Dollar Monopoly in International Currency System: Prospect of Asian Common Currency

SARKER MD. BAYAZID*

Abstract *Dollar is not only the legal tender of US economy but also used as the most dominant global transaction currency. True competition in international currency system rather than dollar monopoly can ensure improved global welfare and accelerate the globalization process. This paper is an attempt to assess the possibility of introducing Asian common currency as the third international currency after euro. At first, the study assesses the amount of US inflation tax collected from outside USA using a newly developed **cross border money demand function**. Secondly, it analyses the global financial crisis of 2008 along with global current account imbalances and the role of Asia behind its deepening. From lessons learnt from the financial crisis, it seems that two or three additional widely recognized international currencies along with similar number of vibrant reserve asset markets can improve the global welfare significantly and by which globalization can be railed again on the right track. This study proposes that Asian advanced economies, emerging economies or even Asia as a whole can enjoy the favorable opportunity supported by recent reserve surplus trend along with using their experiences on Chiang Mai Initiatives and Asian Clearing Union or ACU trade clearing mechanism.*

JEL Classification Number: E-41, F-32, F-33 & F-34.

Key Words: *money demand function, International currency, international reserve and debt flow, international financial institution.*

1.   Introduction

It is widely recognized that cross border financial activities are growing sharply that is supported by augmented globalization process and mass covering of information technology especially internet. Extended cross border human activities influence larger international financial transactions. Considering these significant changes and recent global financial crisis in 2008, it is expected to rethink about the nature of global currency and definition of money demand function covering international transaction demand. However, the ongoing globalization process has been stumbled by the recent global financial crisis in 2008. Though the first shock of the crisis was on the United States economy its recurrent shocks continue through Greece, Ireland and Portugal. Many studies have taken place to find out the causes of the crisis. Recently Cetorelli and Goldberg (2010) identified that global banks' conservative approach in local and cross border lending in emerging countries played a significant role in deepening the crisis during 2007-2009. The findings are more of a business explanation of the crisis. Similarly subprime effect, booming derivative markets, insufficient banking regulations are very common explanations from business point of view rather than economic policy analysis. As the crisis transmitted into the global financial system, the problem should be reviewed through global economic point of view. Dunaway (2009) points out that a combined effect of global current account imbalances among major developed economies and US favorable position as the primary issuer of reserve asset since 2000 resulted in the global financial crisis in 2008. Earlier Corden (2007) held the growing US current account imbalances responsible for the crisis.

The next question is how USA along with other affected countries is overcoming the crisis. Printing money is one of the major policy tools by which they paid their bailout expenses, especially USA. Inflation may be the ultimate result. However, Inflation tax or seigniorage gain is the positive consequence of printing money. Inflation tax is an unseen cost for the people and they cannot realize their losing income easily. However, US Inflation tax is not only collected from the American people but also from the global community (*see model estimation*) because of its internationally acceptable character. In the same way dollar's additional demand from international transactions strengthens it against other currencies. Because of this favorable position, during crisis and thereafter, US dollar has fallen but not at that level where it was supposed to be. As dollar is a widely established international currency, it is wise to review the financial crisis from global perspective, too. From global economic point of view, researchers have already

identified that the increasing trend of Asian surplus reserve flows into US reserve asset market made the crisis longer and bigger. The Asian influences were evident in the unusual economic policy tools, for example, lower interest rates prevail despite continual budget deficit during 2000 to 2007 in US. Thus, it cannot be denied that Asia was also responsible for the crisis. First, Asian countries continued to put their surplus reserve into US deficit financing under less visionary policy. Second, Asia was not able to create any platform in which they can invest their surplus reserve despite 1.35 trillion dollar external debt demanded (38 percent of global figure) within Asia (World Bank, 2011; see table-1). Not only the development supportive debt demand, Asia has experiences and initiatives such as Asian Clearing Union (ACU) of trade payment settlement mechanism and *Chiang Mai Initiatives* as a regional liquidity support system among ASEAN+3 (3 are Japan, China and South Korea) countries. Eight ACU member counties (mostly South Asian) also use Asian Monetary Unit (AMU) for their clearing. In 2009, total trade transaction among the ACU member countries was $14.07 billion, in which 41.08 percent was cleared by their ACU mechanism (ACU, 2010, p.142).

Therefore, main objectives of this paper are:

- Quantifying dollar's gained extra demand from outside USA and how much global community is paying inflation tax to US due to dollar monopoly in international currency system.
- Reviewing traditional money and money demand function to develop a cross border money demand function in line with the first objective.
- Justifying the potentiality and possibility of emergence of a third international currency to bring true competition among the international currencies.

2. Survey of Studies and Identifying Gap

Researchers explained the global financial crisis in 2008 by business point of view and also by the eye of global economic policy movement. Global economic policy analysis points towards the combined effect of global current account imbalances among major developed economies and US favorable position as the primary issuer of reserve asset since 2000 (Dunaway, 2009). Using analytical approach it suggests for better IMF surveillances. US deficit financing supported by issuing reserve asset cannot last long without internal adjustment. Ultimately, it results into the crisis. Current account surpluses or reserve surplus in China, Japan and Emerging Asia may be another reason. After Asian crisis, emerging Asia contributed their surplus reserve by investing in the US market. Obstfeld and

Rogoff (2005) and Corden (2007) signal the probable problems due to growing current account imbalances especially for USA but these signals were not recognized properly by the concerned counterparties. Regarding Asian surpluses, Aizeman and Jinjarak (2009) estimates 1% increase in the lagged US import/GDP is associated with a 0.3% current account surplus of countries running surpluses. Using time series data from 1981-2006, it showed that US is the '*demander of last resort*' of surpluses. Similarly, Schnabl and Schobert (2009) use Middle-East and North African data to show that emerging market economies are international liquidity provider and industrialized economies are the international liquidity absorber.

In relation with Emerging Asian reserve flow, Aizeman and Glick (2009) estimates direct opportunity cost of reserves associated with the marginal productivity of public capital or the cost of external borrowing. However, dollar denominated external debt is attributed to limited financial development in emerging countries (Caballero and Krisnamurthy, 2003). Similarly David (2010) explains an asymmetry of a financial system where developing countries finance USA. The study also identifies the anti development characteristics of US-dollar based international monetary system. It proposes Keynesian plan for an institutionalized rule-based international monetary system which can avoid deflationary pressures for the world economy. In the early 1940s, J. M. Keynes proposed a kind of an international clearing union that would operate on a multilateral basis but the United States opposed the idea on the grounds that it rested on automatic credits and controlled trade. However, in mid-1950, 18 Western European countries joined in a multilateral clearing union known as the European Payments Union (EPU). Similarly, 5 Asian countries formed the Asian Clearing Union (ACU) to minimize hard currency payment burden among them.

For better and sustainable global financial system, the performance of existing international financial organizations like World Bank or IMF is not yet satisfactory. Jensen (2004) finds that countries that had signed in IMF agreements attract 25% less FDI inflows than countries who had not signed. That is why time has come to review the structure of the existing global financial system. Genberg et al (2005) shows that 7 East Asian countries held about 60% of international reserve in 2004. It had an increasing trend thereafter. It proposes to establish an Asian Investment Corporation (AIC) and also supports the *Chiang Mai Initiatives* as a regional liquidity support system.

Therefore, the gap in favor of Asian reserve asset market has gradually been narrowed down by the recent proposal of an AIC and the Chiang Mai Initiatives

as a regional liquidity support system. However, no study has yet taken place to assess the possibility of bridging the Asian surplus reserve to large Asian development demand by forming at least one Asian reserve asset market. The idea of proposed Asian reserve asset market may come to reality by the coordinated structuring of existing Asian initiatives and experiences such as AIC for investment, ACU mechanism for trade clearing among South Asian countries, and *Chiang Mai Initiatives* for regional liquidity support among South-East Asian countries.

3. Limitations and Assumptions

Typical hierarchy of regional economic integration: 1.free trade area, 2.customs union, 3. common market, 4. economic union and 5.political union (Phatak et al, 2006) may not be true equally for all economic environment. For example, European Union was able to introduce a common currency *euro* in 1995, working since Treaty of Rome in 1958. On the other hand, ACU was initially formed with 5 Asian central banks in 1974. In 2010 its member countries rose to 9, and at the same time a few potential Asia and Pacific countries such as China and Australia tried for full membership. Though Asian Monetary Unit (AMU) follows the dollar value, Asian countries are trying to be integrated through ACU trade payment mechanism. Therefore,

- The question whether integration will bring common currency or common currency will bring integration is not very relevant now.

- This study has shown that Asian common currency will be the ultimate result of proposed *'Asian reserve asset market'*.

- The study findings are quite different from European integration and their euro concept.

- At least 50 percent of global trade and transactions are dollar denominated.

- Economics may be looked at *territorial* and *global* economics rather than conventional division of micro and macro economics. Economic activities and interactions among individuals, firms and one state may be the broad areas of *territorial economics* and economic activities and interactions among firms, multinational firms and all states of the world would be the major areas of *global economics*.

4.   Methodology

The study is based on analyses of past data and information with situational analysis. It used secondary data mostly collected from IMF Financial Statistics [IFS] and Bangladesh Bank, the central bank of Bangladesh. A mathematical model has been developed to assess the amount of '*dollar seigniorage tax*' collected from outside USA. The result of this research derives through a process of problem analysis, review of existing process and policies, literature review and finally identifying the research gap, which has implication for further research in this area.

5.   Stylized Fact

A.   Fact of Dollar Value Gained from Rest of The World:

Mostly US dollar is used in global financial system. Dollar monopoly is also prevailing in the international transactions across the globe as most of the transactions are pegged with dollar during quoting or exchange rate determination. That's why US dollar gains extra demand from outside US. The proposed Asian common currency along with existing euro can break the monopoly in near future. The study contains analytical approach and a new model has been framed by rearranging common variables to estimate the value of money. The rationale for introducing a possible Asian common currency may require extended analysis of related experiences and global economic trend.

The Model of Estimation: Council Special Report

This study explores a new function of money as a ***representative unit of nominal GDP*** in addition to the traditional functions such as store of value, unit of account and medium of exchange. The new function can be made clear by emerging a cross border money demand function that would be explained through sequential approaches of existing theories.

According to the classical school the demand for money denotes the quantity of real money balance $\left(\frac{M}{P}\right)$ people wish to hold (Mankiw, 2009).

$$\left(\frac{M}{P}\right)^d = kY$$

Y - real income

k - (constant) how much money people want
to hold for every
dollar of income

So that, $\dfrac{M}{P} = kY$

$$\Rightarrow M\left(\frac{1}{k}\right) = PY \qquad [\ V = \frac{1}{k}$$

$$MV = PY \qquad \Big| \ V \ -\text{income velocity of money}$$

According to Keynesian Economics, people demand money for transaction and investment purposes.

$$\frac{M}{P} = l(r) + k(Y) \qquad \Big| \begin{array}{l} l(r) - \text{speculative demand} \\ k(Y) - \text{transaction demand} \end{array}$$

This paper believes in the *Keynesian money demand function,* but it argues that a particular currency may have cross border demand in addition to its typical demand within territory. The outside demand of a particular currency has an important role to its value or purchasing power or price, in which interest rate is not so important. To explain cross border money demand function as a part of total money demand function, only exchange rate is not enough.

The explanation of new function of money would be clarified with an example of a certain economy. For example, Bangladesh actively participates in international trade and transactions through major international currencies and also with its own convertible currency (Taka=Tk.). But most of its international transactions are settled by foreign currencies such as dollar and euro. As a result, those dollar/euro denominated economic activities are not represented by the local currency so that it's net international transactions gain ratio will be negative. Let the ratio is -8 percent or -0.08. Therefore, *Taka* cannot represent the total economy or GDP and subsequently the lesser amount of the same of -8 percent influences to raise the value of dollar or euro. The example can be denoted as *Taka* representing percent of $1 + f$ GDP of Bangladesh Economy. Mathematically,

$[1+f]$ x GDP

$=\ [1+ (-0.08)]$ x GDP

$= 0.92$ xy

It means local currency (*Taka*) is able to represent its GDP up to 92 percent and the rest 8 percent is represented by US dollar considering its international transaction in other international currency is almost zero. For US dollar pegged countries' 100 percent GDP will be represented by US dollar. Conversely, for USA, it would be $(1+f)$ x GDP, where $f >$. We can say that:

Negative f is denoted by that part of the economy that originates from own economic activities but transactions are made through other than own currency (example, *Bangladesh Economy*). Conversely,

Positive f is denoted by a certain size of economy originated from other than own economic activities but transactions are made through own currency (example, *US Economy*).

Therefore, the total of all countries' international transaction co-efficient will be $\sum_{i=1}^{n} f_i$ =T is the global transactions value. Where, T=$34.1592 trillion in 2009. [source: IMF Financial Statistics (IFS), 2011]

Therefore, the **new function of money demand** only for estimating '*cross border*

$$T = t_I + t_X + t_s + t_L + t_R$$

t_I – global import=$12.4914 trillion

t_X - global export=$12.3529 trillion

t_s - global net service payment (remittance and current account balances=$0.3224 trillion

t_L - global debt or loan transactions=$3.5451 trillion

t_R - global reserve =$5.4474 trillion

demand' may be defined as:

$$\frac{M_2}{p} = tY + mY$$

t – international transactions lost or gained by own currency

m – Monetization process by which prevailing inflation rate does not rise.

p – Price level.

M_2 – money supply.

[This equation is similar to Fisher's Equation but not the same and it has been derived in a different way. Its interpretation is also different.]

According to the new equation, if price level rises, money value falls.

It means an inverse relationship $v \sigma \frac{1}{p}$ or, $v = \frac{1}{p}$ [Assuming constant is a unit]

$$M_2 v = Y (t + m)$$

[Here, v value of the currency]

$$v_i = \left(\frac{Y}{M_2}\right)_i (1 + f_i + m_i)$$

$$[t = I + f_i]$$

$$v_i = \left(\frac{Y}{M_2}\right)_i (1 + f_i + m_i)$$

M_2 may change by printing money, credit growth and or buy back treasury-bills/bonds.

Therefore, value gained from the own economy

$$= [Y(1+m)]\left(\frac{1}{M_2} - \frac{1}{\Delta M_2 + M_2}\right)$$

And value gained from outside the economy

$$= (Y\,f)\left(\frac{1}{M_2} - \frac{1}{\Delta M_2 + M_2}\right)$$
Y – US nominal GDP
M_2 –US money supply.
f –net ratio of US Dollar transactions surplus or deficit(=1.2501[*])

=0.2566 or 25.66%

Here, the change since global crisis in 2007 to 2009 is considered. It means US dollar gained 25.66 percent extra values from the global community or outside US economy during the same period. However, to estimate *inflation tax* or *seigniorage tax* only currency circulation () by printing is required to consider. So that, seigniorage tax collected from outside the economy

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$$= (Y\,f)\left(\frac{Cu}{M_2} - \frac{Cu + \Delta Cu}{M_2 + \Delta M_2}\right)$$

=0.0186574 trillion =18.6574 billion.

Here, change is considered since global crisis to 2009. It means global community paid US dollar 18.6574 billion tax to US during 2007 - 2009. The estimation result is about 50 percent higher than the Feige (2009) estimation in which estimation was up to 2008. Though, this model could estimate similar result close to other studies, it requires to be tested further for best fit.

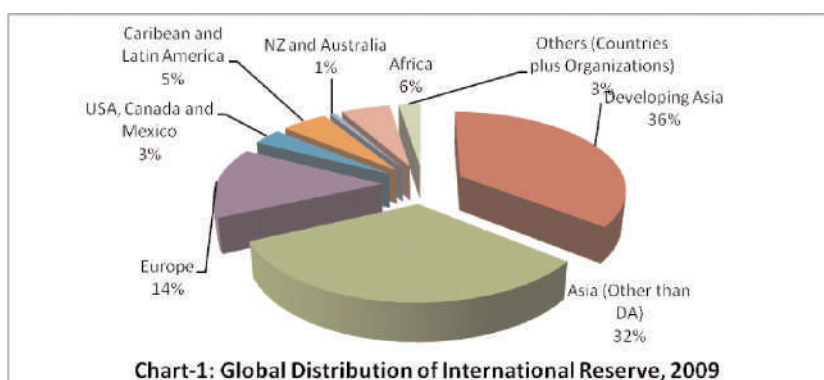## B.   Fact of Experiences and Opportunities:

The post great depression regime has experienced many fundamental changes in economic theory and policy. Even economists were divided into classical and neo-

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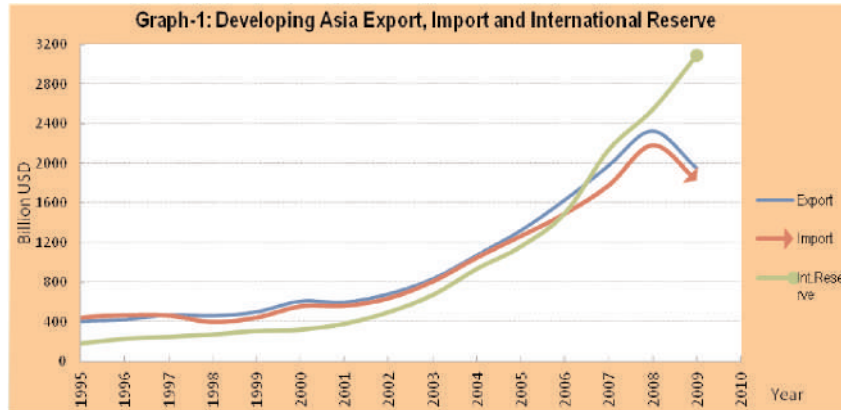[*]   [US transaction deficit in 2009 was about 0.977 trillion. During same year US nominal GDP was 12.88 trillion. Therefore, net international transaction was -0.076. However, USA currency enjoyed about 50% (assumed based on London FX market transactions and the dollar share in SDR) of the total global transactions or 17.0796 trillion that was 132.61% of US nominal GDP. Thus, f = 1.2501 and f = 2.2501]

classical school. In connection with the recent financial crisis, basic money function and related issues are required to be reviewed. One of the basic arguments is the dollar value empowered by transactions demanded outside of USA. In addition, US dollar enjoys almost a monopoly advantage in international currency system. Feige (2009) estimates that USA collected dollar 6 to 7 billion every year from outside as a form of *inflation tax* or *seigniorage tax* over the past two decades. It is also assumed that US reserve asset market attracts most of the surplus reserves, especially from Asia. So, dollar dominating international transactions with New York based reserve asset market in the world plays two important roles. Firstly, recognition of the problem was delayed and secondly, it favored USA to minimize the adverse effect of the financial crisis, which could have been much worse than the actual.
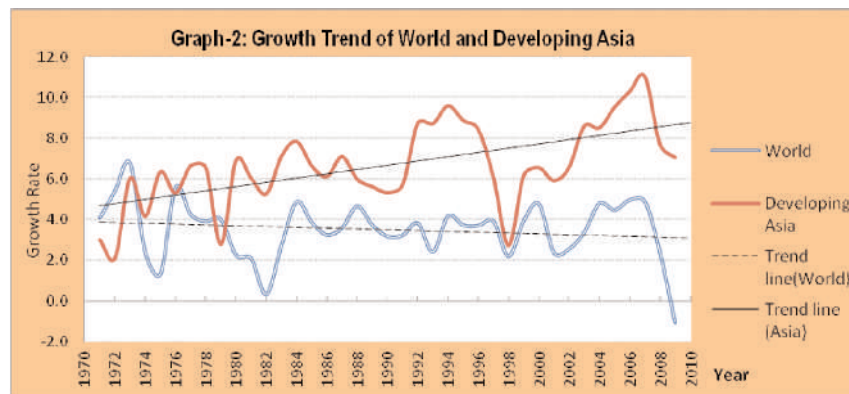
Indeed, the economic analysis of global financial crisis indicates that an addition of two or three widely recognized international currencies along with similar number of vibrant reserve asset markets can improve the global welfare significantly and by which globalization can be railed again on the right direction. This study proposes that emerging Asia or even Asia as a whole can enjoy the favorable opportunity (See Chart-1, graph-1& 2) to form an Asian reserve asset market, which may extend its ability to come under Asian common currency at least among the developed or rich Asian countries. In addition, an Asian Monetary Unit (AMU) system is already functioning as Asian Clearing Union (ACU), which can be extended to include most of the Asian countries. ACU system is still minimizing the dollar dependency or dependency on other hard currencies among 8 member countries' trade settlement.

Chart-1: Global Distribution of International Reserve, 2009

Source: Compilation based on IMF Financial Statistics (IFS), 2011.

Graph-1: Developing Asia Export, Import and International Reserve

Source: *Compilation based on IMF Financial Statistics (IFS), 2011.*

Graph-2: Growth Trend of World and Developing Asia

Source: *Compilation based on IMF Financial Statistics (IFS), 2011.*

In fact, Asia has the potential to take initiatives to start a new international currency based on successful formation of an Asian reserve asset market, which may not be the regional integration like Euro Zone. Asia has of course taken initiatives such as Asian Monetary Unit (AMU) used in South Asian trade clearing and the Chiang Mai Initiatives for regional liquidity support in South East Asia, can help form the proposed Asian reserve asset market. However, the idea is different from existing Asian Development Bank (ADB) structure where 44 percent ownership is held by non-Asian members. USA is the highest 15.6 percent share holder jointly with Japan. Undoubtedly, the role of non-Asian members during initial stage of ADB was highly appreciable. Later, it has become apparent that the US desire has been reflected in ADB's activity in depriving Vietnam's loan proposals.

Therefore, it is the common Asian desire to form a new platform based on pure Asian initiatives enlightened with Asian idea and experiences by which global community can expect a third international currency, the Asian common currency. The outcome of the study may ensure greater Asian economic welfare as well as global economic welfare through introducing better competition in international currency system, the prospect of which has not yet been studied rigorously.

6.   Benefits

A.   Benefits for Asia

The study likes to see the proposed Asian common currency as a prelude to forming an Asian reserve asset market. It does not say that it would be a long term result, as ACU member countries are already enjoying some benefits by using their AMU. If Asia can establish an Asian reserve asset market, many Asian developing countries can borrow from that market rather than from World Bank or other non-Asian international financial institutions. Consequently, Asian surplus reserve may get good return against those government guaranteed development lending. In addition, after financial crisis in 2008, time has come to rethink whether USA will be able to keep its characteristic as a safe haven of international reserve asset or not.

The benefit may be enjoyed by implementing the ideas in several clusters. Especially, Middle East countries held lower variation in their socio-economic culture, and therefore, they can think separately. Even Asian tigers or ASEAN countries may think in this way. Each of the initiatives can slowly but surely enhance trade, investment and welfare through a synergy effect within Asia.

B.   Global Benefits

Reducing dollar monopoly can ensure better welfare for the global community. Possible better competition in global trade and transactions system may expedite the ongoing globalization process. Ultimately, competition other than dollar monopoly will create a situation, in which global community can think about further development such as global currency. Therefore, this type of initiatives are badly needed for both Asian and greater global interest.

7.   Conclusion

Global community does not have any effective global currency yet. US dollar is enjoying the global currency status though their domestic bill. Consequently, US dollar enjoys extra demand from the global transactions. However, recent global

economic trend and the causes of the last global crisis indicate that introducing a third international currency after euro may ensure a better competitive environment in international currency system. Asia is in the most favorable situation to avail of the opportunity to establish an Asian common currency. Forming an Asian reserve asset market for bridging Asian debt demand and other potential debt demand with Asian surplus money may expedite the way of Asian common currency. The journey for common currency may be started based on existing Asian experiences of Chiang Mai Initiatives for liquidity cooperation and Asian Clearing Union for trade clearing.

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Table 1: Global Development Finance: External Debt of Developing Countries, 2011

(million US dollar)

S	Region	Total External Debt Stock	Total long term debt stock	Public and publicly guaranteed debt (Multilateral)	Public and publicly guaranteed debt (Bilateral)	Public and publicly guaranteed debt (Com.banks &others)	Public and publicly guaranteed debt (bond)	Private non-guaranteed debt (bond)	Private non-guaranteed debt(Com.banks &others)	IBRD (memo)	IDA (memo)	Use of IMF credit	Short-term debt
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	East Asia and Pacific	825602	502950	80654	120900	60029	32372	22840	186154	23332	20921	291	322361
2	Europe and Central Asia	1126252	925764	59033	30122	126853	53516	108489	547750	25479	7631	35103	165385
3	Latin America and Caribbean	912980	773100	115208	33869	242880	40159	101621	239364	40439	1468	1243	138637
4	Middle East and North Africa	141321	118719	34673	43096	23946	10853	670	5480	8016	3831	200	22402
5	South Asia	339983	282407	94140	49268	8692	7863	16181	106261	9817	51440	9081	48495
6	Sub-Saharan Africa	198976	156260	54335	48761	13368	22396	6224	11175	900	31612	6261	36456
7	Low Income Countries	135593	116809	68594	36764	750	4754	0	5946	463	39115	5951	12833
	Middle Income Countries		264239							10752			
8	Total (World)	3409521 1	2759200	438043	326016	475768	167159	256025	1096184	107983	116903	52179	733736
	Developing Asia [1+5-(Aus&NZ)]	1165585	785357	174794	170168	68721	40235	39021	292415	33149	72361	9372	370856
	Total Asia	1349142											