1.77	1.04	2.99	4.17	4.05	2.87	3.5	5.03	4.31	2.78
Mongolia	1.84	2.51	2.47	1.81	2.52	3.42	3.32	2.42	3.45	4.63	3.56	2.38
Morocco	46.69	64.13	66.35	48.91	59.52	82.45	83.03	60.10	75.52	106.21	103.46	72.77
Nicaragua	5.41	7.27	7.31	5.45	6.32	8.52	8.47	6.27	7.16	9.53	8.50	6.13
Nlgerla	67.85	100.00	75.91	43.76	112.25	165.19	150.57	97.62	159.02	227.36	208.84	140.50
Pakistan	85.82	122.22	120.95	84.55	109.5	154.87	151.30	105.93	129.52	182.11	173.53	120.93
Paraguay	7.95	10.53	10.53	7.95	8.73	11.48	11.39	8.65	11.15	14.62	13.34	9.86
Phllippines	82.35	112.97	112.67	82.05	103.07	141.51	142.69	104.24	131.13	180.05	172.24	123.32
Senegal	6.93	8.98	9.34	7.30	8.71	11.26	11.34	8.78	10.37	13.46	13.21	10.11
Sri Lanka	20.09	28.11	29.16	21.14	24.41	34.16	33.74	23.99	33.25	46.81	44.68	31.13
Swaziland	2.33	3.18	3.25	2.40	2.58	3.51	3.47	2.54	2.92	3.90	3.72	2.73
Syrian Arab Republic	22.68	38.32	34.18	18.54	28.86	45.56	53.10	36.40	35.47	54.85	47.31	29.25
Ukraine	59.54	81.33	79.54	57.75	86.14	116.46	108.81	78.49	90.58	122.34	108.96	77.19
Vanuatu	0.38	0.46	0.45	0.37	0.39	0.47	0.51	0.44	0.5	0.62	0.60	0.49
Vietnam	41.29	53.03	62.77	51.02	57.63	74.34	67.03	50.32	78.28	101.77	88.64	65.15
Yemen, Rep.	13.63	5.39	12.45	10.89	16.75	6.36	13.99	12.27	19.99	6.50	19.43	17.77
Zambia	5.67	7.28	7.57	5.97	7.18	9.22	10.79	8.74	9.8	12.60	10.79	7.99

Table D.3 (Upper-middle-income economies ($4,126 to $12,745)

Country Name	GDP 2000	MGDP1 2000	MGDP2 2000	MGDP3 2000	GDP 2005	MGDP1 2005	MGDP2 2005	MGDP3 2005	GDP 2010	MGDP1 2010	MGDP2 2010	MGDP3 2010
Albania	6.44	8.51	8.03	5.96	8.38	11.09	10.49	7.77	10.73	14.24	13.39	9.87
Algeria	78.9	135.02	121.30	65.18	103.2	172.64	148.17	78.72	116.51	195.22	176.02	97.31
Argentina	201.96	268.85	264.60	197.71	222.91	294.00	274.70	203.61	293.7	388.18	374.95	280.47
Azerbaijan	7.04	9.33	5.93	3.63	13.25	17.46	11.98	7.76	28.31	37.54	26.84	17.61
Belarus	21.03	27.81	27.71	20.93	30.21	40.50	39.32	29.02	42.96	58.39	54.02	38.58
Belize	0.86	1.12	0.94	0.68	1.11	1.45	1.39	1.05	1.28	1.67	1.64	1.25
Bosnia and Herzegovina	8.6	11.57	11.11	8.13	10.95	14.74	13.94	10.14	12.8	16.99	18.18	13.99
Botswana	8.31	10.84	10.85	8.32	9.93	12.81	12.63	9.75	12.12	15.62	15.17	11.68
Brazil	768.99	998.26	980.88	751.61	882.19	1141.84	1134.94	875.28	1096.75	1417.58	1317.85	997.03
Bulgaria	22.11	29.65	29.34	21.80	28.9	38.48	38.27	28.68	32.99	43.54	47.10	36.55
China	1417.01	1800.96	1774.68	1390.74	2256.9	2912.76	2788.60	2132.74	3839.28	5003.13	4727.36	3563.51
Colombia	122.66	163.10	156.67	116.24	146.52	194.55	184.38	136.36	182.89	242.24	219.84	160.49
Costa Rica	16.34	21.67	20.80	15.46	19.96	26.31	25.39	19.05	25.02	32.94	32.46	24.54
Cuba	33.38	43.44	42.93	32.86	42.64	55.26	54.09	41.48	55.44	71.33	69.61	53.72
Dominican Republic	28.57	37.82	38.00	28.75	33.97	44.67	44.35	33.65	47.85	62.47	60.98	46.36
Ecuador	32.75	43.73	44.49	33.51	41.51	54.98	49.08	35.61	48.76	65.23	58.24	41.77
Fiji	2.67	19.73	3.536	2.68	3.01	22.53	4.03	3.05	3.03	23.90	3.94	2.98
Gabon	7.95	11.36	9 01	5.60	8.67	12.40	9.47	5.74	9.68	13.73	10.79	6.75
Hungary	89.96	121.54	121.36	89.78	110.32	148.30	144.51	106.53	109.26	145.86	163.95	127.36
Iran, Islamic Rep.	146.28	227.82	192.47	110.93	192.01	291.66	228.69	129.05	242.7	385.83	336.96	193.83
Iraq	48.71	96.45	65.01	17.26	49.95	87.79	66.77	28.94	67.27	117.24	103.96	53.99
Jamaica	11.08	14.08	12.62	9.61	11.08	14.49	14.27	10.86	11.08	14.56	12.70	9.22
Jordan	9.24	12.15	8.80	5.88	12.58	17.10	17.20	12.69	17.03	22.95	21.05	15.12
Kazakhstan	34.88	46.20	27.27	15.96	57.12	75.53	45.48	27.07	77.25	102.04	79.36	54.56
Lebanon	17.38	22.37	20.38	15.40	21.29	27.12	26.92	21.09	30.75	39.21	39.39	30.94
Macedonia, FYR	5.54	7.34	7.25	5.45	5.99	7.89	7.67	5.77	7.14	9.31	9.01	6.84
Malaysia	113.87	157.53	148.55	104.89	143.53	201.27	183.72	125.98	178.67	252.50	226.15	152.33
Maldives	0.68	1.04	0.94	0.70	0.99	1.33	1.31	0.97	1.52	2.04	2.02	1.50
Mauritius	5.41	7.11	7.52	5.82	6.28	8.25	8.39	6.43	7.83	10.31	10.13	7.65
Mexico	798.69	1100.12	1093.31	791.89	866.35	1194.73	1131.92	803.54	953.07	1304.16	1213.81	862.71
Montenegro	1.96	2.59	2.59	1.96	2.26	2.93	2.92	2.25	2.8	3.69	4.29	3.41
Namibia	5.71	7.90	7.89	5.70	7.26	9.90	9.86	7.22	8.94	12.14	12.00	8.79
Panama	12.52	16.31	16.59	12.80	15.46	20.19	19.75	15.02	22.6	29.64	29.46	22.42
Peru	60.06	78.87	78.52	59.71	74.15	97.89	96.75	73.01	103.49	134.86	122.15	90.78
Romania	74.66	99.07	90.91	66.50	99.17	134.79	122.50	86.88	114.09	154.75	150.09	109.43
Serbia	19.46	26.17	23.59	16.88	25.23	33.09	31.11	23.26	27.88	37.00	36.89	27.76
South Africa	204.7	275.02	272.45	202.13	247.05	335.00	322.64	234.69	289.81	390.53	358.24	257.52
St. Lucia	0.86	1.01	0.97	0.82	0.91	1.03	0.97	0.85	1.08	1.23	1.10	0.96
Suriname	1.36	1.84	1.67	1.19	1.79	2.47	2.42	1.75	2.19	2.97	2.81	2.03
Thailand	137.52	182.11	197.85	153.25	176.35	232.24	223.86	167.97	210.09	276.67	246.74	180.16
Tunisia	26.36	37.09	36.89	26.16	32.28	45.31	45.74	32.71	40.74	56.45	54.77	39.06
Turkey	386.58	536.86	484.95	334.68	482.98	671.32	656.42	468.08	565.09	775.22	759.14	549.01
Venezuela, RB	128.28	174.46	152.62	106.44	145.51	194.59	145.16	96.08	174.55	231.67	207.18	150.06

Table D.4 High-income economies ($12,746 or more)

Country Name	GDP 2000	MGDP1 2000	MGDP2 2000	MGDP3 2000	GDP 2005	MGDP1 2005	MGDP2 2005	MGDP3 2005	GDP 2010	MGDP1 2010	MGDP2 2010	MGDP3 2010
Australia	591.25	777.56	764.15	577.85	693.66	913.12	887.43	667.98	797.44	1050.29	1002.03	749.18
Austria	280.62	369.87	369.45	280.20	304.98	401.85	401.25	304.38	325.55	427.25	426.60	324.90
Bahamas	7.1	9.66	9.66	7.10	7.71	10.39	10.39	7.70	7.58	10.08	10.08	7.57
Bahrain	12.42	0.00	9.62	9.62	15.97	0.00	12.45	12.45	20.93	0.00	18.41	18.41
Barbados	3.69	4.74	4.73	3.67	3.89	5.03	5.03	3.89	4.03	5.24	5.23	4.03
Belgium	348.63	458.55	458.53	348.60	377.35	494.95	494.86	377.27	400.38	526.55	526.43	400.27
Brunei Darussalam	8.6	11.56	8.59	5.64	9.53	12.82	8.35	5.06	9.85	13.27	10.20	6.78
Canada	1026.88	1124.03	1093.95	996.80	1164.18	1259.87	1207.68	1111.99	1240.06	1327.50	1296.85	1209.41
Chile	101.25	132.04	127.20	96.41	124.4	169.71	159.45	114.15	147.67	197.24	180.94	131.37
Croatia	36.03	47.32	46.63	35.34	44.82	58.94	58.26	44.14	45.87	60.45	59.89	45.31
Cyprus	14.5	19.02	19.02	14.50	17	22.30	22.30	17.00	19.21	25.72	25.72	19.21
Czech Republic	106.45	140.08	139.99	106.35	130.07	172.05	171.84	129.86	148.48	196.92	196.43	147.99
Denmark	242.1	311.99	307.10	237.21	257.68	331.50	324.37	250.54	256.82	330.75	326.22	252.29
Estonia	9.84	13.15	12.94	9.64	13.91	18.58	18.56	13.88	13.9	18.28	18.15	13.77
Finland	171.94	223.86	223.84	171.92	195.78	254.59	254.53	195.73	204.15	265.52	265.22	203.85
France	1973.04	2585.79	2585.26	1972.52	2136.56	2808.21	2807.71	2136.05	2204.45	2898.12	2897.73	2204.06
Germany	2685.2	3508.95	3505.96	2682.21	2766.25	3594.34	3589.81	2761.72	2954.36	3840.33	3837.60	2951.62
Greece	196.96	268.11	268.02	196.87	240.08	309.79	309.63	239.92	240.95	307.80	307.52	240.67
Hong Kong SAR, China	147.64	198.78	198.78	147.64	181.57	247.05	247.05	181.57	220.06	302.68	302.68	220.06
Iceland	13.21	16.82	16.82	13.21	16.29	20.78	20.78	16.29	16.39	20.92	20.92	16.39
Ireland	159.64	177.62	177.46	159.49	202.58	265.73	265.62	202.46	203.31	203.31	203.05	203.05
Italy	1700.99	2253.58	2250.61	1698.03	1786.28	2356.69	2353.03	1782.62	1763.89	2326.32	2324.33	1761.90
Japan	4308.09	5789.62	5789.35	4307.83	4571.87	6128.03	6127.31	4571.14	4648.47	6216.91	6216.34	4647.91
Korea, Rep.	712.75	958.19	958.19	712.75	898.13	1205.89	1205.75	897.99	1098.69	1481.67	1481.50	1098.51
Latvia	10.82	14.39	14.07	10.51	16.04	21.37	21.22	15.89	15.5	20.51	20.38	15.37
Lithuania	17.92	23.91	23.82	17.83	26.09	35.17	35.08	26.00	27.48	36.72	36.62	27.37
Luxembourg	31.59	41.35	41.35	31.58	37.64	49.25	49.25	37.64	40.7	53.41	53.39	40.68
Malta	5.72	7.93	7.93	5.72	5.98	8.02	8.02	5.98	6.72	8.87	8.87	6.72
Netherlands	597.95	778.80	771.61	590.76	638.47	831.57	820.79	627.69	683.06	891.51	885.21	676.76
New Zealand	93.98	124.41	123.99	93.56	113.79	150.66	150.33	113.46	121.17	160.42	159.27	120.02
Norway	272.72	350.82	309.40	231.30	304.06	392.74	345.54	256.86	315.8	408.28	375.12	282.63
Poland	261.09	348.24	346.75	259.61	303.91	404.83	401.91	300.99	383.21	511.74	507.22	378.68
Portugal	184.1	241.49	241.49	184.10	191.85	250.56	250.48	191.77	197.16	257.22	257.01	196.96
Russian Federation	567.38	752.27	600.40	415.51	764	1010.72	825.94	579.22	909.24	1203.42	1083.29	789.11
Saudi Arabia	258.61	405.92	315.89	168.58	328.46	496.69	379.81	211.57	435.99	630.22	541.22	346.99
Singapore	100.38	134.43	134.43	100.38	127.42	171.11	171.11	127.42	176.46	237.80	237.80	176.46
Slovak Republic	48.27	63.56	63.08	47.79	61.33	81.07	80.73	60.99	77.08	102.49	101.96	76.55
Slovenia	29.9	39.60	39.55	29.85	35.72	47.01	47.04	35.75	38.97	50.99	50.85	38.83
Spain	963.13	1266.63	1266.55	963.05	1130.8	1475.25	1475.08	1130.63	1179.23	1517.67	1517.26	1178.82
Sweden	324.51	420.69	420.65	324.47	370.58	478.17	477.60	370.01	401.62	517.45	515.58	399.75
Switzerland	360.57	474.50	474.16	360.23	384.75	505.86	505.77	384.67	427.58	560.57	560.47	427.47
Trinidad and Tobago	10.96	14.96	12.45	8.44	16.09	21.85	14.33	8.57	18.99	25.62	18.46	11.84
United Arab Emirates	139.12	168.71	150.16	120.57	180.62	219.67	187.74	148.69	204.45	243.43	215.70	176.71
United Kingdom	2005.8	2621.64	2583.87	1968.02	2321.36	3042.25	3000.35	2279.46	2360.03	3083.41	3051.74	2328.36
United States	11558.79	15259.08	15181.65	11481.36	13095.4	17277.87	17139.32	12956.85	13595.64	18089.53	17980.01	13486.12
Uruguay	17.21	22.18	22.18	17.20	17.36	22.53	22.39	17.22	22.9	29.45	28.92	22.37

Appendix E

EG, EP1, EP2, EP3

Table E.1 (Low-income economies ($1,045 or less)

Country Name	EG 2005	EP1 2005	EP2 2005	EP3 2005	EG2010	EP1 2010	EP2 2010	EP3 2010
Bangladesh	0.30	0.30	0.30	0.28	0.35	0.36	0.34	0.31
Benin	0.22	0.22	0.22	0.21	0.20	0.20	0.14	0.12
Burkina Faso	0.37	0.36	0.37	0.28	0.30	0.31	0.21	0.18
Burundi	0.03	-0.10	0.03	0.04	0.25	0.34	0.05	0.05
Cambodia	0.56	0.56	0.56	0.59	0.38	0.37	0.35	0.35
Comoros	0.15	0.29	0.15	0.29	0.07	0.16	0.03	0.03
Congo, Dem. Rep.	0.21	0.62	0.21	-0.04	0.31	0.72	0.30	0.38
Ethiopia	0.37	0.35	0.37	0.36	0.68	0.71	0.58	0.50
Guinea	0.16	0.15	0.16	0.29	0.11	0.11	-0.01	-0.04
Kenya	0.20	0.20	0.20	0.19	0.26	0.25	0.21	0.20
Liberia	0.12	0.11	0.12	1.58	0.77	0.77	2.04	2.63
Madagascar	0.12	0.12	0.12	0.14	0.14	-0.08	-0.13	0.07
Malawi	0.08	0.19	0.08	0.13	0.41	0.08	0.35	0.30
Mali	0.36	0.33	0.36	0.26	0.31	0.25	0.16	0.18
Mozambique	0.53	0.52	0.53	0.56	0.39	0.40	0.36	0.34
Nepal	0.18	0.18	0.18	0.19	0.24	0.26	0.21	0.18
Niger	0.22	0.14	0.22	0.15	0.29	0.21	0.13	0.19
Rwanda	0.46	0.47	0.46	0.52	0.47	0.48	0.39	0.35
Sierra Leone	0.42	0.43	0.42	1.21	0.31	0.30	0.32	0.12
Tajikistan	0.60	0.60	0.60	0.28	0.38	0.39	0.29	0.24
Tanzania	0.41	0.40	0.41	0.31	0.39	0.40	0.31	0.28
Togo	0.06	0.04	0.06	0.07	0.17	0.15	0.18	0.21
Uganda	0.38	0.40	0.38	0.44	0.48	0.48	0.37	0.34
Zimbabwe	-0.32	-0.33	-0.32	-0.96	-0.10	0.00	-0.07	-0.18

Table E.2 (Lower-Middle-income economies ($1,046 to $4,125))

Country Name	EG 2005	EP1 2005	EP2 2005	EP3 2005	EG 2010	EP1 2010	EP2 2010	EP3 2010
Armenia	0.78	0.82	0.85	0.81	0.21	0.17	0.00	-0.03
Bhutan	0.46	0.40	0.40	0.48	0.57	0.56	0.38	0.34
Bolivia	0.16	0.16	-0.07	-0.13	0.25	0.25	0.48	0.59
Cabo Verde	0.32	0.30	0.29	0.29	0.33	0.33	0.20	0.20
Cameroon	0.20	0.20	0.37	0.43	0.16	0.15	0.02	0.00
Congo, Rep.	0.22	0.19	0.34	0.51	0.29	0.28	0.60	0.78
Cote d'Ivoire	0.00	0.00	-0.02	-0.03	0.11	0.11	0.17	0.19
Egypt, Arab Rep.	0.19	0.17	0.05	0.02	0.35	0.35	0.43	0.48
El Salvador	0.12	0.13	0.14	0.14	0.07	0.07	0.06	0.06
Georgia	0.42	0.43	0.45	0.46	0.29	0.28	0.18	0.15
Ghana	0.28	0.23	0.20	0.24	0.38	0.30	0.19	0.24
Guatemala	0.16	0.15	0.11	0.10	0.20	0.19	0.22	0.24
Guyana	0.04	0.03	0.10	0.14	0.11	0.12	-0.24	-0.34
Honduras	0.26	0.27	0.35	0.36	0.19	0.19	0.10	0.06
India	0.38	0.37	0.36	0.38	0.49	0.51	0.48	0.44
Indonesia	0.26	0.26	0.19	0.16	0.32	0.31	0.34	0.36
Kyrgyz Republic	0.20	0.21	0.36	0.41	0.24	0.26	0.10	0.04
Lao PDR	0.35	0.37	0.21	0.16	0.47	0.47	0.55	0.57
Lesotho	0.15	0.21	0.23	0.23	0.28	0.55	0.20	0.16
Mauritania	0.10	0.21	0.05	0.01	0.25	0.27	-0.04	-0.20
Moldova	0.41	0.46	1.29	1.77	0.17	0.21	0.06	-0.03
Mongolia	0.37	0.37	0.34	0.34	0.37	0.35	0.07	-0.01
Morocco	0.27	0.29	0.25	0.23	0.27	0.29	0.25	0.21
Nicaragua	0.17	0.17	0.16	0.15	0.13	0.12	0.00	-0.02
Nigeria	0.65	0.65	0.98	1.23	0.42	0.38	0.39	0.44
Pakistan	0.28	0.27	0.25	0.25	0.18	0.18	0.15	0.14
Paraguay	0.10	0.09	0.08	0.09	0.28	0.27	0.17	0.14
Philippines	0.25	0.25	0.27	0.27	0.27	0.27	0.21	0.18
Senegal	0.26	0.25	0.21	0.20	0.19	0.20	0.16	0.15
Sri Lanka	0.21	0.21	0.16	0.13	0.36	0.37	0.32	0.30
Swaziland	0.11	0.10	0.07	0.06	0.13	0.11	0.07	0.08
Syrian Arab Republic	0.27	0.19	0.55	0.96	0.23	0.20	-0.11	-0.20
Ukraine	0.45	0.43	0.37	0.36	0.05	0.05	0.00	-0.02
Vanuatu	0.05	0.03	0.14	0.18	0.27	0.30	0.17	0.12
Vietnam	0.40	0.40	0.07	-0.01	0.36	0.37	0.32	0.29
Yemen, Rep.	0.23	0.18	0.12	0.13	0.19	0.02	0.39	0.45
Zambia	0.27	0.27	0.42	0.47	0.37	0.37	0.00	-0.09

Table E.3 (Upper-middle-income economies ($4,126 to $12,745)

Country Name	EG 2005	EP12005	EP2 2005	EP3 2005	EG 2010	EP1 2010	EP2 2010	EP3 2010
Albania	0.30	0.30	0.31	0.30	0.28	0.28	0.28	0.27
Algeria	0.31	0.28	0.22	0.21	0.13	0.13	0.19	0.24
Argentina	0.10	0.09	0.04	0.03	0.32	0.32	0.36	0.38
Azerbaijan	0.88	0.87	1.02	1.14	1.14	1.15	1.24	1.27
Belarus	0.44	0.46	0.42	0.39	0.42	0.44	0.37	0.33
Belize	0.30	0.30	0.48	0.55	0.15	0.15	0.18	0.19
Bosnia and Herzegovina	0.27	0.27	0.25	0.25	0.17	0.15	0.30	0.38
Botswana	0.19	0.18	0.16	0.17	0.22	0.22	0.20	0.20
Brazil	0.15	0.14	0.16	0.16	0.24	0.24	0.16	0.14
Bulgaria	0.31	0.30	0.30	0.32	0.14	0.13	0.23	0.27
China	0.59	0.62	0.57	0.53	0.70	0.72	0.70	0.67
Colombia	0.19	0.19	0.18	0.17	0.25	0.25	0.19	0.18
Costa Rica	0.22	0.21	0.22	0.23	0.25	0.25	0.28	0.29
Cuba	0.28	0.27	0.26	0.26	0.30	0.29	0.29	0.30
Dominican Republic	0.19	0.18	0.17	0.17	0.41	0.40	0.38	0.38
Ecuador	0.50	0.26	0.10	0.06	0.59	0.19	0.19	0.17
Fiji	0.13	0.14	0.14	0.14	0.01	0.06	-0.02	-0.02
Gabon	0.09	0.09	0.05	0.02	0.12	0.11	0.14	0.18
Hungary	0.23	0.22	0.19	0.19	-0.01	-0.02	0.13	0.20
Iran, Islamic Rep.	0.31	0.28	0.19	0.16	0.26	0.32	0.47	0.50
Iraq	0.03	-0.09	0.03	0.68	0.35	0.34	0.56	0.87
Jamaica	0.00	0.03	0.13	0.13	0.00	0.00	-0.11	-0.15
Jordan	0.36	0.41	0.95	1.16	0.35	0.34	0.22	0.19
Kazakhstan	0.64	0.63	0.67	0.70	0.35	0.35	0.75	1.02
Lebanon	0.22	0.21	0.32	0.37	0.44	0.45	0.46	0.47
Macedonia, FYR	0.08	0.07	0.06	0.06	0.19	0.18	0.17	0.19
Malaysia	0.26	0.28	0.24	0.20	0.24	0.25	0.23	0.21
Maldives	0.46	0.28	0.39	0.38	0.53	0.53	0.54	0.55
Mauritius	0.16	0.16	0.11	0.10	0.25	0.25	0.21	0.19
Mexico	0.08	0.09	0.04	0.01	0.10	0.09	0.07	0.07
Montenegro	0.15	0.13	0.13	0.15	0.24	0.26	0.47	0.51
Namibia	0.27	0.25	0.25	0.27	0.23	0.23	0.22	0.22
Panama	0.23	0.24	0.19	0.17	0.46	0.47	0.49	0.49
Peru	0.23	0.24	0.23	0.22	0.40	0.38	0.26	0.24
Romania	0.33	0.36	0.35	0.31	0.15	0.15	0.23	0.26
Serbia	0.30	0.26	0.32	0.38	0.10	0.12	0.19	0.19
South Africa	0.21	0.22	0.18	0.16	0.17	0.17	0.11	0.10
St. Lucia	0.06	0.02	0.01	0.04	0.19	0.19	0.13	0.13
Suriname	0.32	0.34	0.45	0.47	0.22	0.20	0.16	0.16
Thailand	0.28	0.28	0.13	0.10	0.19	0.19	0.10	0.07
Tunisia	0.22	0.22	0.24	0.25	0.26	0.25	0.20	0.19
Turkey	0.25	0.25	0.35	0.40	0.17	0.15	0.16	0.17
Venezuela, RB	0.13	0.12	-0.05	-0.10	0.20	0.19	0.43	0.56

Table E.4 High-income economies ($12,746 or more)

Country Name	EG 2005	EP1 2005	EP2 2005	EP3 2005	EG 2010	EP1 2010	EP2 2010	EP3 2010
Australia	0.17	0.17	0.16	0.16	0.15	0.15	0.13	0.12
Austria	0.09	0.09	0.09	0.09	0.07	0.06	0.06	0.07
Bahamas, The	0.09	0.08	0.08	0.09	-0.02	-0.03	-0.03	-0.02
Barbados	0.06	0.06	0.06	0.06	0.04	0.04	0.04	0.04
Belgium	0.08	0.08	0.08	0.08	0.06	0.06	0.06	0.06
Brunei Darussalam	0.11	0.11	-0.03	-0.10	0.03	0.03	0.22	0.34
Canada	0.13	0.12	0.10	0.12	0.07	0.05	0.07	0.09
Chile	0.23	0.29	0.25	0.18	0.19	0.16	0.13	0.15
Croatia	0.24	0.25	0.25	0.25	0.02	0.03	0.03	0.03
Cyprus	0.17	0.17	0.17	0.17	0.13	0.15	0.15	0.13
Czech Republic	0.22	0.23	0.23	0.22	0.14	0.14	0.14	0.14
Denmark	0.06	0.06	0.06	0.06	0.00	0.00	0.01	0.01
Estonia	0.41	0.41	0.43	0.44	0.00	-0.02	-0.02	-0.01
Finland	0.14	0.14	0.14	0.14	0.04	0.04	0.04	0.04
France	0.08	0.09	0.09	0.08	0.03	0.03	0.03	0.03
Germany	0.03	0.02	0.02	0.03	0.07	0.07	0.07	0.07
Greece	0.22	0.16	0.16	0.22	0.00	-0.01	-0.01	0.00
Hong Kong SAR, China	0.23	0.24	0.24	0.23	0.21	0.23	0.23	0.21
Iceland	0.23	0.24	0.24	0.23	0.01	0.01	0.01	0.01
Ireland	0.27	0.50	0.50	0.27	0.00	-0.23	-0.24	0.00
Italy	0.05	0.05	0.05	0.05	-0.01	-0.01	-0.01	-0.01
Japan	0.06	0.06	0.06	0.06	0.02	0.01	0.01	0.02
Korea, Rep.	0.26	0.26	0.26	0.26	0.22	0.23	0.23	0.22
Latvia	0.48	0.49	0.51	0.51	-0.03	-0.04	-0.04	-0.03
Lithuania	0.46	0.47	0.47	0.46	0.05	0.04	0.04	0.05
Luxembourg	0.19	0.19	0.19	0.19	0.08	0.08	0.08	0.08
Malta	0.05	0.01	0.01	0.05	0.12	0.11	0.11	0.12
Netherlands	0.07	0.07	0.06	0.06	0.07	0.07	0.08	0.08
New Zealand	0.21	0.21	0.21	0.21	0.06	0.06	0.06	0.06
Norway	0.11	0.12	0.12	0.11	0.04	0.04	0.09	0.10
Poland	0.16	0.16	0.16	0.16	0.26	0.26	0.26	0.26
Portugal	0.04	0.04	0.04	0.04	0.03	0.03	0.03	0.03
Russian Federation	0.35	0.34	0.38	0.39	0.19	0.19	0.31	0.36
Saudi Arabia	0.27	0.22	0.20	0.26	0.33	0.27	0.42	0.64
Singapore	0.27	0.27	0.27	0.27	0.38	0.39	0.39	0.38
Slovak Republic	0.27	0.28	0.28	0.28	0.26	0.26	0.26	0.26
Slovenia	0.19	0.19	0.19	0.20	0.09	0.08	0.08	0.09
Spain	0.17	0.16	0.16	0.17	0.04	0.03	0.03	0.04
Sweden	0.14	0.14	0.14	0.14	0.08	0.08	0.08	0.08
Switzerland	0.07	0.07	0.07	0.07	0.11	0.11	0.11	0.11
Trinidad and Tobago	0.47	0.46	0.15	0.02	0.18	0.17	0.29	0.38
United Arab Emirates	0.30	0.30	0.25	0.23	0.13	0.11	0.15	0.19
United Kingdom	0.16	0.16	0.16	0.16	0.02	0.01	0.02	0.02
United States	0.13	0.13	0.13	0.13	0.04	0.05	0.05	0.04
Uruguay	0.01	0.02	0.01	0.00	0.32	0.31	0.29	0.30