

HUMAN DEVELOPMENT AND OVERCROWDING IN PRISONS

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INTRODUCTION

The relationship between “Crime” and “Development” is no longer questionable (See inter alia, N. Masamba Sita, 2004, and UNODC, 2005). It is a double edged inverse relationship: “Crime” leading to “Underdevelopment” and “Development” in some circumstances leading to Crime. Using tables to describe the African situation, the presentation will be examining (1) the Human Development Index (HDI), an indicator that classifies countries in: developed, developing and under-developed countries (Section 1); (2) the overcrowding in the selected African countries (Section 2); and (3) discusses the relationship between the countries’ Human Development indices and overcrowding in prisons (Section 3).

The working hypothesis is that there is a negative correlation between the Human Development index (HDI) and Overcrowding in respective countries. It is supposed that in countries with a “Very high or high Human Development, there is “No overcrowding”, while those with a “Low Human Development index”, face “Overcrowding”.

The concern of this workshop is overcrowding in prisons, a situation that undermines concerted efforts for human development in the African region. One of the objectives of the workshop is to look at strategies, policies and means at our disposal to effectively combat the phenomenon. The hypothesis the presentation intends to address is: very high or high Human Development in African countries has a positive impact on Overcrowding in Prisons. This helps to better understand the varied aspects of development issues the development actors should take into consideration.

The paper substantiates, from some statistics at our disposal, the relationship between Human Development Indices (HDI) of countries and overcrowding in their prisons. In order to understand whether there is association between the two variables, we shall use the Pearson’s coefficient of correlation, where applicable and other non parametric test as the Spearman’s rho.

SECTION 1: THE HUMAN DEVELOPMENT INDEX (HDI)

The Human Development Index is a comparative measure of life expectancy, literacy, education and standards of living for countries worldwide (UNDP, Human Development Report, 2009). It helps at the household level to measure the quality of life of populations and their accessibility to public services provided by the government. Our hypothesis is that life expectancy, literacy, education and standards of living for populations depends on the category: very high, high, medium and low their countries belong to. It is to be noted that the majority of the African countries listed as “Poorest Countries” are countries with low Human Development (least developed countries) and some of them are now in “Medium Human Development category (developing countries).

The United Nations Development Program’s Human Development Report lists countries in four categories, according to their Human Development Index (HDI). The four (4) categories are the following:

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1. Very high human development (developed countries)
2. High human development (developing countries)
3. Medium human development (developing countries)
4. Low human development (least developed countries)

In each of the above categories, we focus on African countries. According to the list, there is no African country with very high human development. We consider that countries with low income are mainly those under the fourth category, i.e. countries with low human development index. Therefore, the presentation examines only the high, medium and low human development indices.

1.1 AFRICAN COUNTRIES WITH HIGH HDI

Only the following three (3) African countries figure in this category: Libya, Seychelles and Mauritius. Their rank, human development index and changes realized are indicated on table 1 below.

Table 1: African Countries with High Human Development Index

N°	RANK	COUNTRY	HUMAN DEVELOPMENT INDEX (HDI)	
			2007 DATA	CHANGE COMPARED TO 2006 DATA
1	55	LIBYA	0.847	0.005
2	57	SAYCHELLES	0.845	0.004
3	81	MAURITIUS	0.804	0.003

1.2 AFRICAN COUNTRIES WITH MEDIUM HDI

The indices of the 26 African countries listed under this category vary from 0.511 to 0.769.

Table 2: African Countries with Medium Human Development Index

N°	RANK	COUNTRY	HUMAN DEVELOPMENT INDEX(HDI)	
			2007 DATA	CHANGE COMPARED TO2006 DATA
1	98	TUNISIA	0.769	0.006
2	103	GABON	0.755	0.005
3	104	ALGERIA	0.754	0.005
4	118	EQUATORIA GUINEA	0.719	0.007
5	121	CAPE VERDE	0.708	0.004
6	123	EGYPT	0.703	0.003
7	125	BOTSWANA	0.694	0.011
8	128	NAMIBIA	0.686	0.008
9	129	SOUTH AFRICA	0.683	0.003
10	130	MOROCCO	0.654	0.006
11	131	SAO TOME AND PRINCIPE	0.651	0.006
12	136	REPUBLIQUE OF CONGO	0.601	0.002
13	139	COMOROS	0.576	0.003
14	142	SWAZILAND	0.572	0.003
15	143	ANGOLA	0.564	0.012
16	145	MADAGASCAR	0.543	0.006
17	147	KENYA	0.541	0.006
18	150	SUDAN	0.531	0.005
19	151	TANZANIA	0.530	0.011
20	152	GHANA	0.526	0.008
21	153	CAMEROON	0.523	0.004
22	154	MAURITANIA	0.520	0.001

23	155	DJIBOUTI	0.520	0.003
24	156	LESOTHO	0.514	0.003
25	157	UGANDA	0.514	0.009
26	158	NIGERIA	0.511	0.005

1.3 AFRICAN COUNTRIES WITH LOW HDI

In this category, the indices of 22 countries vary from 0.340 to 0.499.

Table 3: African Countries with Low Human Development Index

N°	RANK	COUNTRY	HUMAN DEVELOPMENT INDEX (HDI)	
			2007 DATA	CHANGE COMPARED TO 2006 DATA
1	159	TOGO	0.499	0.001
2	160	MALAWI	0.493	0.009
3	161	BENIN	0.492	0.005
4	163	COTE D'IVOIRE	0.484	0.002
5	164	ZAMBIA	0.481	0.008
6	165	ERITREA	0.472	0.005
7	166	SENEGAL	0.464	0.002
8	167	RWANDA	0.460	0.005
9	168	GAMBIA	0.456	0.003
10	169	LIBERIA	0.442	0.008
11	170	GUINEA	0.435	0.002
12	171	ETHIOPIA	0.414	0.012
13	172	MOZAMBIQUE	0.402	0.005
14	173	GUINEA-BISSAU	0.396	0.005
15	174	BURUNDI	0.394	0.007
16	175	CHAD	0.392	0.001
17	176	DEMOCRATIQUE REPUBLIC OF THE CONGO	0.389	0.018
18	177	BURKINA FASO	0.389	0.005
19	178	MALI	0.371	0.005
20	179	CENTRAL AFRICAN REPUBLIC	0.369	0.002
21	180	SIERRA LEONE	0.365	0.008
22	182	NIGER	0.340	0.005

SECTION 2: OVERCROWDING

Under this section we look at overcrowding of prisons in the countries above. It is worth noting that overcrowding in Africa, according to the available statistics (See ICPS Report 2007; see also PRI, 2005), is a consequence of long illegal detentions (long periods awaiting results of appeal, of trial, non implementation of related legal provisions, undue delay in commencement of trial). Hereafter are some statistics provided by International Centre for Prison Studies (ICPS) on:

- (1) Prison Population total (including pre-trial detainees / remand prisoners);
- (2) Prison Population Rate (per 100,000 of national population);
- (3) Pre-trial / Remand Prisoners (percentage of prison population);
- (4) Female Prisoners (percentage of prison population);
- (5) Foreign Prisoners (percentage of prison population);
- (6) Official Capacity of Prison System;

- (7) Occupancy level (based on official capacity); and
 (8) Recent Prison Population trend (year, prison population total, prison population rate).

2.1 OVERCROWDING IN COUNTRIES WITH HIGH HUMAN DEVELOPMENT INDEX:

Only three African countries figure in this category: Libya, Seychelles and Mauritius. Their profile in terms of overcrowding is as follows:

Table 4: Overcrowding in Countries with high HDI

N ^o	COUNTRY	PRISON POPULATION TOTAL (PPT)	PRISON POPULATION RATE PER 100,000 (PPR) 3	PRE-TRIAL DETAINEES/ REMAND % (PD/R)	FOREIGN PRISONERS (FP)	OFFICIAL CAPACITY (OC)	OCCUPANCY LEVEL (OL)	TRENDS 2004 2007, TOTAL POPULATION AND RATES PER 100,000	OVERCROWDING
1	LIBYA	12,905	200	47,7%	29,1%	9,000	141,6%	2004 9,763 (173) 2007 13,217 (217)	3,905 (30.3%)
2	SEYCHELLES	305	371	63.0%	4.1%	400	76.3%	2003 149 (186) 2007 221 (270)	
3	MAURITIUS	2,163	166	29.9%	4.6%	2,058	104.0%	2001 1,985 (165) 2005 2,464 (205)	105 (4.9%)

Overcrowding in prisons is measured by:

- (1) The difference between the Prison Population Total (PPT) and the Official Capacity (OC) of the prison system; and
- (2) The occupancy level (OL).

Table 4 reveals that there is no overcrowding in Seychelles, very low rate in Mauritius and low in Libya, percentages that seem to represent foreign prisoners.

2.2 OVERCROWDING IN COUNTRIES WITH MEDIUM HUMAN DEVELOPMENT INDEX

Table 5 indicates variations among the 16 affected countries. The overcrowding ranges from 7.0% to 60.8%. Countries without figures under the overcrowding column are countries without overcrowding according to the available statistics.

Table 5: Overcrowding in Countries with Medium HDI

N ^o	COUNTRY	PRISON POPULATION TOTAL (PPT)	PRE-TRIAL DETAINEES/ REMANDS % (PD/R)	FOREIGN PRISONERS (FP)	OFFICIAL CAPACITY (OC)	OCCUPANCY LEVEL (OL)	TRENDS 2004 2007, TOTAL POPULATION AND RATES PER 100,000	OVERCROWDING
1	ALGERIA	54,000	11.3	1.0%	31,500	171.8%	2003 38,868 (121) 2005 43,797 (132)	22,500 (41.7%)
2	BOTSWANA	5,216	17.0	22.6%	3,967	131.5%	2004 6,105 (339)	1,249 (23.9%)

							2006 5,969 (332)	
3	NAMIBIA	4,064	7.9	5.5%	4,347	93.5%	1997 4,071 (250) 2000 (4,779 (273))	
4	SOUTH AFRICA	161,320	31.2	5.1%	115,297	139.9%	2005 156,175 (333) 2008 163,719 (343)	46,023 (28.5%)
5	MOROCCO	53,580	46.5	2.2%	27,113	197.6%	2002 54,288 (191) 2003 54,542 (177)	26,467 (49.4%)
6	SAO TOME AND PRINCIPE	160	c.34.0	0.8%	300	43.3%	2002 130 (79) 2005 155 (82)	
7	SWAZILAND	2,628	27.5	6.0%	2,838	92.6%	2003 3,169 (288) 2006 2,734 (249)	
8	ANGOLA	C.8,300	58.9	.	6,000	82.9%	1999 4,884 (39) 2002 4,975 (37)	2,300 (27.7%)
9	MADAGASCAR	17,703	47.9	0.1%	10,199	173.6%	2004 19,971 (112) 2006 17,495 (90)	7,504 (42.4%)
10	KENYA	46,662	43.3	0.7%	20,892	223.3%	2001 35,340 (117) 2005 50,000 (144)	25,770 (55.2%)
11	SUDAN	19,144	10.0	c.1%	7,500	.	1997 12,933 2002 12,809	11,644 (60.8%)
12	TANZANIA	40,111	48.5	3.7%	27,653	145.1%	2006 43,911 (113) 2008 41,613 (97)	12,458 (31.1%)
13	GHANA	13,377	28.6	4.5%	7,875	169.9%	2004 11,581 (54) 2007 13,336 (58)	5,502 (41.1%)
14	LESOTHO	2,701	16.8	1.0%	2,936	92.0%	2001 2,699 (145) 2004 3,173 (170)	
15	UGANDA	29,826	56.0	0.8%	13,373	223.0%	2005 26,126 (95) 2008 25,464 (80)	16,453 (55.2%)
16	NIGERIA	41,405	69.3	.	47,815	84.1%	2005 40,444 (30) 2008 40,240 (27)	

2.3 OVERCROWDING IN COUNTRIES WITH LOW HUMAN DEVELOPMENT INDEX

Table 6: Prison Overcrowding in African Countries with Low HDI

N ^o	COUNTRY	PRISON POPULATION TOTAL (PPT)	PRISON POPULATION RATE PER 100,000 (PPR) 3	PRE-TRIAL DETAINEES/ REMAND % (PD/R)	FOREIGN PRISONERS (FP)	OFFICIAL CAPACITY (OC)	OCCUPANCY LEVEL (OL)	TRENDS 2004-2007, TOTAL POPULATION AND RATES PER 100,000	OVERCROWDING
1	MALAWI	11,996	78	18.5%	1.0%	6,070	197.6%	2005 9,656 (74) 2007 10,830 (78)	5,926.0 (49.4%)
2	BENIN	6,083	66	79.6%		1,900	307.1%	2000 4,961 (81) 2006 5,834 (75)	4,183.0 (68.8%)
3	COTE D'IVOIRE	11,143	56	28,5%	c.30%	4,871	218.0%	1998 13,670 (95) 2002 10,356 (62)	6,272.0 (56.3%)
4	ZAMBIA	15,544	120	35.3%	2.1%	7,500	207.3%	2003 13,200 (122) 2005 14,347 (122)	8,404 (54.1%)
5	SENEGAL	6,425	53	37.2%	7.5%	2,972	152.0%	2000 4,990 (52) 2002 5,360 (54)	3,453 (53.7%)
6	RWANDA	59,311	593	26.9%	0.3%	46,700	202.4%	2004 87,000 (129) 2006 82,000 (172)	12,611 (21.3%)
7	GAMBIA	450	32	18.5%	66.7%	780	65.0%	1999 478 (38)	
8	LIBERIA	1,600	40	97.3%	2.0%	750	136.3%		850 (53.1%)
9	BURUNDI	10,700	129	68.0%	.	4,050	264.2%	2005 7,969 (106) 2008 9,114 (104)	6,650 (62.1%)
10	BURKINA FASO	4,207	27	58.3%	.	2660	158.2%	2002 2,800 (23)	1,547 (36.8%)
11	MALI	6,700	52	88.7%	.	3,000	223.3%	2002 4,040 (34) 2004 4,407 (33)	3,700 (55.2%)
12	SIERRA LEONE	2,328	41	49.2%	1.7%	1,975	108.1%	2004 c.1,400 (c.27) 2007 1,899 (33)	353 (15.3%)
13	NIGER	5,709	46	c.76%	.	8,840	64.6%	1998 5,263 (52) 2002 c.6000 (c.52)	

Compared to other countries under this category, Rwanda seems to have a very high Prison Population Total (PPT): 53,311, a high Prison Population Rate (593) and Official Capacity (OC): 46,700.

SECTION 3: HUMAN DEVELOPMENT INDEX AND OVERCROWDING

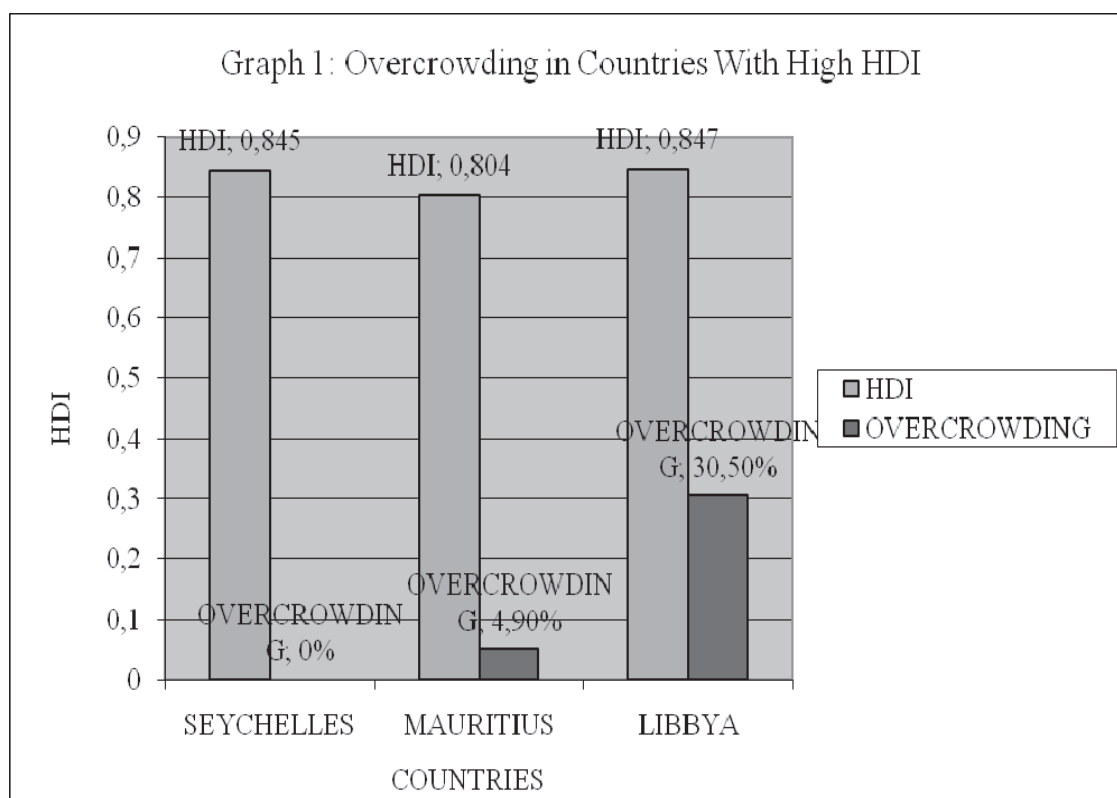
The analysis of data led us to consider “human development” as an Independent variable and “Overcrowding” the dependent variable. In other words Low Human Development appears to be a suitable explanation of “Overcrowding in prisons” in Africa. A concept such as poverty helps to understand how populations’ Low Income affects the quality of their lives. This results in “Overcrowding” in prisons.

3.1 High HDI and Overcrowding:

Table 7: African Countries with High HDI and Overcrowding

N ^o	COUNTRY	HDI	LEVEL OF OVERCROWDING (LO)	
			PRISON POPULATION TOTAL (PPT) MINUS OFFICIAL CAPACITY (OC)	OCCUPANCE LEVEL (OL)
1	LIBYA	0.847	3,905 (30.5% of total prison population)	141.6%
2	SEYCHELLES	0.845	- 95	76.3%
3	MAURITIUS	0.804	105 (4.9%)	104%

The Levels of Overcrowding (LO) that is calculated from the PPT minus OC and translated into percentage for Libya and Mauritius reveals almost an equivalent percentage of their respective foreign Prisoners (FP): 29.1% (30.5%) and 4.6% (4.9). Seychelles escapes from the observed trend: 4.1% (See above Table 4). Even the level of occupancy would have been much lower without foreign prisoners; hence, confirming no overcrowding in Seychelles. Graph 1 hereafter still supports our hypothesis.



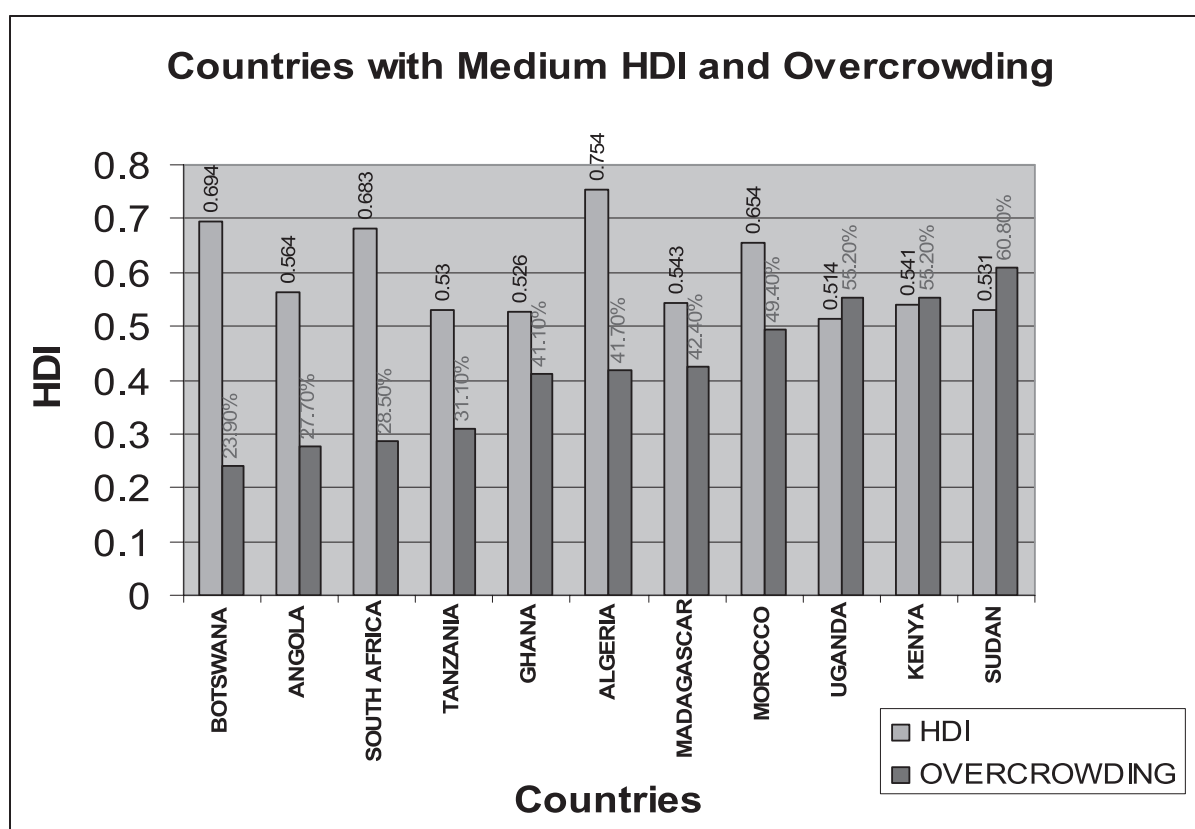
3.2 Medium HDI and Overcrowding:

Countries without overcrowding (Lesotho, Nigeria, Sao Tome and Principe, Swaziland), or with very low rate (Namibia) do not appear in Table 8, because this affects the calculation of the correlation between HDI and Overcrowding.

Table 8: Countries with Medium HDI and Overcrowding

N ^o	COUNTRY	HDI	LEVEL OF OVERCROWDING	
			PRISON POPULATION TOTAL (PPT) MINUS OFFICIAL CAPACITY (OC)	OCCUPANCE LEVEL (OL)
1	ALGERIA	0.754	22,500 (41.7%)	171.8%
2	BOTSWANA	0.694	1,249 (23.9%)	131.5%
3	SOUTH AFRICA	0.683	46,023 (28.5%)	139.9%
4	MOROCCO	0.654	26,467 (49.4%)	197.6%
5	ANGOLA	0.564	2,300 (27.7%)	82.9%
6	MADAGASCAR	0.543	7,504 (42.4%)	173.6%
7	KENYA	0.541	25,770 (55.2%)	223.3%
8	SUDAN	0.531	11644 (60.8%)	.
9	TANZANIA	0.530	12,458 (31.1%)	145.1%
10	GHANA	0.526	5502 (41.1%)	169.9%
11	UGANDA	0.514	16,453 (55.2%)	223.0%

Graph 2 hereafter also visualizes the a tendency for the high values of the HDI to be paired with smaller values of Overcrowding, and vice versa



3.3 Low HDI and Overcrowding:

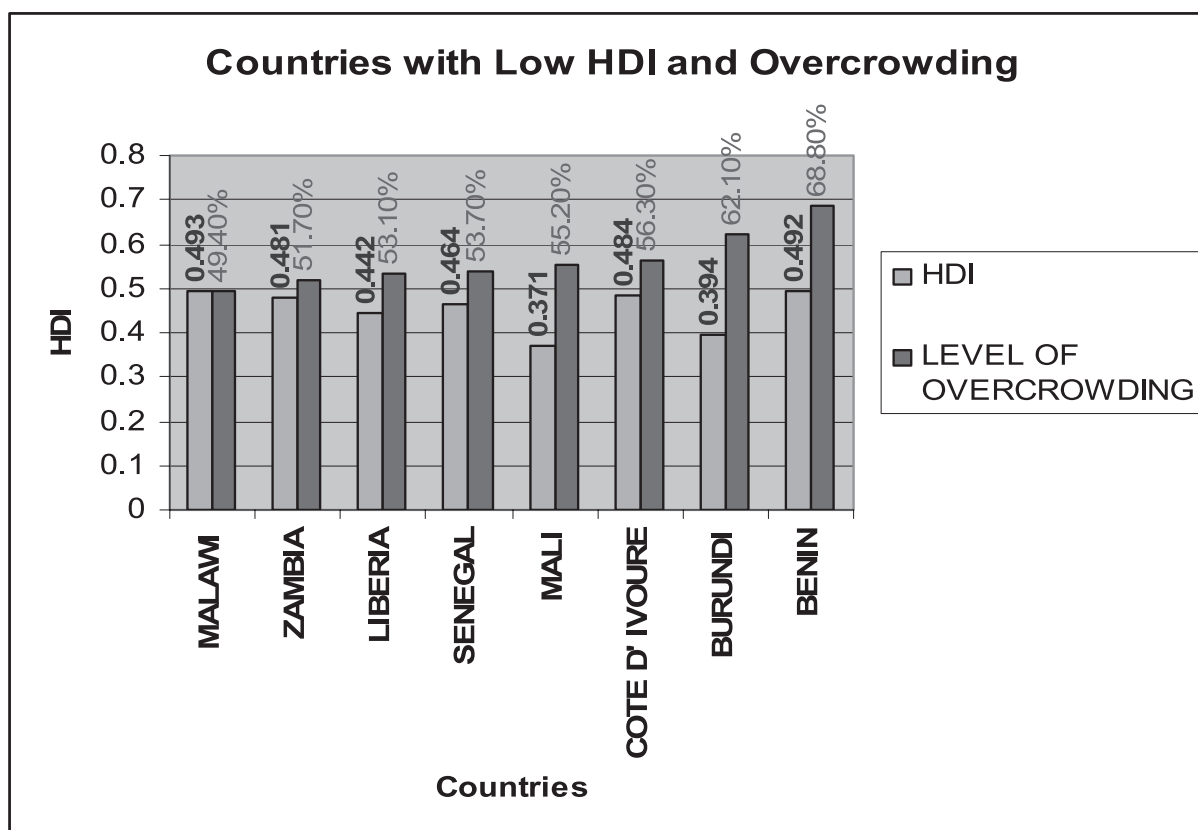
Table 9 is part of table 6 which has 13 countries. We have selected only 8 countries having the needed statistics. Table 9 does not include countries with very low overcrowding (Burkina Faso, Rwanda and Sierra Leone), as they affect our inquiry into the relationship between HDI

and Overcrowding. It is interesting to note that countries with low HDI are also exhibiting a low overcrowding. Cases in point are: Sierra Leone with a HDI of 0.365 with an overcrowding of 15.2% and Burkina Faso with a HDI of 0.389 and Overcrowding of 36.8%, and Rwanda with a HDI 0.460 and an Overcrowding of 21.3%.

Table 9: Countries with Low HDI and Overcrowding

No	COUNTRY	HDI	LEVEL OF OVERCROWDING	
			PRISON POPULATION TOTAL (PPT) MINUS OFFICIAL CAPACITY (OC)	OCCUPANCE LEVEL (OL)
1	MALAWI	0.493	5,926 (49.4%)	197.6%
2	BENIN	0.492	4,183 (68.8%)	307.1%
3	COTE D'IVOIRE	0.484	6,272 (56.3%)	218.0%
4	ZAMBIA	0.481	8,044 (51.7%)	207.3%
5	SENEGAL	0.464	3,453 (53.7%)	152.0%
6	LIBERIA	0.442	850 (53.1%)	136.3%
7	BURUNDI	0.394	6,650 (62.1%)	264.2%
8	MALI	0.371	3,700 (55.2%)	223.3%

Graph 3 hereafter visualizes the trend. A calculated rho of - 0.19 led us to conclude that there is a relationship between Human Development Indices and Overcrowding in correctional institutions, as visualized hereafter in Graph 3.



CONCLUSION

The main working hypothesis was that where there is very high or high Human Development, there is no or very low Overcrowding. In the case of Libya and Mauritius, their respective observed overcrowding of 30.3% and 4.9% (See Table 4) seems to be induced by the presence of foreign nationals. Concerning Seychelles in the same table, data seems to confirm the hypothesis. What they have in common is: absence of or very low overcrowding (Seychelles and Mauritius (4.9%)). We encountered discrepancies in the case of Libya that we are not able to explain (Table 4).

In case of countries that fall under Medium Human Development index (See Tables 7), Pearson's Product Moment Correlation Coefficient reveals a high degree of association between the Human Development Indices and Overcrowding. The correlation coefficient was found to be negative $r = -0.75$. This also means that 56.0% of variations in overcrowding are explained by variations in the Human Development Indices. This confirms that there is a strong relationship between the HDI and Overcrowding. In this case, there is a tendency for the high values of the HDI to be paired with smaller values of Overcrowding, and vice versa. We will only say that 72.7% of these countries have a high overcrowding (only 3 countries have a rate of overcrowding below 50%).

As for the Low Human Development Index countries, we consider that our hypothesis stands. We used a non parametric test: Spearman's rho to establish whether there is a correlation between low HDI and Overcrowding. A calculated rho of -0.19 led us to conclude that there is a relationship. This conclusion was drawn from one tailed test for negative correlation where the null Hypothesis (H_0): the HDI and Overcrowding are not correlated, against an alternative hypothesis: there is a tendency for the large values of HDI to be paired with small values of Overcrowding and vice versa. Null hypothesis was rejected as the calculated rho of -0.19 was too small. We observe that 87.5% of these countries have an overcrowding rate beyond 50%, which we consider as a very high rate.

The analysis of the data at our disposal has substantiated the association between Human Development and Overcrowding. However, we did observe that there were countries (Burkina Faso, Rwanda and Sierra Leone), which were exceptional to our confirmed hypothesis: "very high or high HDI being paired with low Overcrowding". Although the three countries had low HDI, they also had low Overcrowding.

This is significant to us as this variation may help to identify and understand the factors (good practices) if any, that have led to the observed variation in the above countries. A negative relationship has been observed in the three categories: 1) countries with High Human Development Index; 2) countries with medium Human Development Index; and 3) countries with low Human Development Index, meaning that in countries with high Human Development Index (HDI), there is no or very low rate of overcrowding and vice versa. The exceptional countries, deviating from the hypothesis, suggest a need to look at good practices in countries, which may explain the observed situation: low rate of overcrowding in countries with low Human Development Indices; and others practices leading to the situation of (low) overcrowding in countries with high or medium Human Development Indices.