UNRISD
UNITED NATIONS RESEARCH INSTITUTE FOR SOCIAL DEVELOPMENT

DRAFT

Wealth and Income Inequalities

Imogen Mogotsi

prepared for the UNRISD project on
Poverty Reduction and Policy Regimes

November 2007 ▪ Geneva

UNRISD was established in 1963 as an autonomous space within the UN system for the conduct of policy-relevant, cutting-edge research on social development that is pertinent to the work of the United Nations Secretariat; regional commissions and specialized agencies; and national institutions.

Our mission is to generate knowledge and articulate policy alternatives on contemporary development issues, thereby contributing to the broader goals of the UN system of reducing poverty and inequality, advancing well-being and rights, and creating more democratic and just societies.

UNRISD, Palais des Nations
1211 Geneva 10, Switzerland

Tel: +41 (0)22 9173020
Fax: +41 (0)22 9170650
info@unrisd.org
www.unrisd.org

2.1 Introduction

According to the Kuznets hypothesis, as countries grow, they initially experience a rise in inequalities, with income distribution becoming more equal later. This is demonstrated by the so-called Kuznets inverted U-curve, to show that as per capita income grows, the Gini coefficient also rises initially, then later falls. While evidence of this is not concrete for developing countries due to data limitations, this is not an impossible phenomenon to observe for the developing countries.

Inequalities can be measured using both income as well as wealth. While income is normally measured as cash income, in developing countries non-cash income is prevalent, due to the fact that a large proportion of the rural population especially, do not rely on cash income, relying instead on income-in-kind for a sizeable proportion of their total income, such as crops harvested etc. In Botswana, this situation prevails, and as such when income distribution is measured using cash incomes, the distribution is different to when" all" income is used, especially for the rural area. Wealth, on the other hand, is assessed using livestock: cattle, sheep and goats.

This chapter (Area 2 of the Project) will capture the distribution of income and wealth, both cash as well as total income, for households at a national level, then separated for rural as well as towns and cities and urban villages. The trends over time will be assessed, to see if the distribution was becoming more unequal over time, as the Kuznets hypothesis predicts, or it improved.

2.2 Wealth and Income Distribution

This section presents and discusses the size Distribution of Income: 1972 – 2002 using the Gini Coefficient. Changes in the income distribution are highlighted, for rural versus towns/cities and urban villages. The section also examines distribution of wealth, according to the different income groups, to show the patterns of distribution of cattle, sheep and goats according to the various income strata i.e. whether the income-rich possess more cattle (or less or the same) than the income poor.

The size distribution of income is represented by the Gini Coefficient. The coefficient ranges between 0-1; the closer to 1 the coefficient, the greater the income inequality. The Gini Coefficient for Botswana is presented by Table 2.1. Comparison is made between income distribution at the national level, towns and cities, rural and urban villages.

Table 2.1: Gini Coefficient for Botswana: 1985/6-2002/3

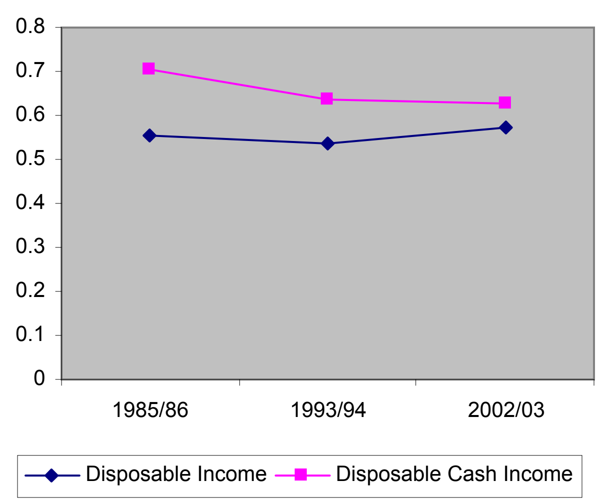
	Disposable Income			**Disposable Cash Income**		
	1985/86	**1993/94**	**2002/03**	**1985/86**	**1993/94**	**2002/03**
National	0.556	0.537	0.573	0.703	0.638	0.626
Cities/Towns	0.536	0.539	0.503	0.563	0.548	0.513
Urban Villages		0.451	0.523		0.552	0.552
Rural	0.477	0.414	0.515	0.674	0.599	0.622

Source of data: Household Income and Expenditure Survey (HIES) Reports 1993/94 and 2002/03

2.2.1 Trends in Inequality: Inter-Regional and Inter-Temporal

Inter-regional comparisons of inequalities i.e. at a national level as compared with cities/Towns and rural areas are presented by Table 2.1 and Figure 2.1a, b and c. In addition, we compare the trends over time for these regions. As indicated by Table 2.1 and Figure 2.1a, the Gini Coefficient at national level *declined and then rose* for the 3 years of 1985/6, 1993/4 and 2002/3 respectively. This means that income, whether total disposable income or disposable cash income, was becoming less unequal in 1993/94 as compared to 1984/85, but then it became more unequal from 1993/94 – 2002/03. This is contrary to expectations according to the Kuznets' Hypothesis, which predicts an initial rise in inequalities, followed eventually by a fall.

Fig 2.1a Gini Coefficient: National



The same trend of a fall in inequality, followed by a rise, is observed for the rural areas (Figure 2.1b). With cities and towns, however, when we use disposable *cash* income as opposed to total income, there is indication of a rise in inequalities, followed by a decline in 2002/3 (Figure 2.1c). This indicates a tendency for a

Kuznets' inverted U-curve. For the total income, however, we observe a decline in inequalities over the whole period, with the decline more pronounced in the latter period of 1993/94 and 2002/03.

Fig 2.1b Gini Coefficient: Rural

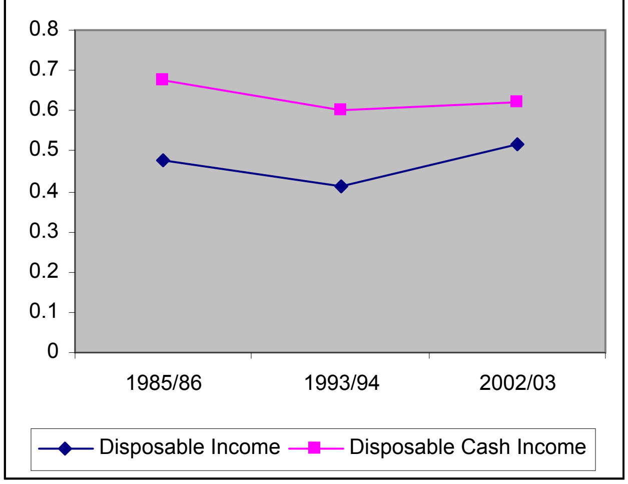
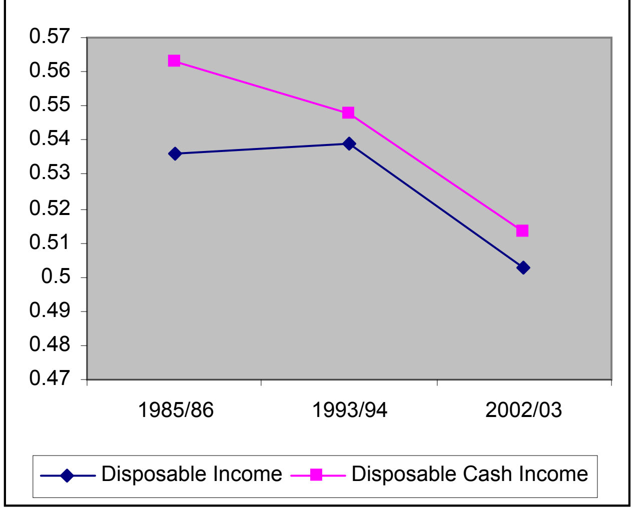


Fig 2.1 c Gini Coefficient: Cities/Towns



2.2.2 Inequalities: Cash versus Total Income

Another point worth noting is that when using cash as opposed to total income the inequality was worse in all cases i.e. inter-regionally as well as inter-temporally. This is shown by a higher Gini Coefficient for the cash income. However, the gap between the two narrowed in the latter period 1993/94 – 2002/03, as compared to the first period of 1985/86 – 1993/94, except for the cities/towns, where the gap seems to have remained the same.

2.2.3 Inequalities: Regional Comparisons

When making inter-regional comparisons, income distribution was less unequal for rural areas when using total income for 1985/86 and 1993/94, but the situation changed in 2002/03, with income distribution becoming more unequal. In other words, in 2002/03 there was less inequality in the towns and cities than rural areas. When using cash income, however, income distribution was more unequal in the rural versus urban centers for the whole period 1985/86 – 2002/03. The higher inequalities when using cash income could be explained by the fact that rural areas are, by their nature, non-cash income-based because of subsistence agriculture. Thus when using agricultural output, income distribution is relatively more equal. Hence with less reliance on cash income and more on subsistence agriculture, the rural population experiences lower inequalities.

2.2.4 Distribution of Wealth and other Assets

While the extent of inequality is normally described using the Gini Coefficient, in a developing country where the bulk of the rural households may not earn a regular income, but have other means of livelihood, it is important to examine distribution of wealth as well. In Botswana the bulk of wealth is in the form of livestock: in particular cattle, but also goats and sheep. This is the traditional means of livelihood, and the rural people may not have much by way of income, but they live on selling livestock.[1] Table 2.2a shows the distribution of cattle ownership, by income strata. In other words, it shows how cattle ownership varies according to income strata.

Table 2.2a Distribution of Cattle Ownership by Households

Disposable Income	Cattle Ownership – Households								
	None	1-9	10-19	20-39	40-59	60-99	100-199	200+	Total HHs
< 200	38,398	15,186	7,713	3,189	1,321	336	232	398	66,772
200-1000	99,323	29,709	11,642	5,420	2,313	653	546	348	149,954
1000-2000	39,713	12,962	5,691	3,508	1,061	534	94	207	63,769
2000-4000	34,302	11,090	4528	3,912	1,043	872	161	194	56,102
4000-6000	14,253	4,215	2,187	1,699	946	630	300	187	24,416
6000-8000	6,544	2,874	509	1,122	242	285	32	126	11,734
8000-10000	4,694	833	408	721	371	173	209	198	7,606
10000+	9,107	1,015	634	1310	593	583	302	377	13920
Total Households	246,335	77,885	33,312	20,880	28,769	4,064	1875	2,033	394,272

Source: Generated from Table 119, HIES Report 2002/03

[1] When a parent needs to raise funds to pay for school fees for their children, it is common for them to sell a number of cattle. Cattle are thus quite a liquid form of wealth, since they can be converted to cash quite easily.

According to Table 2.2a, out of a total of 394,272 households, 66,772 could be categorized as very poor i.e. with income less than P200 (equivalent to about US$ 33), and of those, 38,398 or 58 percent own no cattle; while less than 1 percent of these very income poor households own more than 200 cattle. This demonstrates marked inequalities in cattle ownership, that the income-poor, on a whole, are also cattle-poor. To demonstrate the inequality further, about 80 percent of households in the lowest income bracket of less than P200 income own less than 10 head of cattle.

On the other hand, of the households in the highest income bracket of more than P10,000, about 65 percent (9,197 out of 13,920) own no cattle. This indicates that not all the high income households are into cattle ownership. However, when we examine those who own more than 200 had of cattle, the distribution is more or less even across the income spectra. This indicates that the cattle wealthy households need not be income wealthy: even the income-poor can be cattle wealthy.

Table 2.2b Distribution of Goats Ownership by Households

Disposable Income	Goats Ownership – Households							
	None	1-9	10-19	20-39	40-59	60-99	100-199	200+	Total HHs
< 200	35,718	18,420	7,339	3609	1302	383	0	0	66,772
200-1000	95,518	29,709	9,888	5879	1,158	565	97	152	149,954
1000-2000	39,244	14,743	5,945	2,631	905	193	110	0	63,769
2000-4000	37,462	9,586	5,119	2,572	775	347	243	0	56,102
4000-6000	16,139	3,836	1,561	1,749	833	82	144	73	24,416
6000-8000	8,794	1,246	1,078	481	0	105	30	0	11,734
8000-10000	5,420	661	572	673	71	107	102	0	7,606
10000+	9,954	1,114	1,040	1,005	298	193	316	0	13920
Total HHs	248,249	86,240	32,543	18,598	5,341	1,976	1,041	285	394,272

Source: Generated from Table 120, HIES Report 2002/03

When we examine ownership of goats, the distribution seems to have a similar pattern to that of cattle ownership at the lower end of the income spectrum; in other words, about 81 percent of all households in the income bracket of less than P200