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ESTIMATES OF RURAL VILLAGE CONSUMPTION OF
IMPORTED FOODSTUFFS

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In two recent articles (Harris, 1978; 1979), I commented that

... it does not appear that many rural communities, apart from those close to urban areas, consume much in the way of imported foodstuffs, even when they have adequate cash earnings and access to stores (Harris, 1979.26).

Subsequent to the writing of these articles, a good deal of evidence has appeared which indicates that rural village people¹ are in fact consuming substantial quantities of imported food, particularly rice. This article aims to summarize this evidence and to provide some estimates of the magnitude of this consumption.

1. Background

It is appropriate to commence by noting that high levels of consumption are a recent phenomena which have occurred since the mid-1970's. Village studies carried out in the late 1960's and early 1970's (e.g. Hatanaka, 1972.100-01; Waddell, 1972.121-28; Lambert, 1976.40) were consistent in reporting the consumption of very small amounts of imported

foodstuffs. There were exceptions (e.g. Mitchell, 1976), although this particular village had access to a very large cash inflow, and the villagers easily switched back to traditional staples when their incomes fell.

On the other hand, virtually since colonization, the urban areas and plantations of PNG depended heavily on imported foodstuffs. This dependence resulted from the lack of regular supplies of traditional staples from villages, their perishability and their high price relative to imported staples.

2. Export Crop Prices and Expenditure Patterns

The purchase of high levels of imported foods by rural villagers is closely related to increases in earnings from cash crops during the 1970's. In money terms and ignoring fluctuations, the export price of coffee and copra trebled during the 1970's and that of cocoa increased fourfold. Over the same period, consumer prices increased twofold.

These figures are fairly crude approximations in a number of respects. Export prices are, of course, not equivalent to the prices received by growers.² In addition, consumer price changes are monitored in urban areas and not villages. Nonetheless, the broad conclusion of a distinct improvement in smallholders' terms of trade remains valid.

Associated with greater earnings has been an increased willingness by villagers to use cash to purchase foodstuffs and other basic consumption goods. Until the early 1970's, the general view of highlanders, popularized by Finney (1969) and others, was that of "conspicuous consumers" spending

on items such as vehicles which accorded prestige to their owners. The purchase of such items has certainly increased with the increase in cash crop prices but there has also been impressive increases on other items. Townsend (1977a; 1977b) provides estimates of the use of the increased disposable income of coffee smallholders (estimated at K28m.) as a result of the coffee boom of 1976. These are presented in Table 1.

Table 1

Use of Increased Disposable Income by
Coffee Smallholders: Simbu, EHP, WHP, 1976
(Kina, millions)

Motor vehicles ¹	6
Savings	3
Beer	8
Council Tax, commercial business	2
Other consumption ²	9
Increase in disposable income	28

Source: Townsend (1977b)

- Notes: 1 Includes purchase of new private motor vehicles, and running expenses of private motor vehicles.
- 2 Townsend mentions air travel, school fees, food, cigarettes, clothing and tasks under this heading.

Townsend's interpretation of these data is as follows;

From observation of producers' behaviour, it seems that a period of sustained advantage in terms of trade is required to encourage and allow the diversion of earnings into reinvestment and new bisnis. A sudden and temporary "pay-off" to

producers will be rapidly spent on regaining a previous level of consumption - thus it is no surprise that most of the gains from the 1974-5 cocoa boom and the 1976 coffee boom went rapidly to the suppliers of imported food, clothes and beer. (Townsend, 1977a.167).

A study of meat consumption in EHP, in 1975 and 1976, carried out by Anderson and Trainor (1978), allows further investigation of the impact of high coffee prices. There was a 93 per cent increase in purchases of beef in Goroka between 1975 and 1976, made up of a 20 per cent increase in that sold to urban citizens, and a more than 300 per cent increase in sales to rural citizens.³ Anderson and Trainor estimated that approximately 17 per cent of the increase in coffee incomes was spent on meat. This compares with Townsend's estimate (for three provinces) of 32 per cent for a range of consumer goods.

Several other pieces of evidence allow the extension of horizons beyond the 1976 coffee boom, and we now turn to examine these.

3. Rice Consumption

Estimates of rice consumption in rural areas have been made by Nick Robinson of DPI and are summarized in the following table. They suggest a rural village consumption of about 20 kg per head in 1978.

Table 2

Consumption of Rice in Selected Provinces, 1978
(kg/head)

National Capital	60.5 ¹
Central	27.1 ²
Gulf and Western ³	18.5
Milne Bay, Northern, East Sepik ³	16.0-19.3

Source: N. Robinson, pers. comm., October 1979.

- Notes: 1 This appears to be derived from the Bureau of Statistics, Household Expenditure Survey 1975/6, Preliminary Bulletin, No. 1, Port Moresby. It is important to note some assumptions on which this estimate relies, i.e. average purchases rather than average consumption expenditure, and on a per capita ^{basis} rather than allowing for adult/child differences. Calculations of consumption under somewhat different assumptions suggest that 78 kg of rice per adult equivalent was purchased by urban households in 1975/76.⁴
- 2 When allowance is made for centres such as Bereina and Rigo, and for consumption on plantations, rural village consumption of rice is about 20 kg per head per annum, which is consistent with other provincial estimates.
- 3 Excluding urban areas.

Data for the Household Expenditure Survey of 1975/76 allows calculation of purchases of rice per head (including an allowance for visitors) for six main urban areas.

Table 3

Rice Purchases Per Capita by Urban Households, 1975/76
(kg/head)

Port Moresby	55
Lae	60
Rabaul	73
Madang	73
Goroka	55
Kieta, Arawa, Panguna	57
Mean	62

Source: Calculated from Bureau of Statistics, Household Expenditure Survey 1975/76, Bulletins 1-7.

This suggests an average urban consumption of rice of about 60 kg/head. If this figure remained roughly constant between 1975/76 and the present, then we may suggest an average urban consumption of about three times the average rural village consumption. Recent information regarding food shortages in Mt. Hagen and other highland centres (Post Courier, July 17, 1980) put the "desirable" level of rice supplies to Mt. Hagen at 500 tonnes per week. By making a number of conservative assumptions,⁵ this indicates a level of consumption of about 32 kg per capita per annum for the rural village population in the Western Highlands, Enga and Southern Highlands Provinces. Given the much greater importance of coffee in the WHP, rice consumption is likely to be much higher there than in the other two provinces.

Carrad, et.al. (1979) estimated that the consumption split between urban and non-urban centres in 1975/76 was close to 50/50 and that the 1979 figure was possibly higher. If we assume that the rural village population consumed 20 kg per head per annum in 1979, then they would consume some 50,000 tonnes in aggregate compared with 36,000 tonnes by urban areas/non-village rural. This would mean a ratio of almost 60/40 in favour of rural village consumption.⁶ A consumption of 86,000 tonnes per annum would exceed the rice import quota in 1978/79 by about 10,000 tonnes. This has several important policy implications, which are also suggested by the shortages of rice experienced in a number of centres since the quota was introduced.

4. The Rice Import Quota, 1979

Rice imports rose rapidly during the latter part of the 1970's from 55,000 tonnes in 1975/76 to 82,000 tonnes in 1978/79; this occurred largely as a result of high export crop incomes. The government responded by setting an import quota of 75,500 tonnes of rice from 1979/80, with the aim of stabilizing imports at around 65,000 tonnes after 1979/80. The quota was applied differentially and involved no reduction in supplies to Port Moresby, a cut of around 20 per cent to Lae, Rabaul and other island centres, and cuts of 36 per cent in the Highlands where the rates of increase of rice consumption had been greatest. Regional quota differences were intended to reflect different potential for growing foods to replace rice. In brief the restricted availability of rice caused shortages of rice in urban areas other than Port Moresby and areas supplied from Port Moresby, and a lift in the quota from 65,000 to 76,000 tonnes.

The experience of the quota pointed out a reluctance on the part of consumers to replace rice with locally-produced vegetables, although it is not clear whether this reflected more a lack of ability or of desire to change. It seems clear that urban consumers at least prefer rice for such non-price considerations as storeability, ease of purchase and taste.⁷ In addition, in the Port Moresby region in particular, rice is cheap relative to traditional staples. One important failing of the quota policy was an apparent absence of any effort to increase local food supplies to compensate for the reduced supplies of rice.

5. Conclusions

Firstly, to comment on Townsend's hypothesis, mentioned above. The rise in consumption expenditure to new levels, in the latter half of the 1970's, does not appear to be temporary. It seems likely to last at least as long as export crop prices remain high.⁸

Secondly, however compelling the reasons for reducing dependence on imported rice (Harris, 1980; Carrad, et.al., 1979), it appears that the immediate prospects of significantly reducing the demand for rice are slim. It remains to be seen whether the expected reduction in export crop prices in the early 1980's (DPI 1979), will result in a move away from rice back to traditional staples amongst export crop producers. The ability of export crop producers to switch back to subsistence food production underlay much of the concern expressed about subsistence agriculture in the National Development Strategy (Central Planning Office, 1976).

Footnotes

- 1 In this paper, this term is used to distinguish village people from rural non-villagers (e.g. plantation workers, boarding school pupils).
- 2 As well as margins for middlemen and transportation costs, there are deductions for the price stabilization funds and export taxation. A coffee price of K2290 per tonne c.i.f. means that the roadside seller of parchment received K1.07/kg.
- 3 Purchases of pork fell absolutely because of increases in its price whilst that of beef remained stable. Poultry consumption fell because of restrictions on imports.
- 4 An alternative estimate of urban consumption may be derived from the Household Expenditure Survey of 1975/76 using more realistic assumptions, i.e. that children eat less than adults and that an allowance should be made for visitors to the household. The results are presented in the following table.

Consumption of Rice Per Adult Equivalent
by Urban Area, 1975/76
(kg/head pa)

Port Moresby	71.2
Lae	77.2
Rabaul	90.2
Madang	97.0
Goroka	72.0
Kieta, Arawa, Panguna	61.9
Mean	78.3

Source: Derived from Bureau of Statistics, Household Expenditure Survey 1975/76, Bulletins 1-7, using the following assumptions:

- 1 adult (15 years and over) = 1; child = 0.5;
 - 2 based on average purchases of rice;
 - 3 allowance for visitors to the household averaged 0.7 adult equivalents for the six urban areas.
- 5 Mt. Hagen is assumed to supply all the rice consumed in WHP, Enga and SHP. Population estimates are as follows: rural village populations 65,000; rural non-village and urban populations 70,000. Rural non-village and urban populations are assumed to meet one third of their calorific requirements from rice. This implies a consumption of 0.6 kg per head per week or 32 kg per head per annum.

- 6 Total population is assumed to be 3.1 million, of which urban and non-village rural populations make up 600,000, rural villagers 2.5 million.
- 7 For evidence on this in Port Moresby, see Flores and Harris (1980).
- 8 This article makes no comment on the extent to which sustained high export crop prices have resulted in investment expenditure.

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