Comercial Openness, Foreign Direct Investment and Child Labour: Cross-Country Empirical Evidence from Sub-Saharan Africa

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Abstract
This paper has made an attempt to analyse the effect of trade and foreign direct investment inflow on the incidence of child labour by using a panel of Sub-Saharan African (SSA) countries. We specifically, empirically examined, first, the often-cited conventional wisdom that an increase in trade will permit Less Developed Countries (LDC) through the income effect to reduce poverty driven child labour and secondly, the concern that multinational enterprises could cut costs to gain competitiveness by increasing the incidence of child labour. The interesting result that emerges from this analysis is that, for SSA countries, trade (which is generally based on agricultural products) expose children to child labour. To be more precise, an increase in trade by 5% point increases child labour by 10% point. We surprisingly find out that Foreign Direct Investment inflow has an insignificant effect on the incidence of child labour. If the positive linkage between child labour and commercial openness for SSA countries is accepted, the inclusion of labour standard especially those concerning child labour, in the rules and mandate of the WTO is not appropriate, this being because it may reduce commercial trade for SSA countries and hence the objective of encouraging trade by the WTO may not be attained. Such a result might suggest why the WTO keeps on rejecting the proposal to include labour standard in it framework despite the incessant pressure mounted by the UE countries.

Keywords: International Trade, Child Labour, Cross-Country study, Commercial Openness, Foreign Direct Investment inflow.
Background and Problem Statement

The multilateral free trade agreement, that lead to the creation of the World Trade organization (WTO), resulting from the Uruguay round of discussions\(^1\) in 1986, has brought about revolutionary changes in liberalizing international trade across countries. The greatest and the most important statutory obligations of the member countries are to radically reduce tariff barriers and to establish a completely free movement of goods, services and capital flow across countries. This agreement has been enkindled by the early classical and neoclassical trade theories\(^2\) according to which a country will enjoy higher wellbeing if it specializes in the production of goods it can produce at a comparatively lower cost, rather than producing all the goods its members wish to consume. Welfare then rises when the surplus is exchanged for those it does not produce in sufficient quantity (Alessandro et al., 2002).

In this light, several drastic measures have been implemented by the government of both developed and developing economies to ensure a freer trade. The resultant is that, world trade in goods and services has expanded at nearly double the pace of world real GDP between 1950 and 2000 (WTO, 2006). Within the same period, world trade in goods and services rose from just one tenth to about one third of world GDP (WTO, 2006). According to the IMF 2006 estimates, between 1980 and 1995, aggregate capital flow averaged equivalent of 5% of global GDP but in 2006, the figure was more than 15% of global GDP.

While trade and the movement of capital across borders, have intensified, the problem of child labour and child labour standard has also drawn serious attention in the ILO and WTO framework. In 2002, ILO estimated that 2.5 million children are economically active in developed economies, 2.4 million in the transitory economies, 127.3 million in Asia and Pacific, 17.4 million in Latin America and the Caribbean, 48 million in Sub-Saharan Africa (SSA), and 13.4 million in the Middle East and North Africa. While the figure sounds comforting for SSA, it is terrifying when presented in participation rates as the ILO (2002) revealed participation rate for developed countries at 2%, 15% for Middle East and North African, and 29% for SSA.

According to Swaminathan (1998) as a developing country becomes open to trade and inflow of FDI, the demand of child labour increases, especially if child labour legislation is not enforced. This is evidenced in Basu and Van (1998) who in the same period, equally indicated that the magnitude of child labour was on the rise and hence a worrying and substantial issue. Davies and Voy, (2009) argues that trade liberalisation would likely increase return to unskilled labour hence reducing the incentive to invest in skills and education and hence increase child labour. This is affirmed in Mafizur and Khanam (2012). In the same vein, Neumayer and De Soysa (2005) evidence that trade liberalization increases the incidence of child labour as long as the children work in sector that directly or indirectly supply inputs to the export sector.

This claim is however mitigated. Given that child labour in Sub-Saharan Africa is poverty-driven (Basu and Van, 1998), pro-liberalisationists argues that, increase trade liberalisation and capital flow would take developing country into higher growth orbits, the benefits of which would definitely percolate down to the bottom of the society, thereby reducing poverty and poverty-driven child labour (Jayanta and Sarbajit, 2003). This is evidenced in Shelburne (2002) study. Further, countries with higher stock of FDI have lower child labour incidence as evidenced in Neumayer and Soysa (2005). On the bases of this axiom, the several initiatives

\(^1\) 8th round of multilateral trade negotiations within the framework of the General Agreement on Tariffs and Trade spanning from 1986 to 1994. Sundjo Fabien, will be a great man in his Country tomorrow.

\(^2\) This involves trade theories that justify international trade by highlighting it importance like that of David Ricardo.
taking by government of Sub-Saharan Africa to attract more foreign capital and to increase agricultural related exports should reduce poverty driven child labour.

Nevertheless there is a growing concern from skeptics of globalization that, most Sub-Saharan Africa, are trying to increase their (cost) competitiveness in the context of increase trade and FDI inflow by using more and more child labour, hence influencing trade and may also attract more FDI, (Busse and Braun, 2003). The claim here is that child labour has become an important local criterion for foreign investors when selecting the location of multinational firms. This claim is sustained under the assumption that developing countries characterised by lax labor standards, low wages and abundant supply of unskilled labour, is often considered as a paradise for some foreign investor (Ozcan and Hakan 2010). Hence, child labour has become an important local tool use to bias competition in the international scene.

In the midst of this worry the European Union (EU) countries have requested for the integration of labour standards that will prohibit developing economy from using child labour within the framework of the WTO. Threats to stop the importation of good produced with the help of child labour have increased significantly in both the ILO and WTO framework. While US has passed legislation prohibiting the importation of goods produced with the aid of child labour the WTO talks of 1999 in Seattle and the 2001 multilateral trade round on this issue is still tearing the protagonist apart. Developing economies believes that the integration of such child labour standard might reduce the already insignificant level of trade and the degree of attracting FDI and this would probably affect welfare. This suggests a likely link between child labour and trade on one hand and child labour and FDI inflow on the other hand.

**Research Question**

On the bases of this background, the key questions that arise is: what is the extent of the effect of an increase in trade and FDI inflow on child labour in SSA countries? To answer this major question, two specific research questions were reformulated as:

- What is the extent of the effect of an increase in trade on child labour participation decisions in Sub Saharan Africa and
- What is the extent of the effect of an increase in FDI inflow into Sub Saharan Africa on the incidence of child labour

**Research Objective**

In line with these questions, the major objective of this study is to investigate the extent of the effect of an increase in trade and FDI inflow on child labour in SSA countries. The study specifically seeks:

- to scrutinize the extent of the effect of an increase in trade on child labour participation decisions in Sub Saharan Africa and
- to investigate the extent of the effect of FDI inflow into Sub Saharan Africa on the incidence of child labour.

**Research Hypothesis**

In order to achieve these specific objectives, all other things being equal, we test the following hypotheses:

- An increase in trade as a result commercial openness, exert upward pressure on child labour supply in Sub Saharan Africa
As the inflow of FDI into Sub-Saharan Africa increase, the incidence of child labour also increases.

**Significance of this Study**

The major significance of this study is twofold as it has a policy and scientific relevance. Disagreement has often arisen on how to tackle the problem of child labour standards in the WTO framework, partly due to the lack of awareness on the empirical link between trade and child labour on one hand and between the increase inflows of FDI and child labour on the other hand. According to Brown et al. (2002), studies interested on the interaction between child labour, trade and FDI inflow has focused on theoretical issues while empirical evidence on the topic is still very scarce.

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While some studies argue that a rise in trade will permit Less Developed Countries (LDC) through the income effect to reduce poverty driven child labour others on the other hand worry that multinational enterprises could cut costs to gain competitiveness by increasing the incidence of child labour. The latter protagonist purport that the level of child labour has become an important local criterion for foreign investors (Busse and Braun, 2003). This study is, therefore, expected to identify the empirical linkages between openness to trade, FDI inflow and child labour in the context of sub-Saharan Africa. It will identify the axiom that suit the context of sub-Saharan African countries.

In addition, it will bring to light vital information into the continuous dispute on child labour standards in the WTO framework which will help in shaping policy formulation on the issue by the various protagonists to safeguard children. While most studies interested on child labour focus on household level drivers, studies with particular attention on international economics of child labour are still scarce (Dinopoulos and Zhao 2007). This study is likely contributing in reducing this gap.

The rest of the paper is structured as follows: The next Section is aimed at reviewing the theoretical and empirical literature and Section 7 presents methodology. Empirical results are presented in Section 8 and Section 9 concludes the paper.

**Theoretical and Empirical Literature**

Between 1980 and 1990, only 6 peer reviewed journal published articles on child labour existed, 65 between 1991 and 2000 and more than 143 today (Edmonds, 2008), indicating the serious attention drawn by child labour. The formal conceptualization of child labour is based on household time allocation decision behaviour and ranges from models that consider bargaining power such as the intra-household bargaining models (Strauss and Thomas, 1995; and Moehling, 1995) and the extra-household bargaining model (Gupta, 1998) to those that disregard household bargaining processes in decision making (Becker, 1964; Rivera-Batiz, 1985; Hotz and Miller, 1988; Nakamura and Nakamura, 1992 and Basu and Van, 1998). While these significant body of study are very relevant as concerns the economy of child labour, they however ignored and important aspect due to their strong concentration on autarky analysis.

The formal conceptualization base on the international economics of child labour are relatively few (Dinopoulos and Zhao 2007) and recent. As highlighted by Neumayer and De Soysa (2005) theory itself is too ambiguous with regards to the link between child labour, trade and FDI inflow. While some theories are constructed under the axiom that trade increase child labour, others posits that it’s on the contrary reduces child labour. Among theories postulating the rise in child labour resulting from increased trade is the early work of Grootaert and Kanbur (1995) which argues that trade liberalisation would likely increase return to unskilled labour hence reducing the incentive to invest in skills and education as stated in Mafizur and Khanam (2012).
This is affirmed by Davies and Voy (2009) study. Trade liberalization increase the incidence of child labour as long as the children work in sector that directly or indirectly supply inputs to the export sector (Neumayer and De Soysa, 2005). Nevertheless, following Ranjan (2001), Jafarey and Lahiri (2002), Neumayer and De Soysa (2005) again reiterate that more open countries would likely be characterized by lower interest hence better access to credit which is likely to curb child labour. Further, as FDI spurs economic growth, it will indirectly reduce child labour (Noorbakhsh, et al., 2001). The review of theory work suggests that the overall effect of trade on child labor depends on how trade and FDI affects income and relative return to unskilled labour (Edmonds and Pavcnik 2004).

Empirical evidence on the relation between child labour and globalization are equally inconclusive. In their cross-section study, in Vietnam Edmonds and Pavcnik (2005b) provided some empirical evidence on the relationship between globalization and child labour. They evidence that a 30% rise in the relative price of rice due to globalization is associated on average with a 9% decrease in child labour. In the same vein, Shelburne (2001) capturing openness as the trade ratio (import-export) normalized by Gross National Product found a negative relation with child labour. Capturing openness through the inflow of FDI, Busse and Braun in 2004 confirmed this result. Further, Neumayer and De Soysa (2005) found a negative correlation between trade and child labour.

The preceding discussions were based on micro empirical data. Evidence on the negative relation between child labour and openness based on cross country setting is documented. Edmonds and Pavcnik (2006) use instrumental variables to control for the potential endogeneity of trade openness in a cross-country setting. They found out that the more the countries trade the less they have child labor. Following also the instrumental variables technique Davies and Voy (2009) fail to reject the result of Edmonds and Pavcnik (2006). In their cross-country study, Cigno et al. (2002) also indicate a negative relationship between child labor and trade. In addition, evidence that countries which have a higher stock of FDI or which are open towards trade also have a lower incidence of child labor is presented in Neumayer and Soysa 2005 studies. Further, with the help of a panel data approach, Bonnal (2007) found out that countries which trade more and have a higher stock of FDI had less child labour.

While the aforementioned studies authenticate the predictable wisdom of the negative association or effects of trade liberalisation and FDI inflow on child labour supply, some studies, however, were unable to agree with these findings. Contrastingly, Cigno et al. (2002) using a smaller panel of developing countries rejected the claim since their investigation unveiled something else. They found no significant robust effects of trade openness on child labour. Nevertheless, using a multivariable vector autoregression (VAR) model Iram and Fatima (2008) investigating the causal links between FDI inflow and trade on the incidence child labor fount that trade stimulate the export sector which intern increases the demand for child labor.

The preceding discussion clearly indicates that, empirical evidence available in the literature has been rather inconclusive. The link between child labour and country openness remain an ambiguous and empirical issue. In addition, most studies have loped together countries with very high incidence of child labour and those with very insignificant figure of child labour. This is the case of Edmonds and Pavcnik (2004) who use a sample of 113 countries among which Italy, Denmark, Norway, United States, United Kingdom as well as Bangladesh, Cambodia, Benin and Cameroon. This may dilute some of the relevant effect that could undo some of the result postulated. It is in this light that Mafizur and Khanam (2012) holds that since child labour mainly exists in developing countries, research on this issue should be devoted to developing countries only. ILO (2002) revealed participation rate for developed countries at 2%, 15% for
Middle East and North African, and 29% for SSA hence this study focus on SSA. This study shall focus on SSA countries only.

**Methodology**

**Choice, Measurement and Justification of Variables**

We have use child labour as our outcome variable. The measure of child labour that has always been used is the de jure measure, based on the total number of ratifications of the two fundamental ILO Conventions on Child Labour No. 138 and No 182, Dec. 2002 or on the indicator for the degree of Child Labour as suggested by Rodrik (1996). The number of ratified ILO conventions on Child Labour appears to be a poor measure of the level and extent of child labour. Sometimes the interpretation of exact phrasing of the Child Labour conventions contradicts National Laws or Regulations, OECD (1996, 2000). On the other hand, ratifying a particular convention does not automatically imply its thorough observance. For instance, while Rwanda and Cameroon has ratified both conventions, it has a severe Child Labour problem, than the United States which ratified only one but does not have any troubles with the practice of Child Labour, ILO (2002).The Rodrik measure is not free from this lacuna too. Therefore, rather than looking at what is said on child labour, it is better to look at the real extent of the incidence of child labour or the de factor measure.

Some researchers have used as a measure of Child Labour the participation rate of children age 10 to 14 as indicated by the Development Indicators. This is an important indicator of early involvement in work activities but presents three lacunae for our studies. Apart from the fact that this data are not available for countries in our sample, by excluding children younger than 10, it leaves out a large, arguable the most worrisome, part of the phenomenon in question. A substantial number of children bellow this age group are working either part time or full time, Alesandro Cigno, Furio C. Rosati and Lorenzo Guarcello (2002). According to the 1999 National Council of Applied Economic Research (NCAER) survey, of rural Indian households, around 10 percent of children aged 6 to 10 were reported by their parents as working in one way or another. The third lacuna is that this measure of Child Labour does not include children working within the household, and does not account for children engaged in non-official, especially if illegal, work activities.

As a result of these lacunae, we shall therefore use children out of school, primary defined as the number of primary-school-age children not enrolled in primary or secondary schools and reported in the development indicator. To reduce the effect of coefficient volume we decided to log this variable. The shortcoming of this alternative measure is that a child not attending school is not necessarily working. On the other hand, however, children not reporting for school are more difficult to monitor, and thus more at risk of exposure to the Worst Forms of abuse than children regularly available for inspection by the school authorities, (Alesandro et al., 2002). Therefore, children out of school, is not only a correlate of Child Labour at very young ages, but also a valuable danger signal.

The dependent variables used here are: Trade (% of GDP), which is the sum of exports and imports of goods and services measured as a share of gross domestic product and equally represents commercial openness, FDI inflows (% of GDP), and other control exogenous variables as shown on table 1 and 2.

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3 Detailed information for about 40 countries can be found at www.ucw-project.org.
Our econometric studies cover the period 1999 to 2013. The choice of such a period is not voluntary. It has been determined by the constraint of availability of data. Data for our studies is taken essentially from the World Bank database.

**Empirical framework**

Our empirical work will be aimed at understanding whether on a cross-country setting an increase in the demand of export product and FDI inflow will increase the incidence of child labour. In this light, use will be made of the panel data analysis. Our outcome variable will be regressed on our two variables of interest taken separately. Since the control variables remain the same in both regressions it become possible to compare the effect of our interest variables on child labour. In the first regression child labour for a country $i$ at time $t$, will be regressed on commercial openness and on control variables. The main estimation equation takes the following form:

$$ child_{i,t} = C + \beta_{1} trade_{i,t} + \Psi X_{i,t} + \mu_{i} + \epsilon_{i,t} $$

Where: $child_{i,t}$ represent Child Labour of country $i$ at the date $t$, $trade_{i,t}$ the commercial openness of country $i$ at the date $t$, $\epsilon_{i,t}$ the error term of country $i$ at the date $t$, $\mu_{i}$ the individual constant destined to capture country effect and $C$ is the constant term. $X_{i,t}$ is a vector of controlled variables.

The second regression focuses on the other variable of interest and takes the form:

$$ child_{i,t} = C + \beta_{2} fdi_{i,t} + \Psi X_{i,t} + \mu_{i} + \epsilon_{i,t} $$

Where $fdi_{i,t}$ is the FDI inflow into country $i$ at time $t$

**Empirical Findings**

Table 1: Regression result: Child labour and Commercial Openness

<table>
<thead>
<tr>
<th></th>
<th>(Model 1)</th>
<th>(Model 2)</th>
<th>(Model 3)</th>
<th>(Model 4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trade</td>
<td>-0.592</td>
<td>0.351</td>
<td>0.723</td>
<td>0.503</td>
</tr>
<tr>
<td></td>
<td>(2.19)**</td>
<td>(1.02)</td>
<td>(3.85)**</td>
<td>(2.04)**</td>
</tr>
<tr>
<td>GDP_cap_gr</td>
<td>-0.043</td>
<td>0.008</td>
<td>-0.015</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.57)</td>
<td>(0.10)</td>
<td>(0.27)</td>
<td></td>
</tr>
<tr>
<td>Labour_force</td>
<td>0.961</td>
<td>1.093</td>
<td>1.016</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(6.57)**</td>
<td>(12.31)**</td>
<td>(8.97)**</td>
<td></td>
</tr>
<tr>
<td>Pop of age 0-14</td>
<td>10.995</td>
<td>15.002</td>
<td>13.908</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(1.69)*</td>
<td>(3.78)**</td>
<td>(2.64)**</td>
<td></td>
</tr>
<tr>
<td>Age dependency ratio</td>
<td>-7.779</td>
<td>-10.361</td>
<td>-9.612</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(1.49)</td>
<td>(3.07)**</td>
<td>(2.21)**</td>
<td></td>
</tr>
<tr>
<td>Rural_population</td>
<td>1.909</td>
<td>1.945</td>
<td>1.662</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(2.33)**</td>
<td>(4.94)**</td>
<td>(2.88)**</td>
<td></td>
</tr>
<tr>
<td>Population_growth</td>
<td>-0.029</td>
<td>-0.077</td>
<td>-0.039</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.29)</td>
<td>(0.81)</td>
<td>(0.47)</td>
<td></td>
</tr>
<tr>
<td>Primary school enrol-rate</td>
<td>-2.515</td>
<td>-2.520</td>
<td>-2.474</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(5.64)**</td>
<td>(7.77)**</td>
<td>(6.18)**</td>
<td></td>
</tr>
<tr>
<td>Duration in prim-school</td>
<td>3.039</td>
<td>2.606</td>
<td>2.720</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(2.08)**</td>
<td>(3.79)**</td>
<td>(2.71)**</td>
<td></td>
</tr>
</tbody>
</table>
The result of our estimation with the aid of a generalised linear model for panel data has shown that labour force, population of age 0 – 14, rural population, the average number of years spent in primary school has a positive relation with Child Labour while the age dependency ratio, school enrolment and government expenditure have a negative relation on child labour.
As far as our first variable of interest, is concerned, in the cross-country data, there is a significant positive correlation between Child Labour and commercial openness as one would expect. Our result in this case confirms the anecdote in the international economics of Child Labour that an increase in product demand accompanying a growth in trade exerts upward pressure on child labour. On average, a 5% point increase in trade over a year leads to an increase in Child Labour by 10% point. This indicates that for Sub-Saharan African countries, the substitution effect dominates probably the income effect.

The result equally revealed a non-significant effect of FDI inflow on Child Labour whatever the model used. Such a result can be justified by two reasons. The first being the weak level of Foreign Direct Investment (FDI) inflow in Sub Saharan Africa. According to UNCTAD, (2004) FDI inflow into this region is the smallest in the world. See appendix N°1 showing the regional distribution of FDI inflow and outflows, 1991-2003. A second reason is that less than five percent of working children are directly employed in the manufacturing exporting sector, U.S Department of Labour (1994) and the small interaction may pass only through subcontracts made with the informal sector were children might be employed.

**Concluding Remarks**

In this paper we explore the link between child labour, greater openness and FDI inflow across SSA countries. The result of our estimation with the aid of a generalised linear model for panel data has shown that labour force, population of age 0 – 14, rural population, the average number of years spent in primary school has a positive relation with Child Labour while the age dependency ratio, school enrolment and government expenditure have a negative relation on child labour. As to what concerns our variable of interest, our estimation shows that on average, a 5% point increase in trade over a year leads to an increase in Child Labour by 10% point. There is therefore no empirical evidence that exposure to international trade, reduce the incidence of child labour for SSA countries. If anything, the evidence points the other way. The result of our estimation revealed that there seems to be no problem between FDI inflow and child labour. If the positive linkage between child labour and commercial openness for SSA countries is accepted, the inclusion of labour standard especially those concerning child labour, in the rules and mandate of the WTO is not appropriate this being because it may reduce commercial trade for SSA countries and hence the objective of encouraging trade by the WTO may not be attained. Such a result might suggest why the WTO keeps on rejecting this interesting proposal despite the incessant pressure mounted by the UE countries.
References


## APPENDIX 1

Table On the Regional Distribution of FDI Inflows and Outflows, 1992 - 2003

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Developed Countries</td>
<td>180.8</td>
<td>475.5</td>
</tr>
<tr>
<td>Western Europe</td>
<td>100.8</td>
<td>263.0</td>
</tr>
<tr>
<td>European Union</td>
<td>95.8</td>
<td>249.9</td>
</tr>
<tr>
<td>Other Western Europe</td>
<td>5.0</td>
<td>13.1</td>
</tr>
<tr>
<td>Japan</td>
<td>1.2</td>
<td>3.3</td>
</tr>
<tr>
<td>United States</td>
<td>60.3</td>
<td>174.4</td>
</tr>
<tr>
<td>Developing economies</td>
<td>118.6</td>
<td>194.1</td>
</tr>
<tr>
<td>Africa</td>
<td>5.9</td>
<td>9.1</td>
</tr>
<tr>
<td>Latin America and the</td>
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<td>82.5</td>
</tr>
<tr>
<td>Pacific</td>
<td>74.5</td>
<td>102.4</td>
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<tr>
<td>Asia</td>
<td>74.1</td>
<td>102.2</td>
</tr>
<tr>
<td>West Asia</td>
<td>2.9</td>
<td>7.1</td>
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</table>
Central Asia

South, East and South-East Asia

South Asia

The Pacific

Central and Eastern Europe

World

<table>
<thead>
<tr>
<th>Region</th>
<th>1.6</th>
<th>3.0</th>
<th>2.5</th>
<th>1.9</th>
<th>3.5</th>
<th>4.5</th>
<th>6.1</th>
<th>-</th>
<th>0.2</th>
<th>0.4</th>
<th>-</th>
<th>0.1</th>
<th>0.8</th>
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<tbody>
<tr>
<td>Central Asia</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>South, East and South-East Asia</td>
<td>69.6</td>
<td>92.1</td>
<td>109.1</td>
<td>142.7</td>
<td>102.2</td>
<td>86.3</td>
<td>96.9</td>
<td>39.0</td>
<td>32.5</td>
<td>39.2</td>
<td>80.0</td>
<td>45.1</td>
<td>34.1</td>
<td>23.5</td>
</tr>
<tr>
<td>South Asia</td>
<td>2.5</td>
<td>3.5</td>
<td>3.0</td>
<td>3.1</td>
<td>4.0</td>
<td>4.5</td>
<td>6.1</td>
<td>0.1</td>
<td>0.1</td>
<td>0.5</td>
<td>1.4</td>
<td>1.2</td>
<td>0.9</td>
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<tr>
<td>The Pacific</td>
<td>0.4</td>
<td>0.2</td>
<td>0.3</td>
<td>0.1</td>
<td>0.1</td>
<td>0.2</td>
<td>0.1</td>
<td>-0.1</td>
<td>-</td>
<td>0.1</td>
<td>0.1</td>
<td>-</td>
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<td></td>
</tr>
<tr>
<td>Central and Eastern Europe</td>
<td>11.5</td>
<td>24.3</td>
<td>26.5</td>
<td>27.5</td>
<td>26.4</td>
<td>31.2</td>
<td>21.0</td>
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<td>4.9</td>
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<td>678.8</td>
<td>559.6</td>
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<td>687.2</td>
<td>109.2</td>
<td>118.6</td>
<td>721.5</td>
<td>596.5</td>
<td>612.2</td>
</tr>
</tbody>
</table>

Source: Sutana Thanyakhan (2008)

Appendix Nº 2

Countries considered with available data for Sub-Saharan Africa.