

# An Analysis of External Debt Behavior in the Developing World

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This paper aims to analyze the behavior of external debt in the developing world. External debt is a foreign debt, which is owed to the creditors outside the country. The behavior of external debt in this paper is defined by the following two: first, it is defined by the burden and the sustainability of the debt that developing countries incur; second it is defined by its effect on the economic development in the developing world.

Many developing countries incur a heavy debt burden. 'Debt crisis,' 'debt distress' and 'heavily indebtedness,' among others, are indicative of the debt problems many developing countries experience. Not all developing countries, however, suffer from the external debt. There are many 'wealthy' indebted developing countries, but they are able to maintain a high debt sustainability. Their debt problems are different from those with a low debt sustainability in poor developing countries.

Yet the literature tends to emphasize all negative effects of the external debt in the developing world. This study argues that external debt analysis in the developing world needs to be analyzed beyond singular explanations of negative effect of the indebtedness. It is therefore important to identify different patterns of external debt behavior among diverse countries in the developing world. This paper will analyze how the external debt burden and the external debt sustainability variables each are interrelated with other internal socioeconomic, political, and demographic variables, as well as with international economic variables, in building up the patterns of the external debt behavior in developing countries.

## **Literature Review**

Each country has a different level of capability to manage the debt. They each have a different level of debt sustainability, which is defined as an ability of a country to manage their debts with their respective economic capability. Many low-income countries in the developing world have struggled to maintain their external debt at sustainable level while they try to meet development objectives such as the Millennium Development Goals (MDGs) adopted by the United Nations in 2000. <sup>1</sup> Debt sustainability, which is an essential part of the external debt behavior, is considered to be a significant ingredient of economic stability, which is the foundation of both economic growth and development.

The sustainability of external debt is generally measured by the ratio of external debt to export (export-based sustainability) as well as by the ratio of external debt to GDP (GDP-based sustainability) respectively. While there are various indicators for determining the sustainable level of external debt, no unanimous opinion amongst economists has come up as to one sole indicator. These two indicators can be thought of as measures of the country's solvency since they each consider the stock of external debt in relation to the country's economic ability (export and GDP), which could generate resources to repay debt. <sup>2</sup>

The export-based sustainability is based on the notion that export converts resources into foreign exchange, with which countries can repay their external debts. Economic development (GDP) generates the resources with which debt can be paid. The resources must still be converted into foreign exchange, that is, hard convertible currencies. The generation of foreign exchange occurs through exporting. Thus, exports must be stimulated since they increase a country's ability to convert goods and services into repayment for the debt. In contrast with the export-based sustainability, the 'GDP-based sustainability' is

rather conceptual as it is measured by the annual productive capacity, which still needs to be converted into foreign exchange that can be used for repaying the debt. The debt analysis assesses the effect of debt on both economic growth and quality of life. Debt destabilizes economy of the developing countries, particularly the low-income countries (LIC). Many factors determine the level of quality of life and the debt sustainability is one of them. **3**

Terms of trade, favorable or unfavorable, that developing countries experience with other trading partners affect the economic development and quality of life. The terms of trade are the ratio of the prices of a country's exports to the prices of its imports. Many developing countries have suffered from unfavorable terms of trade. That is, their export prices decline relative to their import prices. Adverse terms of trade have been detrimental to the quality of life in the developing countries. The export of many developing countries rely heavily on the primary commodities (commodity goods), which are raw or partially processed materials that will be transformed into finished goods (in developed countries). Dependence on a few commodities has remained high in many developing countries. Revenues gained from them have an important effect on their living standards. Changes (favorable or unfavorable) in terms of trade have a significant impact on the economic development and income of commodity-exporting developing countries.

The export prices or volumes of the developing countries are affected by the stability/instability of the market of the developed countries. If the quantity demanded by the developed countries is not elastic with changes in the prices (lower or higher) of the commodity goods (that is, 'price inelasticity of demand'), then it will lower the prices of the commodity goods that the developing countries export. The inelasticity of markets in developed countries for the consumption of (demand for) the commodity goods, despite an increase in income in the developed countries, is detrimental to a sustenance of favorable terms of trade for the developing countries (that is, 'income inelasticity of demand').

These two inelasticities (price and income) have attributed to the unfavorable terms of trade that developing countries suffer. The inelasticities erode the productivity gains, which otherwise developing countries could have deserved. No matter what notable gain or increase in the productivity of commodity goods in developing countries, its income from the sale of the commodity goods declined as prices in the markets of the developed countries fell. This means productivity increases in the developing countries were passed along to foreign consumers in the form of lower prices, rather than workers in developing countries in the form of higher wages and living standards. **4** Prebisch-Singer thesis argues that unfavorable terms of trade of primary commodity exports continue due to a combination of low income and price elasticities of demand. This decline also resulted in a long-term transfer of income from poor to rich countries. **5**

The difference between Gross Domestic Products (GDP) and Gross National Products (GNP) is important in analyzing the effect of foreign businesses on the economic development of the host countries where those businesses are operating. GNP is the actual income claimed by residents (nationals) of countries, no matter where they are, domestic or abroad. GDP is the total amount of final outputs of goods and services produced to the country within the territory by both residents (nationals) and nonresidents (foreigners). Therefore, any sector of the economy that is foreign-owned or- operated, GDP will be that much higher than GNP. The difference between GDP and GNP is undertaken as an amount, which is transferred from the nationals of the host countries to the nationals of their home countries. Along this line of argument, the transferred amount of money does benefit not the nationals of the host countries but the nationals of their home countries. **6**

Global interdependence (mutual economic interdependence) based on the amount of export and import relative to the economic capacity (GNP) is an integral part of the economic globalization, yet its effect on the economic development and quality of life in the developing countries has been controversial. Arguments for a positive correlation between trade (export and import) and quality of life are often met with counterarguments. According to the counterarguments, the traditional indicators of growth such as Gross National Product (GNP) and Gross Domestic Product (GDP) could no longer adequately measure the dimension of the quality of life, which is considered to be beyond the simple economic and material measurements. **7**

The quality of life analysis has also suggested that socioeconomic and demographic factors have affected the quality of life in developing countries. Ethnic composition, urbanization, and population growth each have significant effect on the economic growth and quality of life in the developing countries. Rapid population growth has hindered the economic growth as well as the quality of life. Heterogeneity of ethnic and religious composition were found significant determinants of the economic growth and quality of life in the developing world. Ethnic heterogeneity, rather than homogeneity, in the developing world has been impeding an enhancement of the quality of life. Religiously predominant (homogenous) countries in the developing world were also found to have a rather unequal distribution of income than religiously heterogeneous countries. **8**

Debt crisis in some developing countries have become obsolete as a number of big wealthy emerging market economies, whose political systems were democratized as well, have successfully been able to manage their own debts. **9** Authoritarian political systems in the developing countries were unable to effectively manage the external debt and foreign assistance. Their mismanagement often coupled with corruption was considered detrimental to the effective use of the external debt and foreign aid on the economic development. Huge military spending disproportionate to their economic capacity in the developing world is siphoning off their resources, which otherwise would have been used for their economic growth and quality of life. Militarization based on sophisticated arms and weapons in the developing world have increased the death toll as well as the number of refugees (Sivard 1991. 71).

In 2005, the World Bank and IMF implemented a new Debt Sustainability Framework (DSF) in low-income countries. The framework aims to better monitor and prevent the accumulation of unsustainable debt. The DSF is to guide the borrowing decisions of low-income countries so that they could match financing needs with their current and prospective repayment ability. The DSF aims to ensure that resources (loans) are provided to debtors on terms consistent with progress towards their development goals as well as with long-term debt sustainability.

There are many views on the economic growth in the development. Political liberalizations and reforms, with minimal corruption, are required for sustainable economic growth in the developing world. Reduction of barriers to trade and growing mutual interdependence contributes to the economic growth, while global openness with foreign investment is a prerequisite for economic growth. Yet these political reforms may not be as successful as their advocates claim. China and Singapore have enjoyed rapid economic growth without undertaking significant political liberalization. South Korea was able to rapidly develop during the 1970s and 80s while its political system was still authoritarian.

Many countries in the Global South that have implemented economic liberalizing reforms have not experienced economic growth. **10** Stiglitz (2003) argues that the policies emanating from the Washington Consensus produce disappointing results because they are anchored in a free-market dogma, which ignores the unique socio-cultural contexts of the countries where they are applied. **11** The Washington Consensus refers to the views of the western-style economic growth, in which the developing world can best achieve their sustained economic growth via democratic governance, political reforms, free markets and trade liberalization. When inequality of income distribution is related to ethnicity, gender, geographic region, Clemens (2007) argues a stronger role for the state is advantageous for the equal distribution of income. Those most vulnerable members of societies can be safeguarded by the role of the stronger government in the developing world.

Not only the external debt but also many other socioeconomic and political factors were considered significant in determining the economic growth and quality of life in the developing world. External debt is one of many determinants that affect the economic development in the developing world. The analysis of external debt behavior in the developing world needs to undertake all of those variables determining the economic development in the developing world.. **Methodology**

One hundred forty-one (141) countries are classified as the developing countries.**12** Based on the literature review, the following variables were selected as each is relevant to an analysis of external debt behavior in the developing countries. Each variable can be represented as a cause and consequence of the external debt behavior in the developing world: income inequality (Gini index), types of political system, internal conflict, quality of life, economic growth (GDP), urbanization, ethnic composition, religious

composition, population growth, defense spending, indebtedness (per capita external debt), economic interdependence, debt sustainability, gross foreign product (foreign-accrued benefits), and terms of trade.

Each of these variables is hypothesized to affect other variables including indebtedness and debt sustainability as well. Factor analysis, utilized in this study, will produce patterns (dimensions) out of diverse variables assumed to be correlated with the external debt behavior. Each of the following 15 variables including the debt sustainability and the debt burden variables is measured as follows.

(1) Income Distribution: measured by *Gini* coefficient (or *Gini* index). This coefficient measures the degree of inequality in the distribution of family income in a country. The coefficient ranges from 0 (perfect equality) to 1 (complete inequality). The *Gini* index is the *Gini* coefficient expressed as a percentage, which ranges 0 percent to 100 percent as well.

(2) Quality of Life: measured by Human Development Index (HDI). The HDI is a summary composite index that measures a country's average achievements in three basic aspects of human development: longevity, knowledge, and a decent standard of living.

(3) Internal conflict: countries in the developing world experiencing any of the following criteria were classified as conflict-stricken countries and the remaining as non-conflict ones: i. Civil war or internal armed conflict causing the death of 1000 or more people per year; ii. Political overthrows of a government, attempted and unsuccessful; iii. Ethnic conflict, religious conflict, political and ideological conflict, as well as conflicts involving warlords or drug lords; iv. Riots and/or demonstrations **13**

(4) Types of Political System: countries are classified as "not free," "partly free," and "free" in terms of the degree of political freedom represented by both political rights and civil liberties. Countries with "not free" were coded as 1 (highly authoritarian), "partly free" as 2 (authoritarian), and "free" as 3 (democratic).

(5) Economic Growth: GDP measures the economic growth.

(6) Ethnic Homogeneity: measured by percentage of the dominant ethnic-racial groups within each nation.

(7) Religious Diversity: measured by percentage of the dominant religious group within each nation.

(8) Urbanization: the measure is based on urban-rural dichotomy; "urban" refers to a group of allegedly nonagricultural pursuits while "rural" to agriculturally oriented employment patterns.

(9) Population Growth: the natural increase per 1,000 of the population, based on the difference between birth and death rates of given population.

(10) Defense Spending: the measure is based on military expenditure as a percentage of GDP or GNP.

(11) Global Interdependence: the measure based on the total amount of export and import divided by GDP or GNP.

(12) Foreign-Accrued Benefit (Gross Foreign Product): the measure based on the difference between GDP and GNP. The difference indicates amount of "benefits" accrued to foreign businesses in host developing countries where they are conducting their businesses.

(13) Terms of Trade: the measure is based on the index of the price of a country's exports in terms of its imports. The terms of trade are said to improve (favorable) if that index rises, and vice versa.

(14) Debt Sustainability: the debt sustainability is measured by the per capita amount of debt divided by the per capita amount of export.

(15) Debt Burden: the measure based on the per capita external debt amount.

## Results

### (See Table 1)

Table 1 presents a factor analysis, in which factor loadings of 15 variables including the debt burden and debt sustainability variables are presented. The factor analysis identifies "patterns" (dimensions) of external debt in the developing world. **14** The fifteen variables will be classified into several patterns. The factor analysis aims to explore and detect "patterning" of variables employed here with a view to the discovery of "new concept/name" for each of the patterns identified. Factor loading over .30 was selected as substantial loading on a given factor. The factor loading stands correlation coefficient not only between each variable but also between each variable and their respective factor. **15**

The items (variables) with the loading over .30 on each factor are underlined; in the case that any

variables load on more than one factor, each are also underlined accordingly. For example, income distribution (Gini index) turns out to load on Factor 3 and 4 respectively; debt sustainability on factor 1, 2 and 5. There are other variables loaded more than one factor: political system and conflict (factor 1, 2, and 5), ethnic homogeneity (factor 1, 3 and 5), population growth (factor 1 and 4), debt burden (factor 1 and 4) and debt sustainability (factor 1, 2 and 5). Those “multiple-loaded” variables indicate that each is empirically (as well as “theoretically” for that matter) contributing to each corresponding factor they load.

Factor 1 documents nine variables loaded: conflict, quality of life, GDP, urbanization, ethnic homogeneity, population growth, per capita debt, debt sustainability, and foreign-accrued benefit (Gross Foreign Product: GFP): each is underlined. This cluster (patterning) of the nine variables goes together. Each shares economic development and urbanization, debt burden (indebtedness), debt sustainability, conflict and global interdependence. Those developing countries classified with the Factor 1 are economically ‘wealthier’ and urban developing countries. They are featured with a low population growth and moderately ethnically homogeneous. Those countries are indebted, yet are able to retain a high degree of debt sustainability. No negative effect of the external debt on the economic development and quality of life was found. The external debt in those countries turns out to serve as ‘resources’ of rather than as burden with their economic growth and development, which in turn increase their debt sustainability. Such countries are stable with a low frequency of internal conflict as well. They are not conflict-stricken countries with internal conflict and political violence.

These countries also document that foreign-accrued benefit is high. The foreign-accrued benefit, which represents the gross foreign product (GFP), was positively related to this factor. This means that those developing countries that are open to foreign business and investment are positively associated with not only the quality of life and economic development (GDP) but also a high debt sustainability. The benefits accrued to the foreign businesses and enterprises turn out still beneficial to the economic development of those host countries where they invest and do their business. No evidence has shown that the foreign-accrued benefit has a negative effect on the debt sustainability as well as on their economic development of those host developing countries. The amount of external debt serves as resources rather than burden for their economic development and quality of life in those countries. Those countries under Factor 1 are labeled as ‘*economically-oriented debt sustainable countries.*’

Factor 2 has three variables loaded: conflict, global interdependence, and debt sustainability. Those countries are globally and economically interdependent via their trade (export and import). The global economic interdependence makes them high debt-sustainable, not vulnerable, countries. Those globally open and interdependent countries also retain a low level of internal conflict. Yet neither the debt sustainability nor the global economic interdependence was found significantly correlated with the economic growth and quality of life. The global economic interdependence help them alleviate vulnerability coming from a low debt sustainability. It is not necessarily that global economic interdependence and debt-sustainability each are positively and significantly associated with economic development. Factor 2 is labeled as ‘*global economic interdependence-based debt sustainable countries.*’

Factor 3 was loaded with income distribution, political system, conflict, ethnic homogeneity and defense spending. The cluster of these five variables goes together. None of the debt behavior variables (debt burden and debt sustainability) was loaded to the factor. Those countries are politically authoritarian with a heavy military spending. They are moderately ethnically homogenous countries, yet they experience a high frequency of internal conflict. The external debt has nothing to do with the economic growth and quality of life. Both debt burden and debt sustainability each were found insignificant in affecting the economic development and quality of life. External debt is simply an insignificant variable in determining economic development in those countries that are affected by political authoritarianism and that are militarily-oriented with a heavy defense spending. They are immune from the effects of indebtedness, burden or sustainability. Despite the political authoritarianism, there is an egalitarianism in income distribution among different segments of population. The factor 3 is labeled as ‘*authoritarian militarily-oriented non-debt affected countries.*’

Factor 4 loads five variables: income distribution, urbanization, religious composition, population growth, and debt burden. Those countries are featured with a predominance of one homogenous

(dominant) religious group. They experience a high population growth and unequal, not equal, distribution of income. They are heavily indebted countries, yet the indebtedness (external debt) has nothing to do with their economic development except the income distribution. The indebtedness has no significant effect on their debt sustainability either.

The factor indicates that countries featured with a predominance of one homogenous (dominant) religious group experience a high degree of unequal, rather than equal, income distribution. Religiously heterogeneous countries conversely experience a high degree of equal (not unequal) income distribution. Those predominantly religious countries were not free from the indebtedness and the 'religion' appears to not be able to contribute to the economic 'equality' of income distribution.' They are religious and indebted. Factor 4 is labeled as '*religiously oriented-indebted countries.*'

Factor 5 loads conflict, ethnic homogeneity, debt burden, debt sustainability and terms of trade variables. Those countries retain favorable terms of trade with other countries. They retain a low amount of debt burden with a high debt sustainability. They are moderately ethnically heterogeneous, experiencing with a high frequency of internal conflict. The terms of trade (favorable or unfavorable) and the external debt sustainability (strong or weak) each have nothing to do with their economic development and quality of life. The favorable terms of trade make those countries able to retain a high debt sustainability, but the sustainability itself turns out to have no significant effect on their economic development and quality of life. The favorable terms of trade was found to significantly enhance their debt sustainability, but neither the favorable terms of trade nor the debt sustainability was found to significantly affect their economic development and quality of life. Factor 5 is labeled as '*terms of trade-based debt sustainable countries.*'

#### (See Table 2)

Table 2 shows *the five most and the five least* countries for each of the five patterns identified in the developing world. The countries are listed in order of the rank based on their respective factor score. **16** Table 2 A shows the most and the least five economically oriented debt-sustainable countries. United Arab Emirate (UAE), Bahamas, Kuwait, Bahrain and Uruguay were classified as the most, while East Timor, Ethiopia, Equa Guinea, Cuba and Cote d'Ivoire are the least. The table shows there are drastic differences between these two groups of countries in quality of life (HDI), GDP, urbanization, debt burden, debt sustainability as well as in internal conflict, ethnic homogeneity, population growth, and foreign accrued benefit (Gross Foreign Product GFP) (see averages).

Those most economically-oriented debt sustainable countries document that their economic development (GDP), quality of life and urbanization each are much higher than the counterparts in the least countries (see averages). The most countries are much more indebted (\$4143 ) than the least countries (\$482), yet their debt sustainability (\$1695) is still much higher than the least countries (\$4936). Foreign-accrued benefits are also much higher in the most economically-oriented countries (\$7866) than in the least economically-oriented counterparts (\$-296). The negative foreign-accrued benefit in the least countries indicates that the foreign investments in those countries are extremely low. The least countries low in external debt variables (small external debt amount and low debt sustainability) are most likely to experience a poor economic development and quality of life. Although Cuba retains a high quality of life (HDI: .8260), similar least economically-oriented countries are obviously much lower in their economic development (GDP) than the most economically-oriented countries. Despite that they are less indebted than the most economically-oriented countries, they still retain a low debt sustainability. Those poor countries (the least economically-oriented countries) were found not able to benefit from a smaller amount of external debt they incur, while the wealthier countries (the most economically-oriented countries) were able to benefit despite the fact that they incur a large amount of the external debt. External debt in those economically-oriented debt sustainable countries, wealthy or poor, serves as 'resources' (rather than 'burden') for economic development.

Table 2 B shows the global economic interdependence-based debt sustainable countries. The most global economic interdependent and debt-sustainable countries are Kiribati, Tunisia, Equa Guinea, Malaysia, and Swaziland. The least global economic interdependent and debt-sustainable countries are Somalia, Nepal, Afghanistan, Burundi and Sierra Leone. There are differences between these two groups

of countries in the degree of global economic interdependence and debt sustainability. Global economic interdependence (ratio .19) in the least global economic interdependent and debt-sustainable countries is much lower than the most countries (ratio 2.18) and their debt-sustainability (\$28541) is extremely lower than their counterparts (\$511) are. Countries classified with factor 2, whether the most global economic interdependent and debt-sustainable or the least global economic interdependent and debt-sustainable, were found such that their global economic interdependence and debt-sustainability each have nothing to do with their economic growth and quality of life.

Table 2 C shows the most and the least authoritarian-militarily oriented-nondebt affected countries. Vietnam, Yemen, Burundi, Jordan, and Pakistan were found the most authoritarian-militarily oriented nondebt affected' countries. They maintain authoritarian political system with a low degree of political freedom. The least countries are Panama, Peru, Guyana, Zambia and South Africa and they are more democratic with a higher degree of political freedom except Zambia, which is authoritarian. The most authoritarian-military countries, except Jordan, all experience internal conflict while the least none. The defense spending for the most authoritarian-military countries (6.9 %) is much higher than the least counterparts (1.0%). The most authoritarian-military countries document a more equitable income distribution (*Gini* Index 36.4) than the least authoritarian-militarily countries (*Gini* Index 52.0). The more authoritarian the countries are, the more 'egalitarian' in the distribution of income. The most authoritarian-military countries are ethnically more homogeneous (82.1%) than their least counterparts (38.8%).

The authoritarian-militarily oriented nondebt affected countries, whether the most oriented that way or the least, were found not to be significantly associated with the external debt. None of the debt variables (burden or sustainability) turned out to play a significant role in those authoritarian-militarily oriented countries. The external debt has simply no significant effect on the economic development and quality of life. The most countries spend a large military expenditure, while the least a small one. Regardless of the military spending, external debt remains insignificant in determining the economic growth and quality of life in countries.

Table 2 (D) shows religiously oriented-indebted countries. Tunisia, Panama, Jordan, Peru and Venezuela as the most countries, while China, Tanzania, Ethiopia, Mongolia, and Vietnam as the least. There are drastic differences in the religious composition between the two groups (see averages). Those predominantly religiously homogenous countries were much more indebted (\$3872 ) than the religiously heterogenous countries (\$202). Despite their 'religiousness,' they are not more egalitarian (*Gini* index 47.0 %) in the distribution of income than the religiously heterogeneous countries (*Gini* index 34.3%). The religiously homogenous countries document a higher population growth rate (16.7%) than the least countries (6.1%). Regardless of the most and the least, they are all indebted, yet the difference in the indebtedness between the most and the least has nothing to do with the differences in their economic development and quality of life.

Table 2 (E) shows the most and the least terms of trade-based debt sustainable countries. Iran, Kuwait, Nigeria, Angola and Papua Guinea are the most countries, while Tuvalu, Samoa, Antigua, St Kitt, and Djibouti as the least. The terms of trade for the most countries (1.99) are much higher than the least countries (.09). This means the most countries maintain a more favorable terms of trade than the least counterparts do. The most countries with favorable terms of trade countries were much stronger in the debt sustainability (\$683) than the least countries (\$17460) and they also experience a lower debt burden (\$500) than the least countries (\$3023). None of these two variables (terms of trade and debt sustainability) were found to be significantly correlated with the economic growth and quality of life in terms of trade-based countries..

## **Conclusion**

Many patterns of external debt behavior were identified in the Developing World. *These patterns (dimensions) identified* indicate the complexities and the multidimensionality of external debt behavior in the developing countries. Many patterns of the external debt are summarized as follows: First, the complexities and the multidimensionality of the external debt behavior identified indicate that there is no single "patterned" external debt behavior (debt burden and debt sustainability) in the developing world :

external debt behavior was proven to be “multi-patterned.” Each of the five patterns identified has its own distinctive feature based on their respective cluster of variables. Each pattern of external debt behavior is “independent” of other patterns: there is little commonality that can be shared by other patterns. This means, for example, economically-oriented debt sustainable countries (e.g., United Arab Emirates, Kuwait, etc.) are not likely to share the same pattern as authoritarian militarily-oriented nondebt affected countries,’ (e.g., Pakistan, Yemen, Vietnam, etc.), and vice versa.

Second, the debt problem in the developing world is not necessarily caused by the burden (amount) of the external debt they incur, but by the ‘shortage’ of the external debt. The least economically-oriented debt sustainable countries suffer from a low economic development, yet they were able to enhance economic development if the amount of external debt is increased. The external debt in those economically-oriented countries, wealthy or poor, serves as ‘resources’ for their economic development. And those economically-oriented poor countries document a smaller amount of external debt they incurred. The shortage of the resources (that is, the amount of external debt), which are generated from the external debt, in those economically-oriented debt sustainable developing countries could impede their economic development.

Third, many developing countries were found to spend ‘profits’ earned from their international trade (export and import) and/or from the favorable terms of trade for repaying the external debt, thereby increasing their debt sustainability. In those global economic interdependence-based countries as well as in those terms of trade-based countries, the earnings from the external economic relations are significantly *expended* in order to increase their debt sustainability. However, this repayment has no significant effect on their domestic economic development. Neither the global economic interdependence nor the terms of trade was found to significantly affect the domestic economic development, although they each have were found to significantly affect the level of debt sustainability. Developing countries may suffer from allocating a huge amount of externally -earned benefits for repaying the debt, but the debt repayments have no significant effect, positive or negative, on their domestic economic development. It is often argued that if the profits had been used for the domestic economic development in the developing countries, their economic development would have been enhanced. This ‘hypothesis,’ however, seems unwarranted in those developing countries.

Fourth, not all countries in the developing world are classified as debt-affected countries. Some developing countries were found immune from the effect of the external debt. External debt was found simply to be an insignificant variable in determining their economic development. In those authoritarian militarily-oriented countries, neither the debt burden nor the debt sustainability variables were found significantly associated with the economic development. The effect of external debt is simply not found in politically authoritarian and militarily-oriented developing countries.

Fifth, the effect of external debt in the developing world is too complex to be subsumed into a monolithic view that all external debt is negative. Economically-oriented developing countries, wealthy or poor, have proven that the external debt serves as a resource rather than a burden, which enhances their economic growth and quality of life. Even in the least of the economically -oriented poor countries, more, not less, of the amount of the external debt indicates the better they could improve their economic development. It is not necessarily high indebtedness that will make them poor, but external debt will serve rather as a resource for economic development.

Finally, it was also found that the external debt has a negative effect on the income distribution in those religiously oriented- indebted countries. Distributional inequalities of income in religiously- predominant developing countries are well contrasted with the politically-oriented authoritarian developing countries that are more egalitarian. Regardless of the external debt, ‘authoritarian governance’ was found more egalitarian in the distribution of income, while the ‘religious predominance’ is not. It is the authoritarian governance, rather than the religious predominance, that is significantly related to the distributional equalities in the developing world regardless of external debt burden or sustainability.

Many patterns of external debt behavior and their complexities identified indicate that the effect of external debt in the developing world go beyond a mere mono-dimension with a view of negative effect across all developing countries. Any national government in the indebted developing countries need first

identify a “correct” pattern of external debt behavior in order to assess the effect of external debt on their economic growth and development. They also need to identify “interrelations” (correlations) among diverse variables including the external debt variables (burden and sustainability) under each respective pattern of external debt behavior identified. If any international or regional organizations, for example, the United Nations, World Bank, International Monetary Fund, and Asian Development Bank (ADB), among others, need to address their respective “economic” assistances to a debt-stricken country, each also needs to first identify the correct pattern of external debt behavior undertaken by developing countries.

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**Table 1**

Factor Analysis: The Patterns of External Debt Behavior

	(Economically-Oriented Debt Sustainable)	(Global Economic Interdependence-Based Debt Sustainable)	(Authoritarian Militarility -Oriented Nondebt Affected)	(Religiously-Oriented Indebted)	(Terms of Trade-Based Debt Sustainable)
Income distribution	-.297	-.129	-.419	.417	.222
Political system	.298	.010	-.666	.136	-.028
Conflict	-.391	-.351	.371	.157	.337
Quality of life (HDI)	.869	.198	.115	.126	-.002
GDP	.870	.002	-.144	.051	.122
Urbanization	.766	.029	-.124	.367	.109
Ethnic homogeneity	.539	.235	.351	-.101	-.348
Religious composition	.085	.080	.146	.815	.096
Population growth	-.782	-.124	-.025	.346	-.012
Defense spending	-.098	-.049	.769	.185	.058
Debt burden (P/c debt)	.553	.004	-.197	.555	-.327
Global interdependence	-.104	.917	-.109	.135	-.206
Debt sustainability	-.407	.778	-.014	.112	-.425
Foreign accrued benefit	.857	-.034	-.051	-.054	.299
Terms of trade	.258	-.008	.042	.067	.790
Eigen value (%)	(32.5)	(11.7)	(11.2)	( 8.5)	( 8.2)

Source: World Factbook (2005, 2006, 2007); Britannica Book of the Year (2005, 2006, 2007).

**Table 2: The Most and The Least Five Countries**

**(A) Economically-Oriented Debt Sustainable Countries**

	Conflict (1=conflict) (0=no conflict)	Quality of Life (HDI)	GDP (\$)	Urbanization (%)	Ethnic Homogeneity (%)	Population Growth (%)	Debt Burden (P/c Debt) (\$)	Debt Sustainability (\$)	Foreign-Accrued Benefit (\$)
<i>Most</i>									
UAE	0	.8390	33397	76.7	48.1	13.2	4746	353	13397
Bahamas	0	.8250	18917	89.5	67.5	8.9	10477	5553	4257
Kuwait	0	.8710	31051	98.3	74.0	17.8	165	23	13081
Bahrain	0	.8950	21447	90.0	63.9	13.0	3347	380	6947
Uruguay	0	.8510	6007	91.8	88.0	4.9	1933	2164	1647
(Average)		(.8562)	(22164)	(89.3)	(68.3)	(11.6)	(4134)	(1695)	(7866)
<i>Least</i>									
East Timor	1	.5120	350	7.6	80.0	20.9	na	na	-400
Ethiopia	1	.3710	90	16.2	35.8	23.6	85	10573	-70
Equa Guinea	0	.6530	7802	48.1	56.6	21.0	224	55	-818
Cuba	1	.8260	na	75.6	51.0	4.1	1063	7226	na
Cote d'Ivoire	1	na	939	44.9	42.1	20.2	556	1890	99
(Average)		(.5905)	(2295)	(38.5)	(53.1)	(18.0)	(482)	(4936)	(-297)

**(B) Global Economic Interdependence-Based Debt Sustainable Countries**

	Conflict (1=conflict) (0=no conflict)	Global Economic Interdependence (Ratio)	Debt Sustainability (\$)
<i>Most</i>			
Kiribati	0	2.00	111
Tunisia	0	5.90	1822
Equa Guinea	0	.85	55
Malaysia	0	1.13	260
Swaziland	0	1.00	307
(Average)		(2.18)	(511)
<i>Least</i>			
Somalia	1	.10	20516
Nepal	1	.10	5866
Afghanistan	1	.27	55556
Burundi	1	.23	30825
Sierra Leone	1	.24	29940
(Average)		(.19)	(28541)

**Table 2 (continued)****(C) Authoritarian Militarily-Oriented Nondebt Affected Countries**

	Income Distribution ( <i>Gini</i> Index)	Political System	Conflict (1= conflict) (0= no conflict)	Ethnic Homogeneity (%)	Defense Spending (%)
<i>Most</i>					
Vietnam	37.0	Highly Authoritarian	1	86.2	8.2
Yemen	33.4	Authoritarian	1	92.8	7.1
Burundi	42.4	Highly Authoritarian	1	80.9	5.9
Jordan	38.8	Authoritarian	0	97.8	8.9
Pakistan	30.6	Highly Authoritarian	1	52.6	4.4
(Average)	(36.4)			(82.1)	(6.9)
<i>Least</i>					
Panama	56.1	Democratic	0	58.1	.9
Peru	52.0	Democratic	0	47.0	1.3
Guyana	43.2	Democratic	0	43.5	.7
Zambia	50.8	Authoritarian	0	21.5	.6
South Africa	57.8	Democratic	0	23.8	1.6
(Average)	(52.0)			(38.8)	(1.0)

**(D) Religiously-Oriented Indebted Countries**

	Income Distribution ( <i>Gini</i> index)	Urbanization (%)	Religious Composition (%)	Population Growth (%)	Debt Burden (P/c Debt) (\$)
<i>Most</i>					
Tunisia	40.0	65.3	98.9	10.4	14000
Panama	56.1	70.8	88.2	16.7	2289
Jordan	38.8	82.3	93.5	24.9	1314
Peru	52.0	72.6	97.2	14.6	810
Venezuela	48.2	93.4	89.5	16.9	950
(Average)	( 47.0)	(76.9)	(93.5)	(16.7)	(3872)
<i>Least</i>					
China	46.9	43.0	42.1	5.9	69
Tanzania	34.6	35.4	35.0	21.1	166
Ethiopia	30.0	16.2	50.1	23.5	85
Mongolia	32.8	60.2	31.0	11.6	506
Vietnam	27.0	27.0	49.2	10.9	184
(Average)	(34.3)	(36.4)	(41.5)	(14.6)	(202)

**Table 2 (continued)****(E) Terms of Trade -Based Debt Sustainable Countries**

	Conflict (1=conflict) (0=no conflict)	Ethnic Homogeneity (%)	Debt Burden (P/c Debt) (\$)	Debt Sustainability (\$)	Terms of Trade (Ratio)
<i>Most</i>					
Iran	1	34.9	144	296	1.32
Kuwait	0	74.0	165	23	2.31
Angola	1	25.2	712	641	2.31
Papua Guinea	1	21.2	1364	2296	3.30
Fiji	1	54.3	113	158	.73
(Average)		(41.9)	(500)	(683)	(1.99)
<i>Least</i>					
Tuvalu	0	93.6	472	5000	.01
Samoa	0	92.6	968	12650	.12
Antigua and Barbuda	0	82.4	6304	13042	.11
St Kitt	0	90.4	6399	10135	.16
Djibouti	0	46.0	973	46471	.07
(Average)		(81.0)	(3023)	(17460)	(.09)

Source: World Factbook (2005, 2006, 2007); Britannica Book of the Year (2005, 2006, 2007).

**Endnotes:**

1. *The Millennium Development Goals (MDGs) in 2000 are eight international development goals that 192 United Nations member states and at least 23 international organizations have agreed to achieve by the year 2015. The MDGs were developed out of the eight chapters of the UN Millennium Declaration that was signed in September 2000. There are eight goals each with specific indicators developed the MDGs target to achieve. The goals are:*
  - (1) Eradicate extreme poverty and hunger.
  - (2) Achieve universal primary education.
  - (3) Promote gender equality and empower women.
  - (4) Reduce child mortality.
  - (5) Improve maternal health.
  - (6) Combat HIV/AIDS, malaria, and other diseases.
  - (7) Ensure environmental sustainability.
  - (8) Develop a global partnership for development.
2. Dennis R. Appleyard, et al., *International Economics* (5th ed.), McGraw-Hill Irwin, 2008: pp. 443-451.
3. Other than this 'theoretical' reason, empirically there is a high correlation (multicollinearity) between these two sustainability variables (simple correlation between the two:  $r=.82$ ). This is based on 160 developing countries analyzed for this paper. This high intercorrelation between the two, if employed simultaneously as independent variables in multiple regression analyses conducted in this paper, would violate a rule of causality due to their 'overlapping.' The multicollinearity problem makes it difficult to identify a 'true' effect of each of the two in assessing their respective effect on the quality of life, which is treated as dependent variable in this paper. For both theoretical and empirical reasons, this paper will address only the export-based sustainability, whose effect on the

- quality life will be analyzed.
4. Walter S. Jones, *The Logic of International Relations*, Scott, Foresman and Company (Glensview, Ill)1988: pp. 214-235. .
  5. Its intellectual father is Dr. Raul Prebisch, Argentinean economist who created the U.N. Economic Commission for America in the 1950s, initially looking at the unfavorable terms of trades that were allegedly to have led the economic stagnation and foreign control of the world economies; See also Michael P. Todaro & Stephen C. Smith, *Economic Development*, Pearson/Addison Wesley, 2006: pp 586-587.
  6. Michael P. Todaro & Stephen C. Smith, *Economic Development*, Pearson/Addison Wesley, 2006: pp. 602-603]
  7. See.Davies, A. and G. Quinlivan (2006), A Panel Data Analysis of the Impact of Trade on Human Development, *Journal of Socioeconomics* Speech by Prime Minister Jean Chretien to the National Forum.
  8. Hae S. Kim, "The Determinants of Internal Conflict in the Third World," *The Whitehead Journal of Diplomacy and International Relations*," Vol 7, No 2, Summer-Fall, 2006.  
 \_\_\_\_\_ "An Analysis of Gap Between Growth and Quality of Life in the Third World," *National Social Science Journal*, Vol. 11, No 2. Summer 1999.
  9. It is difficult to make an exact list of emerging (or developed) markets As of July 2006, the Morgan Stanley Emerging Markets Index included: Argentina, Brazil , Chile , China , Colombia , Czech Republic , Egypt , Hungary , India , Indonesia , Israel , Hong Kong (transferred to China/1997), Jordan , Malaysia , Mexico , Morocco , Pakistan , Peru , Philippines , Poland , Russia , Saudi Arabia, Singapore, South Africa , South Korea , Taiwan , Thailand , Turkey ; See also Michael P. Todaro & Stephen C. Smith, *Economic Development*, Pearson/Addison Wesley, 2006: pp 666-691.
  10. Collier, Paul. 2007. *The Bottom Billion*. New York: Oxford University Press.
  11. Stiglitz, Joseph. 2003. *Globalization and Its Discontents*. New York: Norton.
  12. The term 'third world' creates confusion and it has been 'controversial.' The classification of the Third World countries in this paper was based on the following criteria:
    - (1) Countries in Central and South America, Africa, the Middle East, Asia (excepting Japan) and the Pacific Islands (excepting Australia and New Zealand);
    - (2) South Korea, Taiwan, Singapore, and Israel were no longer categorized as the Third World countries due to their respective remarkable economic, political, and social development.
    - (3) Those countries classified as the 'second world' during the Cold War era were excluded from the classification of the Third World; they are the former republics of the Soviet Union as well as the Central and Eastern European countries, which were under the domination of the Soviet Union. They are classified as the 'transition' countries and economically many of them are classified as the 'developing' countries. Yet, those former socialist countries have not been classified as the Third World in this paper for their 'unique' historical developments that are not shared with the major features of the Third World.
    - (4) There are 'many' ways of classifying countries. World Bank, fore example, classifies the countries into low-income countries (LICs), lower middle-income countries (LMCs), upper middle income countries (UMCs), high-income OECD countries and other high-income countries. The countries are ranked by their levels of gross national income (GNI). Developing countries are those with low, lower middle, or upper middle income countries. The UN Development Program (UNDP) classifies countries according to their human development index (HDI). According to those 'economic' criteria, some 'third world' countries deserve to be classified as 'developed' countries
    - (5) A majority of the Third World countries are also economically classified as the 'developing' countries. Yet, some of the Third World countries are rich and they are 'developed' countries, but they are still classified as the Third World such as Kuwait, Qatar, the United Arab Emirates (UAE) and Brunei, among others. Significant parts of the population in those countries remain uneducated or in poor health for the country's income level and they are still viewed as

'developing' countries and classified as the Third World countries. The classification of the 'developed-developing' dichotomy does not necessarily coincide with 'first-third' world classification as the first-third dichotomy is much more than a mere economic criterion based on GNI or HDI.

13. Conflict-stricken countries are:  
Afghanistan, Algeria, Angola, Bhutan, Bolivia, Burundi, Brazil, Cambodia, Central Africa, Chad, China, Colombia, Congo Republic, Congo Democratic Republic, Cote d'Ivoire, Cuba, Cyprus, Egypt, Eritrea, Ethiopia, East Timor, Fiji, Ghana, Guatemala, Guinea, Haiti, India, Indonesia, Iran, Iraq, Laos, Lebanon, Mauritania, Mexico, Myanmar, Nepal, Niger, Nigeria, Pakistan, Philippines, Rwanda, Senegal, Sierra Leone, Solomon, Somalia, Sri Lanka, Sudan, Syria, Tanzania, Thailand, Turkey, Uganda, Vietnam, Yemen, and Zimbabwe (55 countries)
14. The factor loading is the terminal solution based on orthogonally rotated factors. It is the *varimax* orthogonal rotation, which is most widely used in the factor analysis. The *varimax* is the rotated solution, in which each variable (item) is accounted for by a single significant common factor. The rotated factor loadings are conceptually simpler than unrotated ones.
15. The factor loading that is greater than .30 is considered significant. But it varies from .30 to .40 to .50. These cut-off points are somewhat subjective, which should be determined by the researcher.
16. The *factor score* was gleaned from the following formula: (factor coefficient) x (Z-score). Computer (SPSS: Statistical Packages for the Social Sciences) produces both the factor coefficient and the Z-score. It has been customary to build the factor score employing only those variables that have substantial loadings on a given factor. Variables over .30 factor loading under each factor were selected to construct the factor score. For example, factor 1 has seven variables loaded: quality of life, GDP, urbanization, ethnic homogeneity, population growth, foreign-accrued benefit, and conflict. The factor coefficient for each of these variables and their respective Z-score produced make the *factor score* for each and every of the countries.