Benefit Incidence of Fiscal Measures to Deal with the Impact on Households of the Economic Crisis in Liberia: Comparing Import and Income Taxes

Tsimpo, Clarence and Wodon, Quentin

The World Bank

April 2012

BENEFIT INCIDENCE OF FISCAL MEASURES TO DEAL WITH THE IMPACT ON HOUSEHOLDS OF THE ECONOMIC CRISIS IN LIBERIA: COMPARING IMPORT AND INCOME TAXES

Clarence Tsimpo and Quentin Wodon[1]

In order to help households cope with the recent economic crisis, and especially the increase in food prices, the government of Liberia announced a number of fiscal measures. A first measure was to implement a temporary exoneration of import duties on food products, and especially imported rice. A second measure announced by the President in her January 2009 State of the Union address was to reduce the personal income tax top rate from 35 percent to 25 percent together with an exclusion from paying income tax for all individuals earning less than L$54,000. This chapter provides an analysis of the consumption and income data from the nationally representative 2007 CWIQ (Core Welfare Indicator Questionnaire) survey in order to compare the likely benefit incidence of both measures. While none of the measures is well targeted to the poor, the first measure is likely to benefit the poor substantially more than the second.

1. Introduction

As discussed in the previous chapter, the increase in rice prices is likely to have affected the poor substantially in Liberia, as well as in a number of other West African countries (Tsimpo and Wodon, 2011; for a rapid impact assessment of the economic crisis in Liberia, see International Labour Organization, 2009). Confronted with rapidly rising food prices, especially for cereals such as rice, many governments in the region implemented reductions in the taxes levied on foods, whether through lower import taxes or lower value added taxes (e.g., Wodon and Zaman, 2010). This was also the case in Liberia, and the issue of who might benefit from a reduction in import tax cuts for rice was already discussed in the previous chapter. The implicit assumption was that a reduction in these taxes would be passed on by intermediaries to consumers, so that the prices paid on markets would be reduced as well. Even if there were such a pass-through or trickle down, it is not clear that a reduction in indirect taxes is good policy for helping the poor. Reductions in indirect taxes often have large budgetary costs. In addition, if a large share of the targeted food items is consumed by the non-poor, other policy instruments to help the poor cope with a crisis may have a stronger impact on poverty reduction at a lower cost. On the other hand, if much of the imported food for which a tax reduction is provided is consumed by the poor, targeting performance to the poor could potentially be good.

In Liberia, in addition to reductions in import taxes on basic foods such as rice, the President announced in her January 2009 State of the Union address a series of other measures to protect households and stimulate the economy. These measures included a reduction in the personal income tax top rate from 35 percent to 25 percent and an exclusion from paying income tax for all individuals earning less than L$54,000. It could seem that this might be a somewhat neutral policy from the point of view of its benefit incidence, given provision to help both those with low incomes and the better off. Yet to the extent that much of the income taxes may be paid by the better off, it could also be that this measure would not benefit the poor very much.

---

[1] The authors are with the World Bank. This chapter was written for a workshop that took place in March 2011 in Monrovia for the preparation of the second Liberia Poverty Reduction Strategy. The views expressed in this chapter are those of the authors and need not reflect those of the World Bank, its Executive Directors or the countries they represent.

The objective of this chapter is to assess and compare the likely distributional implications of both measures. While in the previous chapter some benefit incidence statistics were presented for Liberia only, the analysis of the benefit incidence of the reduction in import taxes presented here was prepared as part of a broader diagnostic for a dozen West and Central African countries, and is discussed in section 2 of the chapter. The analysis of the benefit incidence of the income tax reform was written at the request of the Deputy Minister of Finance in charge of revenue collection in order to help design the details of the tax reform package and assess its potential impact on the population. The results are provided in section 3. The analysis in both sections is based on the consumption and income data from the nationally representative 2007 CWIQ (Core Welfare Indicator Questionnaire) survey. A brief conclusion follows.

2. Benefit Incidence of Taxes on Imported Foods

The previous chapter already included a discussion of the likely benefit incidence of import tax cuts for rice in Liberia using the technique of consumption dominance curves of the second order. It was suggested that the poor as a whole, which represent 63.8 percent of Liberia's population (see Backiny-Yetna et al., 2011) consume approximately 45 percent of the rice consumed in the country. Here, the analysis is done in a simpler way, but comparing the results obtained for Liberia with those obtained for a dozen other West and Central African countries.

Table 6.1 provides data on the consumption of imported foods for a number of West and Central African countries. The data have been collected from the most recent available household survey for each country. The survey years range from 2003 in Guinea to 2007 in Liberia, so the data can reasonably be considered as accurately capturing the current consumption patterns of the population in the respective countries. The analysis is focused on rice, flour and bread, maize, vegetable oil, sugar, and milk, because these are food items that tend to be imported to a substantial extent (although not all countries import all those goods significantly). We focus on imported foods because it is more likely that these food items are taxed, so that it is feasible for governments to indeed reduce these taxes and hope that this will have a downward impact on market prices. By contrast locally produced foods are often not taxed, or at least not taxed to the same extent because they are largely auto-consumed, and when they are sold, this is typically done through transactions taking place through the informal sector which tends to escape taxation.

At least two variables are often used by policy makers to assess to what extent a shock in the price of food items are likely to have a large effect on the standard of living of the population, and thereby to determine whether it is necessary for the government to reduce taxes on these food items. The first variable is the share in total consumption represented by the items. This information is provided in the second column of the table. The larger the share is, the more likely it will be that a government will feel pressure to reduce the tax on the good in a time of food price crisis. There are large differences between countries in the extent to which various food items are consumed. For example, rice accounts for less than 5 percent of total consumption in Burkina Faso, the Democratic republic of Congo, Gabon, Ghana, Niger, Nigeria and Togo, but it accounts for between 5 percent and 10 percent of total consumption in Mali, and Senegal, and for more than 10 percent of total consumption in Liberia and Sierra Leone.

Table 6.1: Basic Statistics and Benefit Incidence of Indirect Taxes on Imported Food

Food item	Share in Total consumption	Proportion Consumers	Share consumed by bottom 40%	Share consumed by bottom 60%
	Burkina Faso (2003 survey); Base Share in Poverty at 46.4%			
Rice	3.6	60.2	13.4	25.6
Bread	0.7	35.6	8.3	18.1
Vegetable oil, butter	1.1	74.9	16.1	31.6
Sugar	0.9	67.4	19.7	35.3
Milk	0.6	18.1	10.3	19.8
	Democratic Republic of Congo (2005 survey); Base Share in Poverty at 71.3%			
Rice	3.2	57.3	15.5	31.7
Palm oil	4.0	96.2	19.7	36.2
Wheat	1.8	35.1	7.1	17.4
Sugar	1.4	57.4	10.6	24.6
Milk	0.7	23.0	4.1	11.6
	Gabon (2005 survey); Base Share in Poverty at 32.7%			
Rice	3.0	91.4	31.7	51.1
Maize	0.3	40.0	14.9	31.7
Wheat	3.9	93.5	27.9	46.8
Palm oil and groundnut oil	1.7	90.6	30.1	48.6
	Ghana (2006 survey) ; Base Share in Poverty at 28.5%			
Rice	3.1	74.6	16.4	33.0
Bread	1.9	84.6	14.2	29.5
Flour	0.0	2.8	45.0	60.4
	Guinea (2003 survey) ; Base Share in Poverty at 49.1%			
Rice	13.0	90.7	23.1	42.8
	Liberia (2007 survey) ; Base Share in Poverty at 63.8%			
Local Rice	9.6	60.1	27.5	47.8
Imported Rice	13.2	84.9	22.3	41.2
Total Rice	22.8	99.0	24.5	44.0
	Mali (2006 survey) ; Base Share in Poverty at 47.5%			
Rice	7.2	95.1	11.1	25.1
Corn	4.2	91.0	14.4	33.1
Wheat	1.5	74.0	19.5	36.7
	Niger (2005 survey) ; Base Share in Poverty at 62.1%			
Rice Imported	4.4	54.7	14.8	31.4
Rice local	1.7	15.4	20.1	35.9
Maize	4.3	30.4	18.2	34.3
	Senegal (2006 survey) ; Base Share in Poverty at 50.8%			
Rice	6.8	96.3	28.0	47.9
Vegetable oil	4.5	95.8	22.8	42.1
Sucre	3.0	99.2	27.1	46.6
Bread	4.0	92.7	14.8	32.6
Milk	2.1	79.6	10.0	23.4
	Sierra Leone (2003 survey) ; Base Share in Poverty at 66.4%			
Rice	11.7	96.4	32.0	53.9
	Togo (2006 survey) ; Base Share in Poverty at 61.6%			
Rice	3.5	92.2	23.0	40.4
Bread	0.6	27.0	5.8	15.5
Milk	0.7	31.1	7.6	18.4
Vegetable oil	1.1	81.3	21.3	39.5
Sugar	0.7	72.3	20.1	36.7
	Nigeria (2004 survey); Base Share in Poverty at 54.7%			
Rice	4.1	73.4	14.0	30.2
Wheat flour and bread	1.5	70.4	12.5	27.0

Source: Wodon (2011).

A second important piece of information is the share of the population that is likely to be affected by the price shock. This share maters from a political economy point of view because when a larger share of the population is affected, it is more likely that policy makers will be under pressure to respond to the crisis. The information is provided in the third column of the table. Considering again rice, we see that in many countries more than 90 percent of the population consumed the good (this is the case in Gabon, Guinea, Liberia, Mali, Senegal, Sierra Leone, and Togo), and the proportion remains high in other countries (the minimum share of the population consuming rice is 57 percent in the Democratic Republic of Congo). For other imported foods such as bread, sugar, or milk, the proportion is lower on average, although bread and sugar in some countries are consumed by a very large share of the population.

What matters more for poverty reduction though is the share of a good's consumption that is accounted for by the poor in the population. The share of the population that is poor varies between countries (from 28.5 percent in Ghana to 71.3 percent in the Democratic Republic of Congo according to recent poverty assessments completed at the World Bank), so that for cross-country comparisons, it is easier to consider the share of total consumption accounted for by the bottom 40 percent or 60 percent of the population (these two proportions were chosen because for most countries, the poverty rate falls between these two values).

Consider first the share of food consumption in the bottom 40 percent. For rice, this share varies from 11.1 percent in Mali to 32.0 percent in Sierra Leone. This means that if we consider the bottom 40 percent as the poor, out of every dollar spent by a government for reducing indirect taxes on rice, only about 20 cents on average will benefit the poor. This is a rather low proportion, and it also assumes that tax reductions do trickle down to lower prices for consumers, which is not necessarily obvious. If we consider that the bottom 60 percent of the population can be considered as poor, the share of subsidies or tax reductions that would reach the poor would be between 25.1 percent and 53.9 percent, which still does not suggest good targeting. For some of the other goods listed in table 1, the proportions are even lower.

In the case of Liberia, 44.0 percent of the benefits of a reduction in taxes on rice would accrue to the 60 poorest percent of the population, with the proportion being slightly lower if we consider only imported rice. This is one of the higher proportions among all countries considered in table 1, but it remains relatively week as targeting performance since the poor, who account for almost two thirds of the population, would benefit from less than half of the potential reduction in rice prices brought about by a reduction in import taxes (assuming trickle down effects).

3. Benefit Incidence of Proposed Income Tax Reform

As mentioned in the introduction, another measure proposed by the government was to reduce income taxes. Total revenue from the personal income tax was US$17.3 million in 2007. The tax brackets and tax rates for the personal income tax were set in 2000, and had not been adjusted for inflation since then. This implies that tax rates had increased in real terms over time since 2000 since inflation had likely led a higher number of individuals to move up in the tax brackets, all other things being equal. The marginal tax rate structure in Liberian dollars at the time the President announced the measure is given in table 6.2. In this section, we will simulate one alternative tax structure, as indicated in table 6.2, but it would be easy to simulate alternative tax reforms. The tax reform proposed by Liberia's President includes an exemption for lower tax brackets, and a reduction in the highest tax rate. The simulation in table 6.2 extends this reduction in tax rates to other brackets, and due to the exemption, the number of tax brackets is also reduced, which helps in simplifying the tax structure.

Table 6.2: Marginal tax rate structure, Liberian dollars

Current structure (Baseline)		Simulated	
Brackets	Rate	Brackets	Rate
1 – 12000	2%	1 – 12000	0%
12001-50000	240+5% for revenues over 12000	12001-54000	0%
50001-100000	2140+10%	50001-100000	5% excess over 54000
100001-200000	7140+15%	100001-200000	2140+10%
200001-400000	22140+20%	200001-400000	7140+15%
400001-800000	62140+25%	400001-800000	22140+20%
800001-1200000	162140+30%	>800000	62140+25%
>1200000	282140+35%		

Source: Government of Liberia for baseline.

The personal income tax (PIT) is computed on individual income, not household income, although it is not permissible for household members to split their income between several individuals in order to pay lower taxes. Taxable income is computed as gross income minus exclusions and deductions. Gross income is the sum of all income sources of the individual during a given tax year. Income sources include (but are not limited to): (i) earnings from employment, including noncash benefits (such as medical costs paid by an employer or insurance benefits, although there is an after tax credit that provides some relief); (ii) receipts from the operation of a business (noting that the business itself will be taxed at 25 percent of taxable income if it has turnover greater than L$5 million or 2 percent over turnover it has turnover of less than L$5 million); (iii) interests, rents, royalties and dividends; (iv) distributions form a trust or estate; and (v) 100 percent of gains on the disposition of property if used in a business or held for investment, or all amounts over L$1.6 million if held for personal use.

Income sources that are not subject to tax (exclusions) include (i) sickness, disability or death benefits; (ii) property received in a donative transfer or transfer by death; (iii) interest accruing from tax-exempt obligations issued by Republic of Liberia (not applicable today); (iv) gains on the sale of "personal-use" property up to L$1.6 million; and (v) interest of less than L$200 per year. Deductions from the individual's tax base include: (i) the cost of producing income but not the costs of personal consumption, Liberian or foreign income tax, interest relating to any Liberian tax, or any fines or penalties imposed by law; and (ii) charitable contributions to the government or registered charities.

In order to use the CWIQ survey for analyzing the benefit incidence of the proposed reform, it is first necessary to verify that the actual income tax collection in the country can be approximated using data from the survey. The CWIQ survey does not have information on individual incomes, but it has a relatively detailed household income module. All estimations and simulations presented here are based therefore on household rather than individual income. This is an approximation, but it is not too damaging because in many households, there is only one individual earning significant income. In countries such as Liberia, most individual are in practice not paying taxes because they have rather small earnings if any (a substantial share of the population makes its livelihood from subsistence agriculture). Many individuals who may have substantial income sources also work in the informal sector, so that it is unlikely that they are taxes in a substantial way. Therefore, we will consider in the survey as taxable income the income of households who have at least one member working in the formal sector, as identified through the survey. The distribution of what we consider as household taxable income in the survey is provided in table 6.3.

In table 6.3, the sample data is based on simple tabulations of the number of observations by category without weights. The weighted data takes into account the survey weight, and therefore represents the distribution in the population as a whole. Almost three fourth of households do not have taxable income (either because they don't have any recorded income, or

more often because they do not have household members working in the formal sector). Only about three percent of the population has taxable income above L$100,000.

Table 6.3: Distribution of households across taxable income group, Liberian dollars

	Sample			Weighted		
Income group	Freq.	Percent	Cum.	Freq.	Percent	Cum.
	Full sample					
0	2,495	69.40	69.40	357,319	71.87	71.87
1 – 12000	422	11.74	81.14	57,560	11.58	83.45
12001-50000	414	11.52	92.66	51,102	10.28	93.73
50001-100000	147	4.09	96.75	16,621	3.34	97.07
100001-200000	58	1.61	98.36	6,414	1.29	98.36
200001-400000	42	1.17	99.53	5,546	1.12	99.48
400001-800000	14	0.39	99.92	1,824	0.37	99.84
800001-1200000	2	0.06	99.97	442	0.09	99.93
>1200000	1	0.03	100.00	331	0.07	100.00
Total	3,595	100.00		497,159	100.00	
	Sample with positive earnings from formal sector					
1 – 12000	422	38.36	38.36	57,560	41.16	41.16
12001-50000	414	37.64	76.00	51,102	36.54	77.70
50001-100000	147	13.36	89.36	16,621	11.89	89.59
100001-200000	58	5.27	94.64	6,414	4.59	94.18
200001-400000	42	3.82	98.45	5,546	3.97	98.14
400001-800000	14	1.27	99.73	1,824	1.30	99.45
800001-1200000	2	0.18	99.91	442	0.32	99.76
>1200000	1	0.09	100.00	331	0.24	100.00
Total	1100	100.00		139,839	100.00	

Source: Authors' estimation using 2007 CWIQ survey

Table 6.4 provides data on mean and total taxable income. Total taxable income is estimated at L$1,080,474,628. Using an exchange rate of 0.015873 to the dollar, this is equivalent to US$17.15 million, which is very close to the actual tax receipts of the government from the personal income tax. This suggests that at least in first approximation, the CWIQ survey can be used for simulating tax reforms. On the other hand, the number of observations in the upper tax brackets is extremely small (one observation in the top bracket, and two in the bracket just below, as shown in table 6.4), so that the analysis is very sensitive to these observations. In addition, and in part to confirm adequacy of an analysis based on so few observations, it would be useful to know the distribution of the personal tax income receipts by tax bracket and compare this distribution to the CWIQ data. Unfortunately such data on the distribution of income by tax bracket are not available from the Ministry of Finance. The analysis presented in this section should therefore be considered with a lot of caution, as results could have been fairly different from another survey as valid as this one.

Table 6.4: Mean and total sum value of taxable income by residence area and tax bracket

	Net Income	Gross Income	Tax
	Mean value		
Location			
Rural	4054	4316	262
Urban	34859	41167	6308
Total	13790	15963	2173
Tax brackets			
0	0	0	0
1 – 12000	4262	4349	87
12001-50000	27242	28297	1055
50001-100000	66841	71090	4249
100001-200000	130652	144460	13809
200001-400000	232315	268069	35755
400001-800000	423388	514037	90649
800001-1200000	676126	854665	178540
>1200000	2750000	4018677	1268677
Total	13790	15963	2173
	Total sum value		
Location			
Rural	1378416450	1467662108	89245658
Urban	5477454208	6468683178	991228970
Total	6855870659	7936345287	1080474628
Tax brackets			
0	0	0	0
1 – 12000	245324889	250331522	5006633
12001-50000	1392115706	1446020084	53904378
50001-100000	1110959999	1181582520	70622520
100001-200000	838001592	926573395	88571803
200001-400000	1288393528	1486679947	198286419
400001-800000	772350725	937714521	165363796
800001-1200000	298620832	377475463	78854631
>1200000	910103386	1329967834	419864449
Total	6855870659	7936345287	1080474628

Source: Authors' estimation using 2007 CWIQ survey

Table 6.5 provides data on the share of taxable income by location and income tax brackets. As expected, most of the taxes (91.7 percent) are paid by urban households. Although few households have high level of incomes, those households contribute to a large share of the tax base (but again, key results are based on an extremely small sample of households in upper income tax brackets).

Table 6.5: Contribution of areas/income group in total personal tax income receipts

	Net Income	Gross Income	Tax
Location			
Rural	20,1	18,5	8,3
Urban	79,9	81,5	91,7
Total	100,0	100,0	**100,0**
Tax brackets			
0	0	0	0
1 – 12000	3,6	3,2	0,5
12001-50000	20,3	18,2	5,0
50001-100000	16,2	14,9	6,5
100001-200000	12,2	11,7	8,2
200001-400000	18,8	18,7	18,4
400001-800000	11,3	11,8	15,3
800001-1200000	4,4	4,8	7,3
>1200000	13,3	16,8	38,9
Total	100,0	100,0	**100,0**

Source: Authors' estimation using 2007 CWIQ survey

In tables 6.6 and 6.7, we provide results from the simple simulation indicated in table 6.2. This is done not to suggest or recommend any particular policy, but only to indicate the type of simulations that can be performed. Many other simulations could be implemented, and it would be easy to assess the impact of tax reforms on income inequality, as well as poverty by combining the information in the survey from the income module and the data on consumption.

Table 6.6 provides the mean value and total taxable income under the baseline and simulated tax reform. The impact of the simulated reform on total taxes could be large, with a reduction in taxes of almost half. Because upper income bracket households pay a large share of the taxes, they would benefit from a larger share of the reductions in taxes.

Table 6.7 provides the share of taxable income by decile under the baseline and simulated tax reform. Even though the simulated tax reform includes an exemption from paying taxes for individuals/households with less than L$ 54,000 in total income, the impact of the overall reform still reduces the share of total after tax income that benefits the lower brackets of the income distribution. In that sense, there is a significant risk that the tax reform would be regressive. All those results should be considered as tentative, given that the sample sizes on which some of the estimates are based remains very small (and extremely so in the upper brackets). But in terms of comparing the benefit incidence of the proposed income tax reform with that of the temporary cut on rice import taxes, the messages tend to be relatively clear.

Table 6.6: Mean value and total taxable income under the baseline and simulated tax reform

	Net Income		Gross Income	Tax	
	Baseline Y after tax	Simulated Y after tax		Baseline Tax	Simulated Tax
	Mean values				
Tax bracket					
0	0	0	0	0	0
1 – 12000	4262	4349	4349	87	0
12001-50000	27242	28297	28297	1055	0
50001-100000	66841	70217	71090	4249	873
100001-200000	130652	137875	144461	13809	6586
200001-400000	232315	250719	268069	35754	17350
400001-800000	423388	469090	514037	90649	44947
800001-1200000	676126	778859	854665	178540	75806
>1200000	2750000	3151868	4018677	1268677	866809
Total	13790	14846	15963	2173	1117
	Total sum				
Tax bracket					
0	0	0	0	0	0
1 - 12000	245324889	250331522	250331522	5006633	0
12001-50000	1392115706	1446020084	1446020084	53904378	0
50001-100000	1110959999	1167072102	1181582520	70622520	14510421
100001-200000	838001592	884330262	926573395	88571803	42243136
200001-400000	1288393528	1390456969	1486679947	198286419	96222978
400001-800000	772350725	855720778	937714521	165363796	81993740
800001-1200000	298620832	343994495	377475463	78854631	33480972
>1200000	910103386	1043100186	1329967834	419864448	286867649
Total	6855870659	7381026399	7936345287	**1080474628**	**555318896**

Source: Authors' estimation using 2007 CWIQ survey

Table 6.7: Share of taxable income by decile under baseline and simulated tax reform

	Net Income		Gross Income	Tax	
Deciles	Baseline Y after tax	Simulated Y after tax		Baseline Tax	Simulated Tax
1	1,29	1,25	1,16	0,33	0,04
2	2,67	2,62	2,50	1,45	0,95
3	2,61	2,52	2,37	0,87	0,32
4	4,57	4,45	4,25	2,25	1,55
5	5,01	4,88	4,67	2,55	1,85
6	5,37	5,22	4,92	2,08	0,98
7	6,80	6,66	6,34	3,45	2,15
8	12,95	12,90	12,54	9,93	7,73
9	14,42	14,21	13,86	10,26	9,16
10	44,31	45,28	47,38	66,83	75,26
Total	100,00	100,00	100,00	100,00	100,00

Source: Authors' estimation using 2007 CWIQ survey

4. Conclusion

This chapter has provided simple estimates of the likely benefit incidence of indirect tax reforms for selected food items in a dozen West and Central African countries. Reducing import taxes or the VAT on food imports is one of the first actions that governments are considering to reduce the impact on the poor of rising food prices. Yet while this is a simple measure to take administratively, it is also costly in budgetary terms, and it is not clear that it necessarily reach the poor. In the case of Liberia, the results suggest that 44 percent of the benefits of reduced taxes on imported rice may have benefitted the bottom 60 percent of the population, with the proportion being reduced slightly further if one considers only the consumption of imported rice. In addition, there is no guarantee that the tax cuts will end up reducing the market prices of the goods targeted. Finally, for many food items, even if there is a one-to-one relationship between taxes and market prices, much of the benefit of the tax cuts could be enjoyed by the non-poor. This does not mean that no tax cuts should not be implemented, but rather than one needs to look closely at the country level data before making decisions. In a country such as L:iberia, where a substantial share of the rice is consumed by the poor, a tax cut may make more sense that in some of the Sahelian countries such as Burkina Faso, Mali, and Niger where rice tends to be consume more by better off households residing in urban towns. But even in Liberia, the targeting performance of indirect tax cuts, assuming that they do indeed trickle down to lower the prices for consumers on the markets, remains relatively weak.

The chapter has also provided an analysis of household survey data in order to provide an analysis of the benefit incidence of a proposed a personal income tax reform. All results should be considered as tentative, given the small size of the sample used for the estimation in some of the income tax brackets, especially at the upper end. Nevertheless, the analysis suggests that there is an even more significant risk than was the case for import tax cuts on rice that the income tax reform would be regressive. Given that there are plans to adjust other taxes in Liberia, including the sales tax, it could make sense to propose an integrated reform package dealing with the various taxes in a more comprehensive and integrated way to avoid that much of the benefits of the tax reform accrue principally to the better off, especially at a time of crisis.

References

Backiny-Yetna, P., R. Mungai, C. Tsimpo, and Q. Wodon, 2011, Poverty in Liberia: Level, Profile, and Determinants, in Q. Wodon, editor, *Poverty and Policy Response to the Economic Crisis in Liberia*, Africa Region Working paper No. 131, The World Bank, Washington, DC.

International Labour Organization, 2009, A Rapid Impact Assessment of the Global Economic Crisis on Liberia, mimeo, Monrovia.

Tsimpo, C., and Q. Wodon, 2011, Rice Prices and Poverty in Liberia, editor, *Poverty and Policy Response to the Economic Crisis in Liberia*, Africa Region Working paper No. 131, The World Bank, Washington, DC.

Wodon, Q., and H. Zaman, 2010, Higher Food Prices in Sub-Saharan Africa: Poverty Impact and Policy Responses, *World Bank Research Observer*, 25: 157-176.