Income Distribution and Expenditure Patterns in South Africa

Anne Case
Princeton University
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1. Introduction

Trade liberalization will influence many aspects of the South African economy. First among these will be the effect of liberalization on income distribution, as jobs are created and wages respond to changes in demand for South African exports and to changes in the mix of goods produced in, and imported into, South Africa. The changing profile of imports and exports may also have a profound effect on the prices of goods purchased by South Africans. To understand the impact of trade liberalization on household well being in South Africa, it is important to understand the present consumption patterns in the country and the anticipated behavioral responses of households to price and income changes upon trade liberalization.

This paper provides the building blocks for such an understanding. A profile of household consumption is provided separately for African (black) and White households, using the 1993 South African Living Standards Survey (SALSS). Non-parametric estimates are presented to provide information both on the expected incidence of price changes, and on the behavioral responses to be expected as incomes change.

If consumption patterns varied dramatically between African and White households, then any employment changes affecting African and White income distributions would be expected to alter aggregate demand for goods that households consume, and would result in a further round of price changes. Patterns of African and White consumption are explored at length below. In addition, income and price elasticities are estimated for thirteen commodity groups, using a Linear Expenditure System (LES) and the SALSS data. These elasticities are by themselves useful for welfare analysis. In addition, they may be useful as intermediate inputs into a CGE model estimating the impact of trade liberalization (along the lines, for example, of Devarajan and van der Mensbrugghe (2000)).

The paper will first present an overview of income and consumption patterns in South Africa. It will then present information on commodity price and income responses of African and White households, estimated using a linear expenditure system (LES). I use household budget shares, together with estimates from the linear expenditure system and estimates of the changes in consumer prices anticipated following a tariff reform, to quantify the extent to which trade reform will affect households as consumers.

2. Income and consumption patterns in South Africa

2.1 Data

I rely extensively on a multi-dimensional data set collected in South Africa in the second half of 1993 by a team of researchers from the World Bank and the South African Labour and Development Research Unit (SALDRU) of the University of Cape Town. In total, information was collected on 43974 individuals in 8848 households drawn from 360 clusters. These data, the

first nationally representative data collected in South Africa since the 1970 census, provide information on household membership, employment, health and education. Figure I provides a look at the distribution of income per capita among Africans (left panel) and Whites (right panel) using the SALSS data. A poverty line of one dollar per person per day has been added as a vertical marker in both panels. Roughly half of Black South Africans were living on less than a dollar a day in the second half of 1993, true for a negligible number of Whites. The mean income per person among Africans was 320 Rand per month, among Whites was 2400 Rand per month. Figure I makes clear not only the much lower mean income among Africans, but also the greater dispersion of income. Figure I also shows that only a handful of Africans have a log income per household member above 7.5. In some of the non-parametric analysis that follows, it will be worth bearing in mind that households with log per capita income above 7.5 represent very few households, and that observed behavior for such households may be noisy.

Important for our purposes here, the SALSS also collected expenditure data on a detailed set of consumption goods. Data were collected at the cluster level on the prices of (roughly 30) food items. I use budget shares averaged by race over different food items to weight the prices faced by consumers, in order to construct a food price index to use in the estimation of a Linear Expenditure System. That is, for food items j=1 to J, the price index for food is calculated:

$$P = \exp\left[\sum_{j=1}^{J} \alpha_j \log(p_j)\right]$$

where p_j is the price of item j, collected in a market in the cluster from which the household was drawn, and α_j is the average share of item j in the total food budget, where the average has been taken by race.

The price indices calculated for food, by racial group, are presented in Figure II. It is apparent from Figure II that the prices for food paid by Africans are substantially lower than those paid by Coloureds, which are in turn lower than the prices paid by Asians and Whites. (I have little choice here but to use the racial categories applied historically in South Africa.) These differences in price indices across races may be due in large part to differences in the quality of food items purchased. Deaton (1997, page 77) discusses the responsiveness of log unit values (expenditure divided by quantity purchased) to increases in log total expenditure, which Prais and Houthakker (1955) refer to as "quality elasticities." Deaton presents quality elasticities for food (for Pakistan 1984-85) and discusses Prais and Houthakker estimates (for inter-war Europe), on the order of 0.10. With more than a seven-fold difference in the mean incomes of Africans and Whites, I would anticipate a quality-driven difference in the log price indices of Africans and Whites of roughly 0.75, which account for the mean difference in log price indices observed in the SALSS data.

Africans may face lower prices in the markets in which they buy their goods, or Africans may buy less expensive food stuffs. Consistent with the quality elasticity explanation above, I find when decomposing the difference in African and White price elasticities that the entire difference can be

explained by the types of goods purchased. I can express the difference in the log price index between races:

$$logP^{African} - logP^{White} = \sum_{j=1}^{J} [\alpha_j^A - \alpha_j^W]\log(p_j)^W + \alpha_j^A[\log(p_j)^A - \log(p_j)^W].$$

I can use this to calculate which part of the difference in the log price index is due to the composition of goods (the first term in the sum on the right hand side in the expression above), and which part is due to differences in prices faced (the second term). Decomposing the difference in this way, I find that on average the composition accounts for a difference in the log price index of −0.695, and the price differences account for a difference in the log price index of 0.019, suggesting that the difference in the log price indices between races is accounted for entirely by the composition of goods purchased.

2.2 Consumption patterns

I analyze the budget shares of thirteen commodity groups in the SALSS: food, fuel, housing, alcohol and tobacco, clothing, personal items, transportation, medical expenses, savings, insurance, schooling, and entertainment. Food expenditures have been aggregated from 31 categories, including grains, meat, dairy, fruits and vegetables, and sugars. School expenditures include spending on school fees, uniforms, text books, transportation, stationery and school meals. Spending on tobacco and alcohol includes spending on cigarettes, tobacco, wine, beer and spirits. Personal items include soap, shampoo, haircuts, newspapers, stationery, envelopes, stamps, telephones, and other similar items. Entertainment includes spending on such goods as movies, sports events, and music. Savings here refers to savings instruments, such as stokvel (rotating savings and credit association) contributions and retirement annuities. (Note that 'savings' here does NOT refer to the difference between household reported income and expenditures.) Insurance includes expenditures related to life insurance, short-term policies and funeral policies.

The average budget shares for these commodity groups are shown, by race, in Table I. By a wide margin, food is the largest part of an African household's budget. On average, African families spend 52 percent of their budgets on food. The food share for Whites is less than half this, estimated here as 21 percent of overall household budget on average. Africans also spend a sharply larger share of their budget on fuel (5.3 percent, which contrasts with 0.2 percent on average for Whites), and on alcohol and tobacco (4.2 percent, relative to 2.7 percent for Whites). In the LES estimates provided below, these three groups which are a markedly larger part of Africans' budgets—food, fuel, and alcohol/tobacco— are the only three groups for which Africans' consumption is price inelastic.

Apart from the difference between African and White budget shares on food, the most striking difference in expenditure patterns between races is in expenditure on housing. Whites spend on average 30 percent of their budgets on housing, while Africans spend 11 percent, on average.

Whites also have larger budget shares for personal items, transport, medical expenses, savings contributions, insurance, schooling and entertainment. Of this group, the largest difference lies in expenditure for insurance: Whites spend on average roughly 9 percent of their budgets on insurance, while Africans spend 1 percent.

These average budget shares, and the mean differences between races, may be useful in evaluating the welfare effects of price changes. Let the social welfare function of a policy maker be a weighted sum of the utilities of all households:

$$W = \sum_h \gamma_h u_h = \sum_h \gamma_h \psi_h(y_h,p)$$

where γ_h represents the weight policy makers apply to household h's utility, and ψ represents the indirect utility function for household *h*, a function of household *h*'s income (y_h) and the prices that the household faces (p). Then the effect of a change in the price of good i on social welfare can be represented:

$$\frac{\partial W}{\partial lnp_i} = -\sum_h [\gamma_h * \frac{\partial \psi_h}{\partial lnx_h}] * w_{hi} = -\sum_h \theta_h * w_{hi} \quad (1)$$

where (lower case) w_{hi} is the budget share of good *i*, and $\partial\psi_h / \partial lnx_h$ is a measure of the marginal utility of money (in logs) to household *h*. θ_h represents the social marginal utility of money in the hands of household *h*, which may vary from household to household, either because society values the utility of one type of household more strongly (γ) or because the marginal utility of money to a given household ($\partial\psi_h / \partial lnx_h$) is very high. If the post-Apartheid government weighed the utility of Africans more strongly then the utility of White households then the government would be most interested in lowering the prices of goods whose budget shares are highest for Africans. All else held equal, this would lead to a policy focussing on lowering the prices of food, housing, transport and fuel (in that order).

The information provided in the mean budget shares is limited. Budget shares and the social marginal utility of money may vary with household income. For this reason, it may be important to observe budget shares over the entire range of the income distribution. These are provided for 12 commodity groups (all but "other expenditures") in Figures III.A through III.C, which present the results of locally weighted (Fan) regressions of budget shares on log(income per household member), estimated separately by race. These regressions are of the form

$$w_i = m(lnx) + \epsilon = E(w_i | lnx) + \epsilon \quad (2)$$

where the expectation of the budget share is taken conditional on log income per capita for commodity group *i.* For Figures III.A through III.C, weighted regressions were run at 50 equally spaced grid points in the distribution of log(income per capita). For an observation to be included in a given regression, the log(income per capita) at that observation must be 'close enough' to the

grid point, where being 'close enough' is determined by the bandwidth chosen. The choice of bandwidth determines how smooth the relationships appear in III.A through III.C. In these figures, I have probably undersmoothed the graphs, which was done to retain as much information as I could about the relationship between budget shares and log(income per capita). One can smooth the graphs by eye, leveling out the small jumps and blips in the relationship. The weight an observation carries in a given regression will depend inversely upon the distance of that observation to the grid point at which the regression is being run. In the results presented in Figures III.A through III.C, I weight observations using quartic kernels. (See Deaton (1997, Section 3.2) for discussion of this procedure.) The advantage to this approach is that it allows the relationship between budget shares and log(income per capita) to vary over the range of income, and allows the data to determine what that relationship looks like.

Many interesting facts come to light when examining the relationship between budget shares and per capita income in this way. First, while the budget shares of food, fuel, and transport are very different between Whites and Africans on average, these differences appear to be explained almost entirely by differences in log(income per household member) between Whites and Africans. The budget shares of wealthier Africans look very much like those for Whites for these goods.

In addition, food, fuel and schooling (for the upper half of the African income distribution) are the only 'necessities' in African household budgets—goods for which the budget shares decrease with increases in income. (The budget share of alcohol/tobacco also falls for a large part of the range, and the LES below identifies this as a necessity as well.) Food and fuel are the two commodity groups with the lowest estimated income elasticities for Africans in the LES, below. These, then, are goods for which reductions in prices may have the highest social payoff: these goods have high budget shares on average, and the highest budget shares for the poorest South Africans, where the social weight attached to the household may be the largest.

The list of necessities is longer for White households: food, fuel, alcohol and tobacco, personal items, housing, and schooling (for the upper half of the White income distribution). The LES identifies food, fuel, alcohol and tobacco, clothing, and personal items as necessities.

The sharpest difference in the spending of Whites and Africans is in housing (bottom left panel of Figure III.A). The budget share of housing falls for Whites, throughout the range of White income per person observed, while it rises for Africans, throughout the range. The budget share of housing for Whites is everywhere above that for Africans. Over that part of the income distribution where both Whites and Africans are observed, the budget share of housing for Whites is roughly twice that for Africans (roughly .30 for Whites, and .15 for Africans in the upper end of the African income distribution). I will return to this in next section.

The other striking difference in spending patterns between Africans and Whites is in the budget share of schooling. The budget share for Whites rises from log(income per capita) of 5.0 to (roughly) 7.0, and falls thereafter. The reverse is true for Africans: the budget share falls from

log(income per capita) of roughly 4.0 to 7.0, and rises thereafter. Schooling expenses are largely driven by fees, even for public schools, and it may be important to distinguish between discretionary and non-discretionary school spending to understand this relationship.

In summary, the welfare payoff associated with trade liberalization would be highest were it to result in lower prices of food stuffs and fuels purchased by the poorest African households.

2.3 Income redistribution and commodity demand

If trade liberalization results in redistribution away from Whites, I would expect to see changes in aggregate commodity demands, if tastes for commodities varied by race. I can use the information contained in Figures III.A through III.C to estimate how changes in income would affect spending on different commodity groups. From equation (2), I can express the change in spending on good *i* for an infinitesimal change in income per capita as

$$\frac{\partial(p_i q_i)}{\partial x} = m_i^{/} + w_i.$$

This expenditure response has an intuitive explanation: an increase in household income is shared among commodities according to their budget shares (w_i), and is shaded by the responsiveness of expenditure to income at the margin $m_i^{/}$. This expenditure response is estimated using the same Fan regressions discussed above. At each grid point on the log(income per capita) axis, an average budget share is calculated, and is added to the estimated slope of the relationship at that point.

The results of this procedure are plotted against log(income per capita) in the twelve panels of Figures IV.A through IV.C. Several observations are in order here. The poorest African households spend roughly 60 cents of a marginal Rand on food. This falls to roughly 20 cents for the wealthiest Africans, and coincides quite closely with White spending on food out of a marginal Rand. The poorest African households spend upwards of 15 cents of a marginal Rand on fuel, which falls to something close to a penny for the wealthiest African households. Again, the marginal spending of the wealthiest Africans looks very similar to that of Whites.

For a large part of the range—from log(income per person) of 0 through 4.0—Africans spend roughly 8 cents out of a marginal Rand on housing. Beyond that level of income, expenditure on housing at the margin rises markedly. Indeed, the marginal spending on housing is not very different between the wealthiest Africans and Whites. The reasons behind this were apparent in Figure III.A: Whites have higher budget shares for housing than Africans at similar income levels but, at the margin, Whites are reducing those budget shares ($\beta<0$) while Africans are increasing them ($\beta>0$).

With the exception of savings and insurance for the handful of Africans with log(income per

capita) above 8.0, I see little evidence of inferior goods. (The LES identifies only fuel for White households as inferior—with an expenditure elasticity less than zero. However, the standard error on this estimate is large; one cannot reject that the expenditure elasticity of fuel for Whites is 0.)

Overall, the results presented in Figures IV.A through IV.C suggest that redistribution of income from White households to African households would not result in a noticeable change in the aggregate demand for the commodity groups presented here. This is a rather remarkable finding; I would not have anticipated this before starting this work.

3. Linear Expenditure Systems

I turn now to estimation of price and income elasticities for the thirteen commodity groups introduced above. Demand systems are estimated separately for Africans and Whites, using the SALSS data.

The linear expenditure system provides estimates for a system that can be characterized:

$$p_i q_i = p_i \gamma_i + \beta_i [x - \sum_{j=1}^{J} p_j \gamma_j] \quad (3)$$

for $i = 1$ to J (here, 13 commodity groups). This system is consistent with demand theory, provided that the β_is are non-negative and x is not less than $\sum_j p_j \gamma_j$. Table II provides full information maximum likelihood (FIML) estimates for a 13 equation system based on equation (3). Table II provides estimates of the price and income elasticities derived from equation (3).

The linear expenditure system has a large benefit for the analysis here, because I can estimate price and expenditure elasticities for all commodity groups, even though I have access to only one price index, that for food. With the food price index, and the expenditure information for all groups, I can estimate the expenditure equation for food:

$$p_f q_f = p_f \gamma_f + \beta_f [x - \sum_{j=1}^{J-1} \tilde{\gamma}_j] - \beta_f p_f \gamma_f$$

where

$$\tilde{\gamma}_j = p_j \gamma_j$$

is the product of the commodity price and the demand parameter γ, which I can estimate for commodities for which I do not have price information. That is, I can estimate:

$$p_k q_k = \tilde{\gamma}_k + \beta_k [x - \sum_{j=1, j \neq k}^{J-1} \tilde{\gamma}_j] - \beta_k p_f \gamma_f$$

for all commodities other than food. This places restrictions on the system: the same $\tilde{\gamma}$ terms

appear in each equation. I estimate this system using full information maximum likelihood. The own-price elasticity estimates are:

$$e_{ff} = -1 + \frac{\boldsymbol{p_f}\gamma_f}{\boldsymbol{p_f q_f}}(1-\beta_f)$$

for food, where $\boldsymbol{p_f}$ is the average price index for food, and $\boldsymbol{p_f q_f}$ is the average expenditure on food. For commodities other than food, the own-price elasticity is:

$$e_{ii} = -1 + \frac{\tilde{\gamma}_i}{\boldsymbol{p_i q_i}}(1-\beta_i)$$

where $\boldsymbol{p_i q_i}$ represents mean expenditure on good *i*. The expenditure elasticities are estimated:

$$e_i = \frac{\beta_i \, \boldsymbol{x}}{\boldsymbol{p_i q_i}}$$

where $\boldsymbol{x}$ is the mean total expenditure. (See Deaton and Muellbauer, Section 3.2, for details.) Table III presents estimates of $\tilde{\gamma}_k$ and β_k for twelve commodities in our system and, for food, estimates of γ_f and β_f.

On the whole, the income and price elasticities presented in Table II are consistent with the patterns of consumption observed in the non-parametric estimates presented in Section 2. For Africans, food, fuel, alcohol/tobacco and (marginally) other goods are estimated as necessities. Of these, food, fuel and alcohol/tobacco are also estimated as price inelastic. For Whites, food, fuel, alcohol/tobacco, clothing, personal items, and (marginally) personal items and other goods are estimated as necessities. Of these, only food, fuel, clothing, alcohol/tobacco are estimated as price inelastic. On the whole, Africans are estimated to be more price sensitive than Whites for most items. For example, the estimated price elasticity for housing is −1.79 for Africans, which compares with −1.14 for Whites; for transport, the price elasticity is −1.71 for Africans, and −1.14 for Whites; for medical expenses, the price elasticity is −1.83 for Africans, and −1.21 for Whites; for savings, the price elasticity is −1.91 for Africans, and −1.41 for Whites; for insurance, the price elasticity is −3.05 for Africans, and −1.43 for Whites; for entertainment, the price elasticity is −2.45 for Africans, and −1.08 for Whites.

4. The impact of tariff reductions on household wellbeing

I use the budget shares presented in Figures III.A through III.C, together with our estimates from the linear expenditure system and estimates of the changes in consumer prices anticipated following a tariff reform, to quantify the extent to which trade reform will affect households as

consumers.[1]

Table IV presents percentage changes in prices anticipated following tariff reform, estimated by Devarajan and van der Mensbrugghe (2000) using a CGE model for the South African economy. A 75 percent reduction in tariffs is anticipated to have the largest effects on the prices of food (which are anticipated to fall by 6 percent), the prices of tobacco (10 percent), and that of clothing (13 percent).

As presented in equation (1), the welfare effect of these price changes are a weighted average of each household's budget share, with the social marginal utility of money in the hands of each household used as weights. The relatively large reduction anticipated in the price of food may provide a large gain in social welfare, both because it is a large share of all South Africans' budgets (upper left panel of Figure III.A), and because the share is largest for the poorest households, for whom the social marginal utility of money may be large. The large anticipated reduction in the price of clothing will also disproportionately benefit African households, although the largest gain here will go to wealthier households, who have the largest budget shares on clothing (upper left panel of Figure III.B).

I can quantify the impact of tariff reform on household wellbeing using the linear expenditure system estimated in Section 3. The cost of reaching the household's initial level of utility at the new (lower) prices that it faces, relative to the cost at original price, represents a measure of the gain to consumers. These gains are presented by race in Table V, expressed as a fraction of average pre-reform total household expenditure. A 75 percent reduction in tariffs is estimated to reduce the cost of reaching the household's initial level of utility by roughly 2 percent for African households, and by 1 percent for White households—representing large gains to both groups.

[1]Note that this does not speak to job creation, nor to changes in wages that may result from trade reform. A complete data-based analysis of the impact of trade reform on employment and wages is not currently feasible for South Africa. It is not understood why South Africa suffers from a 30 percent unemployment rate. Until this is better understood, it would be very difficult to model and estimate the impact of tariff reform on job creation. In addition, it would be extremely difficult to estimate the impact of tariff reform on wages in South Africa. Wages in South Africa in many sectors are rigid, due not only to the presence of unions and industrial councils but also due to government statutes and lack of competition in some sectors, see Butcher and Rouse (2001). Until both unemployment and wage rigidities in South Africa are better understood, it is unlikely that a data-based estimation of the impact of trade reform on employment and wages will be possible. Until then, one must rely on simulation results, as in Devarajan and van der Mensbrugghe (2000). In this section, I focus only on the gain to households as consumers, which can be estimated using data available.

4. References

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Deaton, Angus and John Muellbauer. 1980. *Economics and Consumer Behavior*. Cambridge University Press, Cambridge.

Devarajan, Shantayanan and Dominique van der Mensbrugghe. 2000. "Trade Reform in South Africa: Impacts on Households." Mimeo. The World Bank, Washington.

Figure I Income distributions for Africans and Whites

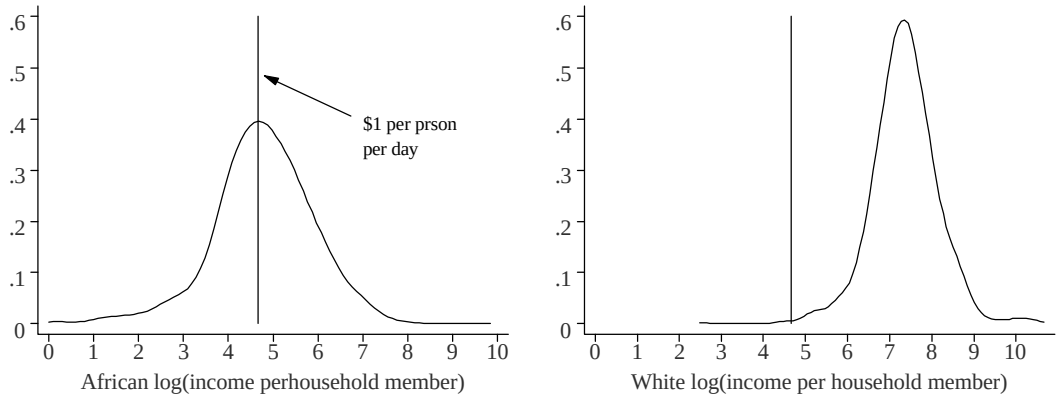

Figure II Log Price Index for Food, By Race

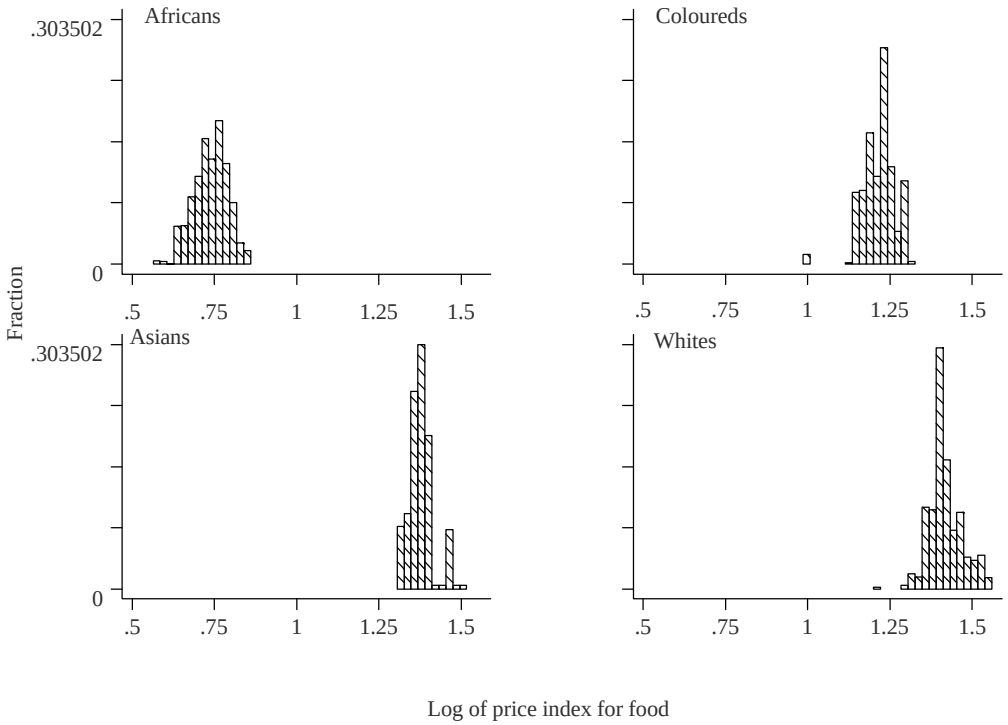

Figure III.A Commodity Budget Shares and log(income per household member)

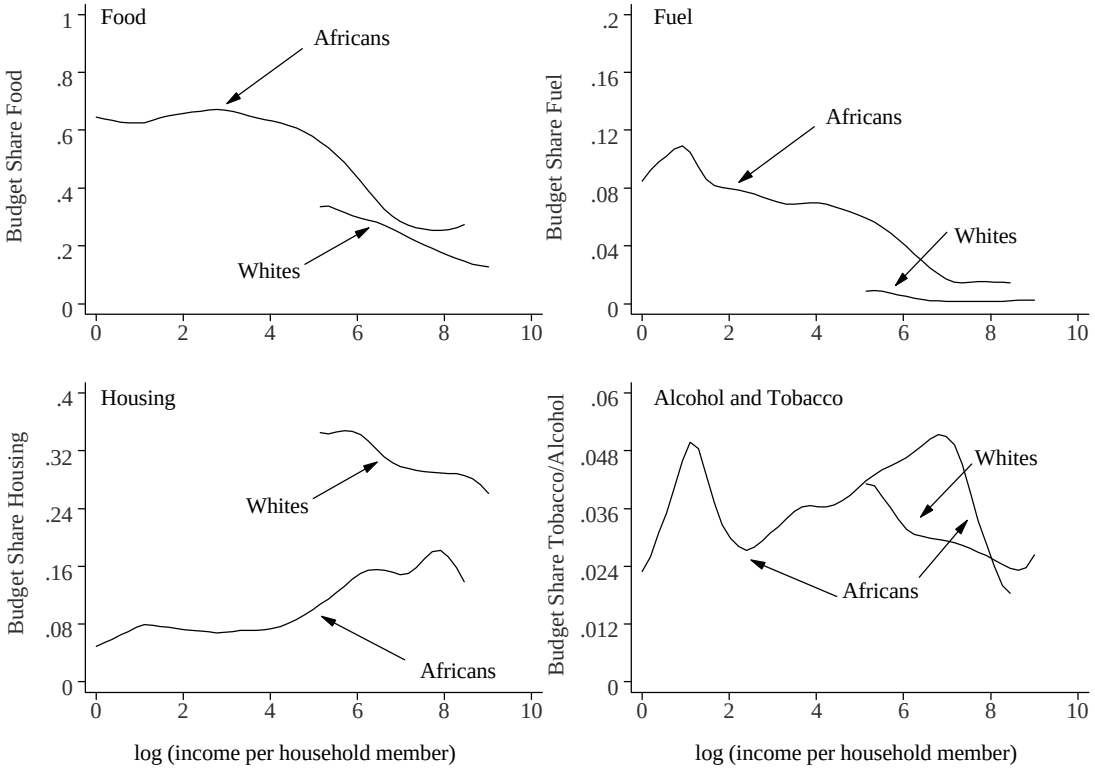

Figure III.B Commodity Budget Shares and log(income per household member)

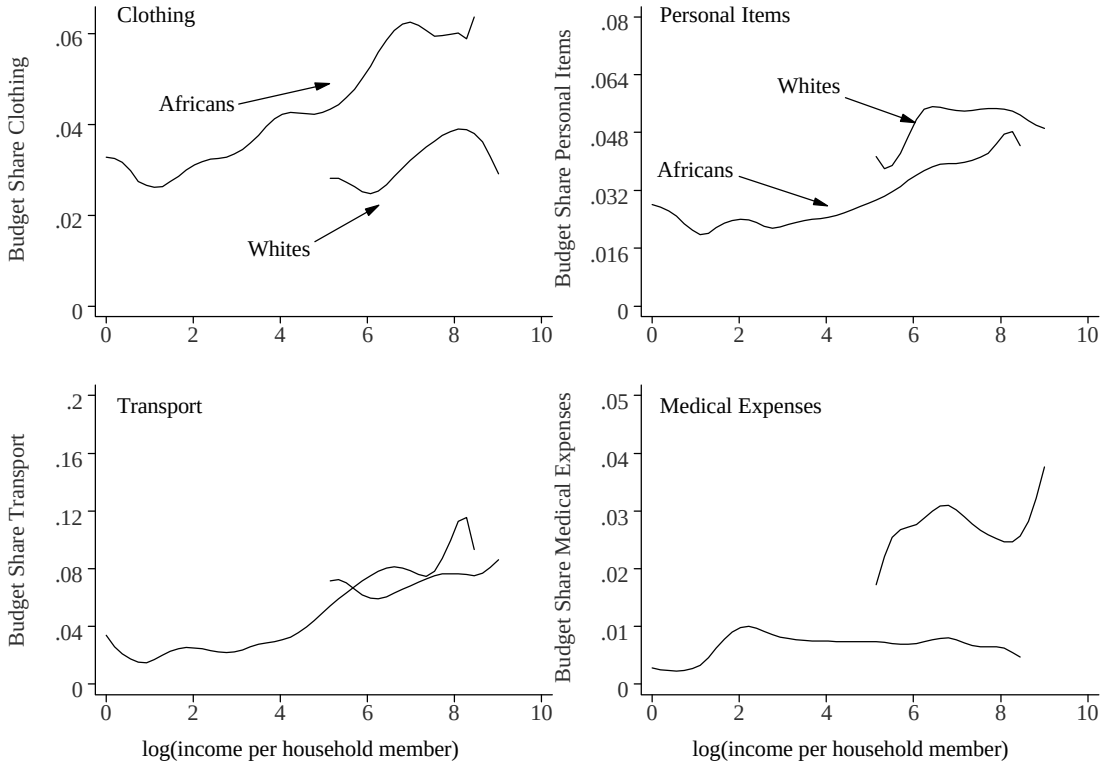

Figure III.C Commodity Budget Shares and log(income per household member)

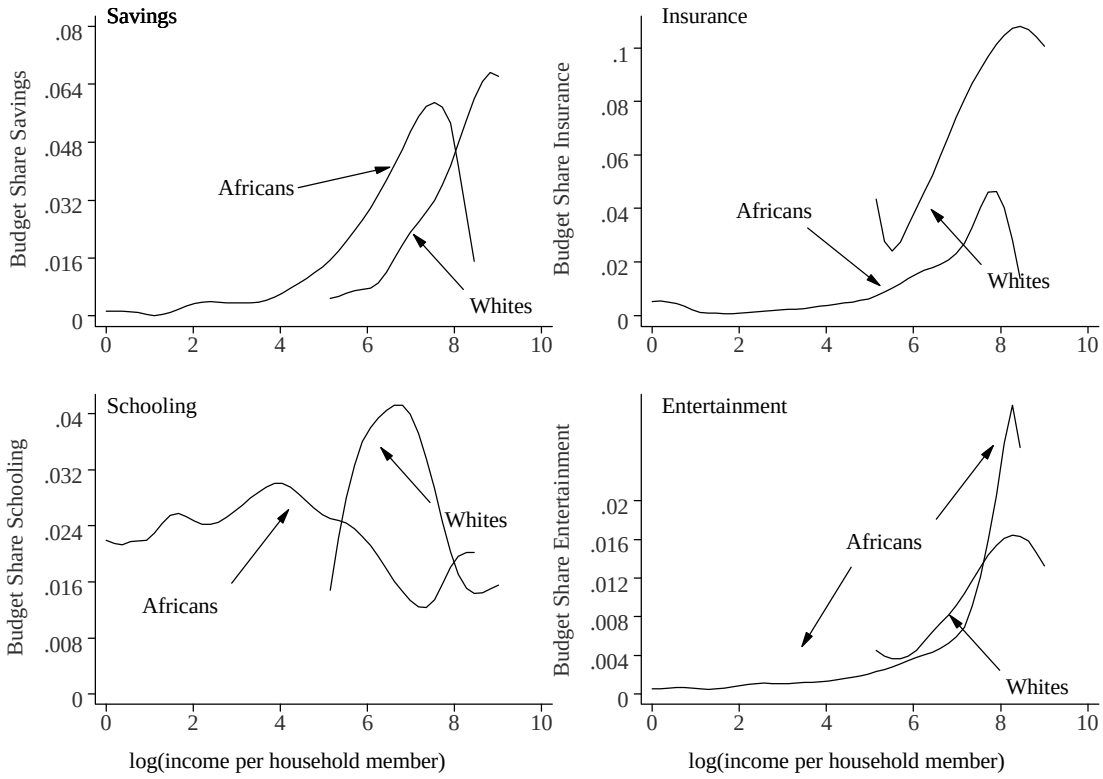

Figure IV.A Anticipated change in expenditure with a change in log(income per member)

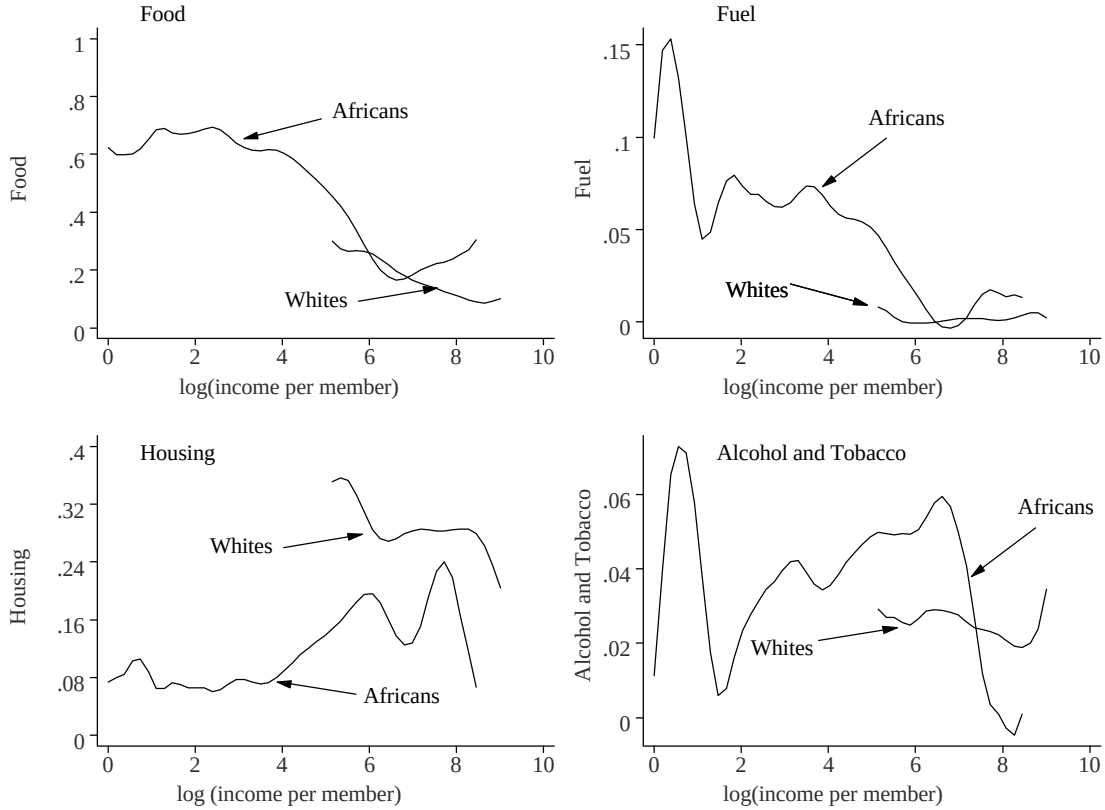

Figure IV.B

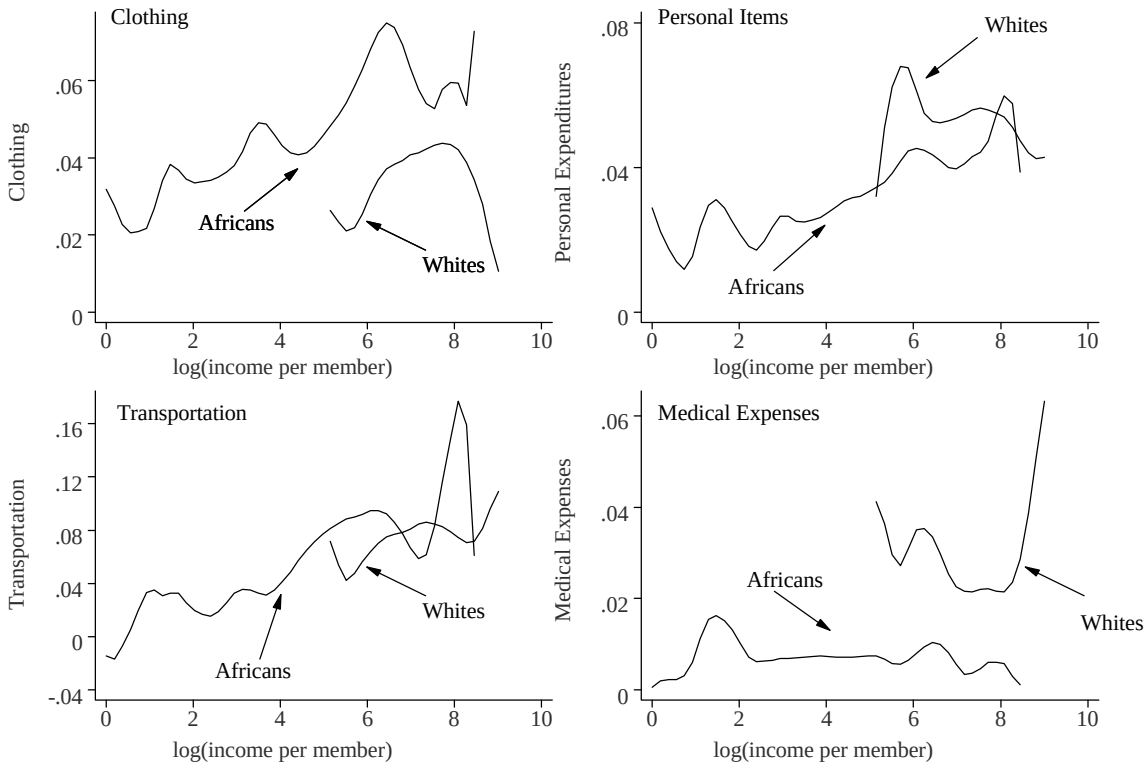
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Figure IV.C

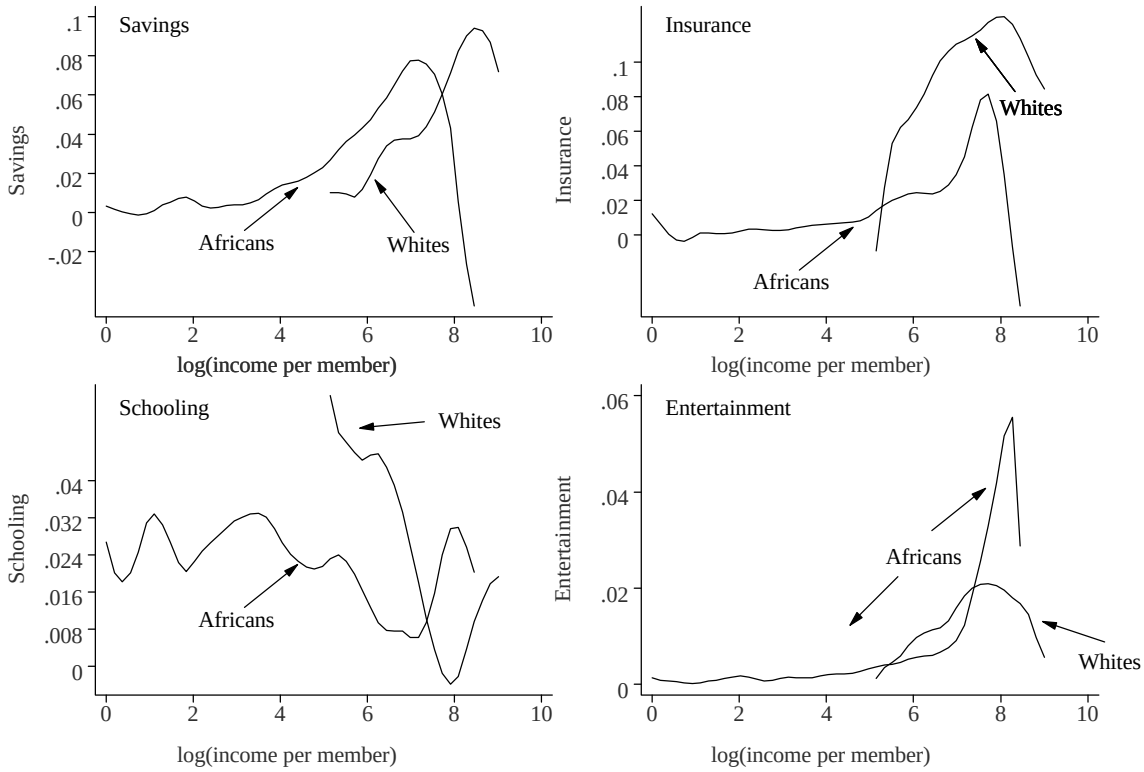
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Table I. Mean Expenditure Shares by Race

	African Households	White Households
Food	.522	.209
Fuel	.053	.002
Housing	.111	.300
Alcohol/Tobacco	.042	.027
Clothing	.046	.034
Personal Items	.031	.054
Transportation	.055	.072
Medical Expenses	.007	.028
Savings	.020	.034
Insurance	.010	.088
Schooling	.024	.030
Entertainment	.003	.012
Number of Observations	6410	1337

Notes: means are weighted using sample weights (rsweight). SOURCE: SALSS 1993.

Table II. Expenditure and Price Elasticity Estimates From Linear Expenditure Systems

	AFRICANS		WHITES	
	Expenditure Elasticity	Price Elasticity	Expenditure Elasticity	Price Elasticity
Food	.66	−.88	.73	−.84
Fuel	.34	−.43	−.32	.36
Housing	1.61	−1.79	1.10	−1.14
Alcohol/Tobacco	.67	−.84	.62	−.70
Clothing	1.04	−1.28	.86	−.95
Personal Items	1.28	−1.57	.93	−1.01
Transport	1.43	−1.71	1.03	−1.14
Medical Expenses	1.48	−1.83	1.10	−1.21
Savings	1.57	−1.91	1.28	−1.41
Insurance	2.53	−3.05	1.34	−1.43
Schooling	1.46	−1.79	1.50	−1.64
Entertainment	1.97	−2.45	.98	−1.08
Other goods	.98	−1.10	.99	−1.02
Number of Observations	4801	4801	838	838

Table III. Estimates from the Linear Expenditure System
(Standard errors in parentheses)

	AFRICANS		WHITES	
	$\tilde{\gamma}$	β	$\tilde{\gamma}$	β
Food (γ only)	80.11	.30	99.19	.16
	(173.97)	(.01)	(234.11)	(.01)
Fuel	22.41	.01	7.16	−.0008
	(7.53)	(.001)	(2.00)	(.0006)
Housing	−140.18	.22	−157.17	.35
	(127.22)	(.008)	(501.07)	(.03)
Alcohol/Tobacco	6.72	.03	22.17	.02
	(15.88)	(.002)	(28.63)	(.003)
Clothing	−14.80	.05	3.57	.03
	(29.32)	(.002)	(40.94)	(.003)
Personal Items	−21.00	.002	−1.29	.05
	(25.68)	(.04)	(70.74)	(.004)
Transport	−59.08	.10	−22.94	.07
	(60.71)	(.004)	(102.08)	(.007)
Medical Expenses	−8.13	.01	−11.15	.02
	(8.14)	(.001)	(36.25)	(.003)
Savings	−28.38	.05	−26.23	.04
	(52.49)	(.03)	(223.07)	(.07)
Insurance	−40.32	.05	−86.52	.11
	(26.94)	(.002)	(150.82)	(.009)
Schooling	−22.73	.04	−35.98	.04
	(22.99)	(.002)	(52.17)	(.005)
Entertainment	−6.60	.009	−2.20	.01
	(5.10)	(.0005)	(16.76)	(.002)
Other goods	−9.44	.08	−5.71	.10
	(23.09)	(.004)	(35.15)	(.010)

Table IV. Estimates of Post/Pre-Reform Prices Following a Tariff Reduction

	25 percent reduction in tariffs	75 percent reduction in tariffs
Food	.980	.940
Fuel	.999	.997
Housing	.986	.957
Alcohol/Tobacco	.973	.899
Clothing	.965	.879
Personal Items	.996	.986
Transport	.995	.981
Medical Expenses	.992	.973
Savings	.994	.979
Insurance	.994	.979
Schooling	.992	.973
Entertainment	.992	.973
Other goods	.991	.970

Source: Devarajan and van der Mensbrugghe (2000), "Trade Reform in South Africa: Impact on Households" World Bank mimeo, Table 7.

Notes: 1. Food price changes are a weighted average of price changes anticipated in food processing, agriculture and beverages.
2. Fuel price changes are price changes for utilities.
3. Housing price changes are a weighted average of those for construction and civil engineering.
4. Personal items price changes are price changes for communications.
5. Medical expenditures, schooling, and entertainment prices are price changes for community services.
6. Savings and insurance prices are those for financial services.
7. 'Other items' price changes are those for 'items not classified.'

Table V. Estimates of the Compensating Variation of Tariff Reductions Expressed as a Percentage of Initial Household Expenditure

	Africans	White
25 percent reduction in tariffs	.565	.322
75 percent reduction in tariffs	1.640	.972