

Indirect Tax Reform and the Poor in Papua New Guinea

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Abstract

This paper uses nationally representative household survey data to identify the items that are consumed mainly by poor households in Papua New Guinea. This information can help in the design of indirect tax reforms so that they avoid excessive increases in the cost of living for the poor. Distributional effects of some of the exemptions to the proposed value-added tax are analyzed and alternative consumption items that might better combine merit good and poverty alleviation objectives are identified.

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INDIRECT TAX REFORM AND THE POOR IN PAPUA NEW GUINEA

Papua New Guinea (PNG) is in the midst of a substantial reform of indirect taxation and tariff policies. The key component of this reform is the planned introduction of a value-added tax on January 1, 1999.¹ The main reasons for this reform are to broaden the tax base so that a larger share of the population contributes to government revenues (Mulina, 1996), and to reduce distortions in the economy by shifting the burden of taxation away from highly variable trade taxes towards a more uniform consumption tax (Economic Insights, 1996). Currently, personal income tax is paid by only about five percent of the population and contributes almost one-third of non-mineral revenues, while import duties are an even more important revenue source for the government (Dahanayake, 1996). The tariff and tax reforms are part of a broader liberalization that PNG has committed itself to under the World Bank supported structural adjustment program and as part of its entry into the WTO and APEC, although there were also domestic pressures for reform (Haiveta, 1996).

This reform of indirect taxation and tariffs will cause considerable adjustment in prices in PNG, with consequent impacts on the welfare of consumers and producers. Because of these potential welfare impacts, the proposals are controversial, with attention centered on administrative costs and equity issues (Economic Insights, 1996). There has been less discussion of efficiency effects, and especially of whether a uniform tax rate will minimise deadweight losses, presumably because of the lack of detailed estimates of supply and demand elasticities in PNG. The equity issues are especially salient because of concern about

¹ At the time of writing (October, 1998) the enabling legislation for the value-added tax has not yet been passed by Parliament.

the effects of the structural adjustment program on poverty in PNG. These concerns were partly responsible for a 1996 assessment of poverty in PNG, carried out by the World Bank.

This paper uses household survey data collected as part of the 1996 poverty assessment to identify the items that are consumed mainly by poor households in PNG. By identifying these items, it may be possible to design indirect tax reforms that excessive increases in the cost of living for the poor. It is important that these equity considerations are present at the tax design stage because PNG lacks a comprehensive tax and transfer system through which a compensating benefit package could be introduced (Gibson, 1996).²

There are also long-term benefits of identifying the items consumed mainly by the poor. In particular, knowing what these items are can help to give research and investment strategies a pro-poor bias. This is especially important for agricultural research because many items are self-produced by poor households, and hence fall outside of the reach of public policy if indirect tax is the only instrument. For example, sago is the food whose consumption is most heavily concentrated amongst the poor in PNG, so improvements in sago production or processing technology will tend to reduce disparities in living standards.

The Proposed Value-Added Tax

The value-added tax was initially due to be implemented in January 1998 but the distractions of the Sandline crisis and the national elections meant that the enabling legislation was not introduced to Parliament in 1997 (Manning, 1997). However, broad details of the proposed tax have been publicly available since 1996 (Lohberger, 1996). The main details are that the

² This is an important contrast to the introduction of Goods and Services Tax (GST) in New Zealand, and with the proposed GST in Australia.

value-added tax rate is to be set high enough to offset the loss of provincial sales tax revenue (provincial sales taxes will be abolished), and the loss of customs revenue resulting from the tariff reform program.³ It is expected that the value-added tax rate will be uniform, although certain classes of goods and services will either be *zero-rated* or *exempted*.⁴ However, considerable variability in tariff and excise tax rates will remain, so the proportion of the final price paid by PNG consumers that is due to indirect taxation (the effective tax rate) will vary widely between different goods and services.

A variety of practical and merit-good arguments have affected the selection of the goods and services that are proposed to be exempted from value-added tax, while equity reasons for exemptions have been downplayed. Financial services will be exempt because of difficulty in defining value-added (a common problem in all countries), while mining and logging will be exempt because the government would face cash-flow difficulties when crediting tax on inputs if these export oriented sectors were zero-rated. Health and educational services will be exempt, with this distortion introduced in the hope of improving the level of human capital in PNG.⁵ Public road transport is also exempt, in the hope of preventing increases in transport costs (Lohberger, 1996). But there are no exemptions for transport by boat or plane, which are more important means of transport for people in remote areas.

³ There may also be gains in revenue from imposing the value-added tax on items that are currently not subject to either sales tax or customs duties. The most important of these items is rice, which is the last of several staple food imports that were once free of customs duties.

⁴ Any value-added tax paid on purchased inputs results in a tax credit for the producers of zero-rated goods and services, while no tax is applied when these zero-rated items are sold. The main example is exports. The sale of an exempt good or service attracts no value-added tax but neither does the seller get a credit for any tax paid on purchased inputs.

⁵ Some inputs into health services, specifically prescription drugs and medical prostheses, will be zero-rated, which it is hoped will reduce cost increases resulting from the inability of exempt health service providers to reclaim value-added tax paid on inputs (Lohberger, 1996).

In addition to the exemption of certain sectors, it is proposed that businesses with annual turnover of less than K30,000 will also be exempt from value-added tax. Effectively, this will mean that businesses in the informal sector will pay value-added tax for any inputs they purchase from the formal sector but will not incur value-added tax on their sales. Of course, wholly subsistence activities will be fully exempt and this bias against the formalization and monetization of activities may go against some of the general aims of promoting economic development.⁶

Measuring How Heavily Consumption is Concentrated on the Poor

The measure used to show how heavily the consumption of each good is concentrated on the poor is the *distributional characteristic*, which is adapted from the theory of marginal tax reform (Newbery and Stern, 1987). This theory shows that the social welfare effect of a marginal price change is given by the weighted sum of each household's consumption of the good. The weights reflect the social marginal value of consumption by each household. The social welfare impact of a price change therefore depends on the total level of consumption of the good and (if social weights differ across households) the distribution of that consumption amongst the population.

The distributional characteristic is a scale-neutral measure, which makes it useful for identifying goods that are candidates for having reduced rates of tax on equity grounds. Measures without scale neutrality tend to rank goods with large aggregate consumption as attractive candidates for reduced rates of tax, because price increases for these goods have the largest total effects on social welfare. However, reduced tax rates on these goods also tend to reduce tax revenues the most, which is likely to increase the resistance to equity targeting by

⁶ I am grateful to an anonymous referee for this point.

fiscal authorities. In contrast, items with a high distributional characteristic (meaning that consumption is concentrated on the poor) need not have large aggregate consumption, so reduced tax rates on these items need not cause large revenue losses.

In addition to scale neutrality, another advantage of the distributional characteristic is that it relies on detailed, finely disaggregated, household-level consumption data. Other approaches that require consumer demand systems to be estimated are limited to a few broad commodity aggregates because of the econometric problems of multicollinearity and missing observations on prices. These broad commodity aggregates are less suitable for equity targeting because they will include some finely defined commodities that are consumed mainly by the rich and other finely defined commodities consumed mainly by the poor.

The distributional characteristic of a good is defined by Newbery (1995) as:

$$d_i \equiv \frac{\sum_h \mathbf{b}^h q_i^h}{\bar{\mathbf{b}} Q_i} ,$$

which is comprised of four components:

- the social weight, \mathbf{b}^h defined as the social marginal utility of transferring one kina to household h
- consumption of the i th good by household h , q_i^h
- the average of the social weights, $\bar{\mathbf{b}}$ over all of the households, and
- the aggregate consumption of good i , Q_i .

The distributional characteristic will be higher, the more heavily the consumption of good i is concentrated on the socially deserving (i.e., those with high social marginal values of consumption, \mathbf{b}^h).

Methods of Estimating Social Weights

Commonly used social weights are based on a utilitarian framework and use the constant elasticity of substitution social welfare function:

$$W = \frac{(c^h)^{1-\nu}}{1-\nu} \quad \nu \geq 0, \nu \neq 1$$
$$W = \ln(c^h) \quad \nu = 1,$$

where W is the value that some judge places on the income distribution, c^h is the consumption level for household h , and ν is the coefficient of inequality aversion. With this social welfare function, the social weight applied to consumption by household h is given by the social marginal utility of consumption, $b^h=(c^h)^{-\nu}$. Different values of the coefficient ν reflect different judgements about the desirability of making transfers to reduce income inequality. Because of this element of value judgement, a range of values for ν are commonly used to see whether conclusions are robust to particular ethical judgements.

One way to view the value for ν is to consider judgements about the effect of taking K100 from a richer household, giving some of this to a poorer household and destroying the rest (e.g., due to efficiency losses). If one household has twice the income of the other, then when $\nu=0$ the judge would approve of this transfer only if the poorer household received all K100. But it can be shown that when ν takes the values of 0.5, 1, and 2, then the amount that the poorer household receives needs to be only K71, K50, and K25 in order for the resulting distribution to give the same level of social welfare as before the transfer (Creedy, 1996).

In the current context, when the inequality aversion parameter is, say, $\nu=2$, taking one extra kina in indirect tax from a poor household is judged to cause four times as much social cost as does taking one extra kina in tax from a household with twice the consumption level. In

the special case of zero inequality aversion ($\nu=0$), taking one more kina in tax from the poorest household has the same social cost as taking another kina in tax from the richest household, and thus the social weight is equal for every household ($b^h=1$).

Social weights can be based on more than just the income or consumption level of households. Other factors that reflect social deservedness, such as age, disability, educational status, widowhood, the number of dependent children, and location can also be used. One pertinent factor for the purposes of this paper is access to public services. A common view of the proposed value-added tax is that many rural households get benefits from government services, while paying no income taxes, so indirect tax is one way to make them pay some of the costs (Brogan, 1996). The corollary to this view is that many households in remote areas have almost no access to government services, so they should not be expected to pay taxes for services that they do not receive.

The 1996 Papua New Guinea Household Survey

Data used in this paper come from the Papua New Guinea Household Survey (PNGHS), which is the first nation-wide household consumption survey in PNG. The survey covered a random sample of 1200 households, residing in 120 rural and urban communities (“clusters”), who were interviewed between January and December 1996. The clusters were selected from the enumeration areas of the 1990 Census and came from all provinces except North Solomons.⁷ A set of household weights were derived from the variation between the 1990 Census estimates of the size of each cluster and the actual size found during the survey, and

⁷ The Bougainville crisis prevented the Census from being conducted in North Solomons in 1990 so there was no information available for the selection of clusters, even if the safety of interview teams could have been guaranteed in 1996.

from the deviation of the actual number of households surveyed in each cluster from the target number. These sampling weights allow the results reported to be representative of PNG in 1996. The results reported are estimated from the 1144 households who had complete information on their consumption.

The survey interviewed each household twice, with the start of the two-week consumption recall period signaled by the first interview. Expenditure data were collected on all food (36 categories) and other frequent expenses (20 categories) during the recall period. The expenditure estimates include the imputed value of own-production,⁸ net gifts received, and stock changes, so they should be a good measure of consumption during the recall period. An annual recall covered 31 categories of infrequent expenses. An inventory of durable assets was used to estimate the value of the flow of services from these assets, including rental services from owner-occupied dwellings. The expenditures by households of different size and demographic composition were standardized by dividing by the number of adult-equivalents, where children aged 0-6 years count as one-half of an adult and everyone else counts as an adult.⁹

Details of the Analysis

The distributional characteristic was calculated for each of the 87 goods and services with consumption data available from the household survey. This level of commodity detail is clearly more aggregated than the fine detail of the tariff schedule but it is still a useful starting point in

⁸ The monetary values for self-produced foods were the values used by respondents. Estimates of average expenditure are unchanged if these respondent-reported unit values are replaced by either cluster medians of the unit values or cluster averages of market prices (Gibson and Rozelle, 1998).

⁹ The adult-equivalence scale is based on estimates of child costs, made using the Engel and Rothbarth methods outlined by Deaton and Muellbauer (1986), and on a comparison of the dietary requirements of adults and children of various age groups. Details are provided by Gibson and Rozelle (1998).

the search for items for which equity targeting of effective tax rates is appropriate. The social weights were based on the CES utility function (defined over the real value of total consumption per equivalent adult), with two values of the inequality aversion parameter used ($\nu=0.5$ and $\nu=2$). These values cover the usual range used in similar studies in other countries.

Households who did not have access to public services were identified from the combined travelling time they faced when journeying to the nearest community school, plus aid post, plus transport facility (whichever is closest amongst roads, airstrips, and ports). These three public services can be considered as a basic minimum that should be available. This estimate of the combined travelling time was used as the social weight when the distributional characteristic was recalculated to see how heavily the consumption of each item was concentrated on households who have poor access to public services. The range of travelling times was from 45 minutes (all three facilities were within 0-30 minutes travelling time) to 1680 minutes (the three facilities were each, on average, nine hours away).

Which Items Are Consumed Mainly by the Poor?

The items whose consumption is most heavily concentrated on the poor are locally produced foods and firewood (Table 1). These items are usually out of the direct reach of commodity taxation but public policy can still target poor households by increasing agricultural research investments in these crops. At both low and high levels of inequality aversion, sago is the food whose consumption is most heavily skewed towards poor households. Other items where the poor have a disproportionate share of consumption include taro and chinese taro, firewood, yams, sweet potato, bananas, cassava, and aibika. This ranking of self-produced items might help to guide the research allocations of the National Agricultural Research

Institute, so as to provide a pro-poor bias that has been lacking in previous agricultural research allocations (Shaw, 1985).

Amongst the items that have to be purchased, and hence could be taxed, axes, bushknives, and other garden tools, school fees, children's clothing, pots and pans, salt, rice, and tinned fish have consumption most heavily skewed towards the poor, when the lower level of inequality aversion ($v=0.5$) is used in the calculations. Adult clothing joins the list when the distributional characteristic is calculated at the higher level of inequality aversion. Lower rates of effective taxes on some or all of these items would improve the progressivity of the indirect tax system and reduce disparities in consumption levels between rich and poor households.

Which items are consumed most heavily by households who have poor access to public services? Amongst the items likely to attract indirect tax, axes and bush knives, batteries, matches, soap, and pots and pans have consumption that is most heavily concentrated on households in remote areas. These items would be candidates for lower effective tax rates *if* the principle that households who do not have access to government services should not pay tax is accepted, and if differential tax rates are the mechanism used to deliver this tax relief.

Implications for the Value-Added Tax

The value-added tax proposed for PNG is touted as a 'pure' version that follows the New Zealand model of a comprehensive consumption tax with a uniform rate and minimal exemptions (Lohberger, 1996). The reality is rather different, with a number of distortions introduced into the tax proposed for PNG. These distortions are justified by arguing that health, education and public road transport are merit goods. But once some distortions are

allowed it is difficult to argue against others that can be based on equally compelling grounds, such as poverty alleviation. However, the demand for more exemptions may be muted if the items already nominated for exemptions happen to be heavily consumed by the poor because then both merit good and poverty alleviation goals will have been already met.

How do the three “merit goods” that have been flagged for exemption from the value-added tax rank in terms of equity effects? Educational services, medical services, and public road transport rank only 15th, 56th, and 33rd (out of 87) in terms of their consumption being heavily concentrated on poor households (measured at the lower level of inequality aversion). They rank 32nd, 66th, and 31st in terms of their consumption being heavily concentrated on households who have poor access to government services. Thus, with the exception of school fees, the proposed exemptions are likely to make the indirect tax system more regressive. All three of the exemptions will provide relief from value-added tax for households in locations where government services are already available while not providing relief for households with very poor access to government services.

There may be other consumption items that better combine merit good and poverty alleviation objectives, and hence are additional candidates for exemptions. For example, it is difficult to see why public road transport should be judged more meritorious than air transport and boat transport, yet air and boat travel rank 28th in terms of their consumption being heavily concentrated on households who have poor access to government services, while public road transport is only 31st. Thus the proposed exemption for public road transport favours households who live in favoured locations. Exemptions for foods like rice and tinned fish may also combine merit good and poverty alleviation objectives. These nutrient-dense foods have a beneficial effect on the nutrition of children and adolescents

(Jenkins, 1992), and this nutritional effect may be just as important in improving human capital as is the effect of formal education and health services. Thus, the proposed exemptions for the value-added tax reflect a rather narrow view – appropriate mainly in urban areas – of what constitutes health and transport. The nationally representative survey data suggest some other consumption items with beneficial equity effects and for which exemptions may be justified by merit good arguments.

Items like rice and tinned fish that are important for human capital formation raise a more general point, which has been neglected in PNG, that many items of household ‘consumption’ are in fact productive inputs. These inputs are necessary if there is to be an efficient, healthy, and well-educated supply of labour. Hence, the value-added tax is not just a consumption tax, it may also tax some inputs used in the production of future labour.¹⁰

Implications for Excise Tax Reform

The estimated distributional characteristics reported in Table 1 may also be relevant for the reform of excise taxation. The two main sources of excise revenue in PNG are taxes on beer and taxes on cigarettes. A higher effective tax rate is placed on cigarettes than on beer and this pattern has existed for several years (Gibson, 1995). This pattern of excise taxation is not what would be suggested on equity grounds because the consumption of beer is more heavily skewed towards the rich. Beer ranks 6th (10th) in terms of its consumption being concentrated on the rich, at low (high) levels of inequality aversion, while cigarettes rank only 52nd (47th). Unless there are either offsetting efficiency reasons, due to the demand for cigarettes being

¹⁰ I am grateful to an anonymous referee for raising this point.

more price inelastic, or health-related reasons, economic welfare would be improved by increasing the effective tax rate on beer and reducing it on cigarettes.

Conclusions

The current reform of indirect taxes and tariffs in Papua New Guinea is likely to have considerable effects on consumer welfare. Although one aim of the reforms is to reduce distortions, there will still be a wide variation in effective tax rates even if the value-added tax is implemented as proposed. Indeed, the value-added tax may introduce distortions of its own, due to the decision to exempt certain items for merit good reasons. These variations in effective tax rates raise the possibility that the indirect tax reforms can be designed so as to avoid excessive increases in the cost of living for the poor. This sensitivity to concerns about poverty can be implemented by an appropriate choice of the effective tax rates on various items.

This paper has used nationally representative household survey data to identify the items that are consumed mainly by poor households in Papua New Guinea. The results, reported in the form of the distributional characteristics of various goods and services, help to answer questions about which items should be exempt from the value-added tax on the grounds of distribution equity and poverty alleviation. Knowing which items are consumed mainly by the poor can also help to guide investment activities, particularly for agricultural research, so that they have a bias in favour of the poor.

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Table 1: Distributional Characteristics of Items Consumed in Papua New Guinea

	Social Weight Based On:					
	Low inequality aversion ($\nu=0.5$)		High inequality aversion ($\nu=2$)		Travelling time to nearest public services	
	d_i	Rank	d_i	Rank	d_i	Rank
Sago	0.94	1	1.17	1	0.59	30
Taro and Chinese Taro	0.91	2	0.65	4	1.25	1
Firewood	0.90	3	0.66	3	1.10	6
Yams	0.90	4	0.64	5	1.13	4
Cassava	0.90	5	0.56	11	0.84	13
Sweet potato	0.89	6	0.61	7	1.22	2
Leaf tobacco (and mutrus)	0.89	7	0.62	6	1.19	3
Banana (cooking and sweet)	0.88	8	0.59	8	1.07	8
Sugar cane	0.88	9	0.55	12	1.09	7
Other greens, vegetables and nuts n.e.s. ^a	0.87	10	0.57	10	1.03	10
Aibika	0.87	11	0.67	2	1.04	9
Coconut	0.86	12	0.57	9	0.74	17
Axes, bushknives and other tools	0.85	13	0.53	13	0.72	18
Bush meat and other unspecified meat	0.82	14	0.46	18	1.11	5
School fees	0.81	15	0.48	15	0.57	32
Children's clothing (new and used)	0.81	16	0.47	17	0.56	33
Pots, plates, cups, and other kitchen utensils	0.81	17	0.51	14	0.67	22
Fresh fruit (excluding bananas)	0.81	18	0.47	16	0.85	12
Salt, pepper, spices, sauces	0.81	19	0.44	20	0.64	26
Rice	0.79	20	0.39	26	0.51	40
Tinned fish	0.79	21	0.42	23	0.46	46
Betelnut, lime and mustard	0.78	22	0.41	24	0.96	11
Adult's clothing (new and used)	0.78	23	0.45	19	0.66	23
Peanuts	0.78	24	0.39	27	0.75	16
Matches	0.77	25	0.40	25	0.71	20
Sugar	0.77	26	0.32	34	0.53	39
Linen	0.77	27	0.42	22	0.64	27
Soap	0.77	28	0.34	30	0.70	21
Kerosene	0.76	29	0.36	29	0.54	38
School stationary, text books, and uniforms	0.76	30	0.43	21	0.43	51
Butter, margarine, cooking oil and dripping	0.76	31	0.33	33	0.55	36
Flour	0.75	32	0.29	38	0.46	45
P.M.V. fares	0.75	33	0.29	39	0.57	31
Biscuits	0.74	34	0.29	36	0.43	50
Batteries	0.74	35	0.33	32	0.72	19
Cigarettes	0.73	36	0.27	41	0.38	60
Medicines (modern and traditional)	0.73	37	0.38	28	0.56	34
Fish (fresh, frozen, dried, incl. shellfish)	0.73	38	0.29	35	0.43	52
Jewelry, watches, clocks, umbrellas, bags	0.72	39	0.34	31	0.66	24
Shoes	0.72	40	0.28	40	0.47	44
Entrance fees for films and videos	0.71	41	0.24	48	0.30	76
Tinned meat	0.71	42	0.25	46	0.48	43

Irish potato	0.71	43	0.24	51	0.31	73
Tea, coffee and milo	0.71	44	0.26	44	0.44	49
Other household equipment and services	0.71	45	0.15	63	0.45	48
Lamb and mutton	0.70	46	0.24	47	0.39	56
Wedding expenses and brideprice	0.69	47	0.29	37	0.76	15
Laundry powder	0.68	48	0.24	52	0.40	55
Chicken	0.68	49	0.20	56	0.50	41
Snack food (Twisties, chewing gum, etc.)	0.67	50	0.24	49	0.34	67
Compensation payments	0.67	51	0.25	45	0.78	14
Burial and death feast expenses	0.67	52	0.23	53	0.55	37
Airfares, ship fares, car hire	0.67	53	0.27	43	0.60	28
Meals consumed away from home	0.67	54	0.27	42	0.50	42
Soft drink	0.67	55	0.20	57	0.37	62
Medical fees	0.66	56	0.22	55	0.34	66
Other diary and cereal products and eggs	0.65	57	0.24	50	0.60	29
Pork	0.64	58	0.17	58	0.55	35
Land rent and land taxes for the dwelling	0.64	59	0.17	60	0.24	87
Milk (liquid, powdered, canned)	0.64	60	0.17	59	0.41	53
Furnishings	0.60	61	0.16	61	0.38	59
Gambling (except lottery tickets)	0.59	62	0.23	54	0.66	25
Stamps and postage fees	0.57	63	0.10	70	0.31	72
Other personal care products n.e.s.	0.57	64	0.12	67	0.34	68
Depreciation of non-dwelling durables	0.57	65	0.15	62	0.41	54
Entertainment equipment (toys, books, etc.)	0.57	66	0.12	66	0.38	58
House repairs and maintenance	0.57	67	0.09	72	0.29	80
Petrol	0.56	68	0.08	75	0.37	63
Bread	0.56	69	0.14	64	0.31	71
Newspapers and magazines	0.56	70	0.11	68	0.35	65
Housing rent (actual and imputed)	0.54	71	0.14	65	0.30	75
Alcoholic drinks (except beer)	0.53	72	0.08	77	0.45	47
Domestic services	0.52	73	0.07	79	0.29	78
Toilet paper	0.52	74	0.09	73	0.30	77
Other home maintenance products n.e.s.	0.52	75	0.09	71	0.37	61
Kitchen electrical equipment	0.51	76	0.08	76	0.25	84
Lottery tickets	0.50	77	0.08	74	0.26	82
Diesel	0.50	78	0.04	84	0.29	79
Vehicle registration and insurance charges	0.50	79	0.05	83	0.38	57
Electricity and gas charges	0.50	80	0.06	80	0.26	83
Charges for sewerage, garbage, and water	0.50	81	0.10	69	0.24	86
Beer	0.49	82	0.07	78	0.33	69
Entrance fees to sports matches	0.47	83	0.05	81	0.35	64
Telephone charges	0.47	84	0.05	82	0.30	74
Life, health and personal effects insurance	0.46	85	0.03	85	0.32	70
Vehicle repairs and maintenance	0.43	86	0.03	86	0.28	81
Holiday accommodation and tours	0.34	87	0.02	87	0.24	85

Notes:

The item ranked “1” has consumption most heavily biased towards poor (or remote) households, the item ranked “87” has consumption most heavily concentrated on rich (or accessible) households.

^a Not elsewhere specified.