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# **What do we know of consumers' preferences and food choices in the islands of the South Pacific**

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## ***Introduction***

This paper presents a preliminary examination of the existing knowledge on consumers' preferences and food choice among the South Pacific islands. The objective is to provide an overview of the types of research that have been conducted into food choice, the main findings of this research and to suggest areas for future research.

The paper commences with an overview of the region and then outlines the reasons why the determinants of consumers' preferences and choices are of increasing relevance to policy development in these island states. There are various sources of information on consumers' preferences and choice behaviour in the South Pacific islands including historical studies, anthropological research, small-scale consumption and expenditure surveys, and nutrition surveys. The nature of these studies is outlined together with a summary of their findings.

## ***An overview of the region***

The region comprising the South Pacific Islands includes the island countries of Micronesia and Papua New Guinea to the north west, French Polynesia in the east and New Zealand at its southern tip. The islands are categorized into 3 broad cultural groups: Micronesia which includes among others the Federated States of Micronesia, Guam and Kiribati; Melanesia which encompasses New Caledonia, Papua New Guinea, the Solomon Islands, Vanuatu and Fiji<sup>2</sup>; and Polynesia whose larger island countries are Samoa, French Polynesia and Tonga. The three regions have quite distinct cultures and histories, ranging from Melanesia which is extremely culturally diverse and with relatively recent exposure to the West, to Micronesia which has had longer exposure to international influences and cultural ties with Southeast Asia. Polynesia is the most ethnically homogeneous of the regions (Mellor 1998). Despite these differences, there are many cultural traditions, which are common across the regions (Kahn and Sexton 1988).

Table 1 outlines key demographic features of a selection of the larger islands and New Zealand is included as a base for comparison. Evident from the table is that all have relatively young populations, particularly Papua New Guinea, Samoa and Vanuatu. In these islands over 40 per cent of the population have not reached their reproduction

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<sup>2</sup> Although it is generally considered to be closer to Polynesia in culture (SPC).

age. There is a strong and continuing trend to urbanisation across all islands. Migration towards the urban areas is particularly strong in Papua New Guinea, Vanuatu and the Solomon Islands, all of which have relatively low urban populations at present.

The figures on literacy and access to media indicate the population's exposure to consumer advertising and the potential for these media to influence consumption habits. Fiji and New Caledonia have the highest media access whereas Papua New Guinea and the Solomon Islands have the lowest exposure, although this is likely to be understated since a single village may have one television or radio that is listened by all villagers.

Table 1: Area and population characteristics of selected Pacific Island nations.

| Year             | Land   | Population Characteristics |         |                  |          |        |              |                     |      |
|------------------|--------|----------------------------|---------|------------------|----------|--------|--------------|---------------------|------|
|                  | '000   | Total                      | Age 15+ | Urban population |          |        | Literacy 15+ | Media per household |      |
|                  | sq kms | million                    | (%)     | % total          | % change | Growth | (%)          | radio               | TV   |
|                  |        | 1996                       | 1996    | 1996             | 1985-96  | 1996   | 1990-97      | 1990                | 1995 |
| New Zealand      | 268.0  | 3.64                       | 65.17   | 86.10            | 39.7     | 1.4    | ..           | 2.8                 | 1.5  |
| Fiji             | 18.3   | 0.80                       | 62.31   | 40.94            | 22.5     | 1.9    | 92.0         | 3.0                 | 0.5  |
| French Polynesia | 3.7    | 0.22                       | 62.27   | 56.50            | 27.1     | 2.0    | ..           | 2.8                 | 0.9  |
| Kiribati         | 0.7    | 0.08                       | 58.99   | 36.02            | 25.4     | 2.9    | 90.0         | 1.1                 | 0.1  |
| New Caledonia    | 18.7   | 0.20                       | 63.47   | 62.42            | 39.7     | 3.2    | ..           | 2.8                 | 2.1  |
| Papua New Guinea | 452.9  | 4.40                       | 57.65   | 16.28            | 14.3     | 4.0    | 72.0         | 0.4                 | 0.0  |
| Samoa            | 2.8    | 0.17                       | 56.70   | 21.10            | 48.7     | 1.5    | 70.0         | 2.3                 | 0.2  |
| Solomon Islands  | 28.0   | 0.39                       | 52.86   | 17.54            | 9.2      | 6.0    | ..           | 0.6                 | 0.1  |
| Tonga            | 0.7    | 0.10                       | 61.39   | 42.00            | 100.9    | 2.8    | 95.9         | 2.8                 | 0.2  |
| Vanuatu          | 12.2   | 0.17                       | 55.42   | 19.12            | 48.0     | 3.7    | 80.0         | 1.5                 | 0.1  |

<sup>a</sup>Based on an assumption of five persons per household, New Zealand based on 3 persons.

The trend towards urbanisation, together with high expected growth rates and the strong emphasis by governments on developing and expanding export crops as opposed to subsistence, has sparked renewed concern for food security across the Pacific Islands. In particular, the need to ensure that the population has access to an adequate and stable food supply.

Added to this is the need for the food to be sufficiently nutritious to enable the population to maintain a healthy and active life style (Secretariat of the Pacific Community 1998). The latter has come to the fore since the International Conference on Nutrition (ICN) in 1992 which highlighted the need to attend to intra-household allocation of food and access to micronutrients as well as total calories available to a population.

## Food security and nutrition

Concerns with food security are perennial in the Pacific Islands and arise because of the perceived vulnerability of the island economies to uncertainty in world commodity and resource markets. All island nations rely heavily on exports of agricultural commodities and resources for their income, and for many the majority of these exports comprise only one or two commodities (see Table 2). Further, with the possible exception of Papua New Guinea, all are small economies that lie outside major trading routes and have little prospect of influencing their export or import markets. As such, price falls in key exports can have a significant impact on their trade position. Trade deficits have also been a major problem for Pacific island nations (Fisk 1995) and food imports remain a significant component of total imports, although the figures in Table 2 suggest there has been little evidence of significant growth over the past decade.

Table 2: Key growth and trade characteristics

|                  | CPI               | Exports (\$US) |               |           | Imports (\$US) |                             |                      |
|------------------|-------------------|----------------|---------------|-----------|----------------|-----------------------------|----------------------|
|                  |                   | Total (fob)    | Main export   | Top 2 (%) | Total (cif)    | Proportion of food to total |                      |
|                  | 1996              | 1996           | 1996          | 1996      | 1996           | 1980                        | 1986-96 <sup>a</sup> |
| Fiji             | 3.1               | 511            | Sugar         | 42.1      | 877            | 14                          | 17.32                |
| Kiribati         | -0.6              | 6              | Copra         | 67.0      | 37             | 32                          | 33.85                |
| Papua New Guinea | 11.6 <sup>b</sup> | 2,602          | Mineral       | 33.9      | 1,521          | 19                          | 17.69                |
| Samoa            | 7.5               | 10             | Coconut cream | 50.0      | 99             | 21                          | 27.13                |
| Solomon Islands  | 11.6              | 162            | Timber        | 69.1      | 152            | <sup>c</sup> 11             | 20.3                 |
| Tonga            | 3.0               | 14             | Squash        | 71.4      | 76             | <sup>c</sup> 24             | 28.05                |
| Vanuatu          | 0.9               | 30             | Copra         | ..        | 81             | 20                          | 21.41                |

<sup>a</sup> Average proportions based on 86-96 for Australia and New Zealand, 86-94 Fiji, 86-93 Kiribati, 85-90 PNG, 1990 Samoa, 85-88 Solomon Islands, 85-94 Tonga, 93 Vanuatu.

<sup>b</sup> In 1997 dropped to 4.0

<sup>c</sup> Tonga and the Solomon Islands are probably under-recorded (Connell 1984)

Source: World Bank, United Nations, and Connell (1984).

During the 1980s governments responded to this vulnerability by promoting import substitution. The failure of this policy avenue together with the realisation of the inevitable withdrawal of preferential access to Australian, New Zealand and European markets has moved the policy platform to one of identifying niche markets where islands may have a comparative advantage. However, Fisk (1995) states that even in niche markets the Island states are at a disadvantage because of their small size. He argues that governments should also explore the scope for reducing imports by increasing the marketing of local foods. The Secretariat of the South Pacific also supports this view, identifying it as a necessary response to expected price increases as a result of the liberalisation of agricultural trade (Pacific Island Nutrition 1996).

The call for expansion of domestic food production and consumption is echoed by nutritionists and social researchers (Thaman 1991, Parkinson 1991) who express an added concern over the implications for nutritional health of increased reliance on imported foods. Recent health statistics and anecdotal evidence indicates widespread problems with obesity throughout the Pacific, Vitamin A deficiencies in Kiribati, the Federated States of Micronesia and Marshall Islands, and anemia among women and children in Fiji as well as an increase in diabetes (WHO 1997, Saito 1995, Darton-Hill et al. 1996).

These 'Western' diseases are perceived to be a consequence of diets that are high in sugars and fats and that reflect increased consumption of low-nutrient processed imported foods (Parkinson 1990, Thaman 1990). On the other hand, Sexton's (1991) results from a household expenditure survey of the Daulo people in highland Papua New Guinea, found that 41.4 per cent of purchases were for protein foods and were a necessary supplement for the low-protein subsistence diet. In general though, the evidence does suggest that in both rural and urban areas food purchases are often of high-energy foods rather than nutrient-rich (Opio 1993, Parkinson 1990). However, Saito (1995) cautions that the issue is nutrient intake in general and not a case of "Western" being bad and traditional food good.

While there is general agreement that food security and nutrition should take equal priority with the development of commercial crops (Secretariat of the Pacific Community 1998), it still remains to identify the drivers of changing consumption patterns in order to formulate appropriate policy. In Fiji the problem appears to have been interpreted as one of declining production and consumption of locally produced nutritious crops requiring a production-based response (Fleming et al 1998). Such a narrow interpretation is unlikely to resolve the problem. There are many examples of the pitfalls of investing heavily in production-related research while largely ignoring the consumer preferences. For example, Pollock (1993) points to the IRRI rice programme where the varieties of rice produced were culturally unacceptable as food.

Attempts to influence consumption habits at the household level have also met with mixed success. Denman and Dewey (1989) evaluated a coupon system designed to encourage low-income groups in the Mariana Islands to increase purchase of local foods. Their results indicated that the objective of improving nutrition levels and promoting local agricultural production was unsuccessful. In fact, participants in the coupon scheme substantially reduced their home production of food and their consumption of local fruits and vegetables. The primary beneficiaries of the scheme were local bakeries (that rely on imports of white flour). Home garden projects have also met with varying success. Barker (1996) reports that while many household in Micronesia have home gardens the occupants do not eat their produce but prefer to purchase their food from local supermarkets.

These studies serve to highlight the need for closer scrutiny of the underlying determinants of food choice prior to investing in research and development or intervening to change household food habits.

### ***Research and evidence on consumers' food choices***

The nature of food preferences and choice has been examined from various viewpoints. These can be divided roughly into economic and marketing studies by

agricultural and development economists, nutrition-based studies and projects, and ethnographic research and surveys by social researchers and anthropologists.

### **Economic and marketing research**

Economic and marketing research that has examined marketing problems and the links between food production and marketing is almost non-existent. Despite an extensive search for studies of this nature in Fiji, Fleming et al (1998) record only two reports that make reference to marketing issues for agricultural products with domestic commercial potential, Iqbal (1989) and Bett (1989), both of which provide only superficial discussion of the issues. In one of the few studies directed at consumers' behaviour, Chandra (1985) examined choice of shopping location in Suva, Fiji. He found that for low-income shoppers availability of transport and proximity of a shopping outlet were significant determinants of shopping location, as was the availability of credit at the outlet. Barker (1995) also found availability of credit to be a factor in shopping location in Port Vila, Vanuatu. An implication of this is that household purchases are confined to the prices, scope and quality of food available at their most convenient outlet.

Most economic-based research relevant to consumers' choice behaviour is limited to household production and consumption studies in rural or semi-rural areas, and most are increasingly dated (for example, Cameron 1991, Fleming 1989, Kingston et al 1986). While these studies provide some indication as to the direction of preferences, they often suffer from problems of inadequate data and inconclusive results. Kingston et al's study of three Tongan villages did indicate that with higher incomes some villages had a propensity to consume more protein and to move from canned to fresh forms of meat. Cameron (1991) in a comparison of consumption patterns in rural and urban areas in the Solomon Islands in 1982 also found that as income increased there was a greater tendency to purchase fresh protein and dairy products, and to reduce purchases of canned foods. Root crops, on the other hand, maintained their share of consumption. Also evident were distinct differences between rural and urban consumers. Rural consumers consumed more local crops and fish and supplemented these with rice and biscuits. Urban consumers consumed a broader range of fruits and vegetables and consumed higher levels of protein and imported staples, this time supplemented by root crops. There was also some indication from his comparison with 1976 consumption data that consumers were sensitive to the relative price of products.

### **Nutrition surveys and projects**

Studies undertaken by nutritionists range from large-scale surveys such as the National Nutrition Survey in Fiji (comprising over 4,500 respondents) to small-scale intensive studies of nutritional health and consumption patterns (for example the long-running Naduri surveys in Fiji). The emphasis in these studies is on documenting consumption behaviour and identifying associations between consumption patterns and nutritional health. Underlying consumer preferences and choice behaviour are extrapolated from the data rather than systematically studied. Another source for identifying consumer preferences are project reports and evaluations. Evaluations are particularly useful because their success, or otherwise, often points to influences on consumption habits.

Perhaps the most comprehensive examination of changes in food consumption patterns is Parkinson's (1990) review of 34 nutrition-based studies conducted in Fiji

between 1850 and 1987. All of the studies indicated a steady move from traditional foods to introduced crops (mostly cash crops) and Western imported foods and increased variety in food intake. There was also an increase in consumption of refined cereals, sugar and less nutritious foods, which was seen to be at the expense of nutrient-dense traditional foods. Opio (1993) surveyed farm household consumption in Fiji and Western Samoa over a 13-month period in 1986-1987. His findings also indicated a move away from locally grown foods. In Fiji purchases of rice, bread and tinned fish were 64 per cent of household purchases. In Western Samoa tinned meat and local foods were the prominent purchases. In both islands few vegetables were consumed, and although vegetables and fruits that are rich in various nutrients were often available from home gardens and markets, many households did not consume these because they were considered to be children's food. Barker (1995) reports similar behaviour in the Federated States of Micronesia, Tuvalu and Kiribati where vegetables may be included in feasts but not in daily consumption. In Kiribati there is no tradition of consuming green leafy vegetables and vegetables were generally considered to be pigs' food. While this perception has changed, they still appear to have low status. Barker also noted a clear preference for the convenience of supermarket shopping in the Federated States of Micronesia.

### **Rural sociology and anthropological research**

Perhaps the richest sources of information on consumers' preferences in the South Pacific Islands are the indepth studies from rural sociologists and anthropologists. These point to the importance of historical context and the cultural values surrounding food to understanding current consumption habits (Pollock 1995, 1992, Kahn and Sexton 1988).

Prior to early colonial influences the typical Pacific diet comprised some variation of a staple of root crop or breadfruit accompanied by fish, shellfish (in coastal areas), and pigment, coconut and leaf vegetables and fruits. Early trading introduced islanders to tea, sugar, flour, and preserved meats, which were traded for fresh supplies. Sexton (1991) argues that foreign foods not only provided a welcome variation on an essentially monotonous diet but also were favoured because of their association with the wealth and power of Westerners.

With colonisation came profound changes in lifestyle and diets. The introduction of plantations moved subsistence producers into the cash economy, reducing their time for subsistence activities and increasing their reliance on purchased foods. In Fiji Thaman (1991) attributes shifts in diets to imported foods to an overemphasis by colonial and present governments on cash cropping and plantations at the expense of traditional culture. This emphasis resulted in subsistence production being marginalised by cash crops and in subsistence plots being relocated to more distant or inferior land. The move to imported foods has also been assisted greatly by various forms of subsidies on imports (Thaman 1991). Nowhere are the effects of subsidies on traditional dietary patterns more evident than in Micronesia, Kiribati and American Samoa. Bindon (1988) reports that following World War II American Samoans became caught in a cycle of high dependence on imported foods. Generous wages during and after the war attracted labour from production and increased reliance on imported food. By the 1960s and 70s American Samoa was importing traditional foods; although this was turned around in the 1980s. In Micronesia food assistance programs run by the USA encouraged consumption of imports through the distribution

of commodities to eligible families and through school programs. By 1981 there had been a significant decline in production of local foods (Denman and Dewey 1989).

Today there is renewed emphasis across Pacific islands on traditional crops (SPC 1997). However, the legacies of colonial influences remain and the continued emphasis on cash crops has seen an increasing reliance on food purchases as opposed to subsistence production. Wage earners and cash crop farmers have limited time for other activities, including food production and preparation. Further, the foods that are easiest to prepare are also generally cheaper than their local alternatives and, for the most part, readily available (Kahn and Sexton 1988).

Nevertheless, while the sources of food have changed, the underlying cultural values and beliefs that shape food preferences appear to remain (Pollock 1995, Kahn and Sexton 1988). Diets are still dominated by starch-based food with an accompaniment, be it taro with fresh fish and coconut or rice and tinned fish. The emphasis on starch-based food as the substantial food is common throughout the region (Lewis 1988, Bindon 1988, Flinn 1988, Pollock 1985). Pollock (1985) reports that in Fiji only starch-based foods can provide the feeling of being full. Other foods are considered less substantive (even if they are higher in calories) and, therefore, are consumed only as accompaniments (*i coi*) to starch foods or as refreshments (*vakasoso vudi and gunu ti*). The former include coconut, meat, fish and leafy vegetables while refreshments cover cooked foods using coconut, sweet buns and biscuits or raw foods such as slivers of fresh fruit or coconut (*kokoda*).

Food also plays a central role in developing and defining social relationships. The manner in which it is prepared (and by whom) and is eaten defines the status of individuals and delineates between gender roles. In Samoa, for example, men prepare the earth ovens, cultivate the taro and provide deep-sea fish. Each activity is associated with the substantial tasks of food provision and involves skill and risk. The women provide the accompanying foods of reef fish and shellfish, leafy greens and fruits, requiring less skill and risk (Bindon 1988). Bindon attributes part of the fall in consumption of traditional food to the movement of men into wage labour which left no time to prepare foods.

Finally, there is a clear urban-rural distinction in shaping consumer preferences. The scarcity of imported foods available to rural consumers coupled with their generally lower income levels enhances the prestige associated with imported foods. Conversely, among urban communities the traditional foods take on greater significance because there is limited scope to cultivate root crops such as taro in urban areas, and their quality and availability in markets can be erratic (Pollock 1993).

### **Key determinants of food choice?**

Despite the diversity of perspectives implied by this range of disciplines, there is common agreement on the basic influences that have shaped, and continue to shape, consumers' preferences and choice behaviour in the region. These are summarised in Table 3 which provides an overview of principal consumption occasions against the key food choice drivers. For each consumption occasion the factors that are expected to be of most influence in choice are indicated. The distinction between 'daily meals' and 'Sunday lunch' is to reflect the relative cultural importance of the latter and the expectation that factors such as price and convenience, *ceritus paribus*, would be of less importance than for a 'daily meal'. This categorisation does not preclude other



influences; rather it is an attempt to provide a summary from the diverse literature cited earlier and a base from which the interaction of various influences on choice might be explored.

### ***What is there still to be explored?***

Most evident is the need to update research on the determinants of choice and for this research to be cast in a formal framework that encompasses economic, social and cultural influences on food choice. It is surprising that such research has been lacking in the Pacific island region given early calls “to find out the significance attributed to food, food groupings, presence of taboos, etc” (Clements 1959:176). Pollock (1992) asks for research to determine the relationship between traditional foods and Western substitutes. The answers to such questions as “To what extent have the new starches been incorporated with the traditional starches: that is, is rice a substitute for taro? Are these alternatives equally acceptable, or is the use of imported food just pragmatic—because it is quicker and easier to prepare?” (Pollock 1992:220) have significant implications for the strategies employed to develop markets for local foods and for educational programmes to improve nutritional health. Such answers will indicate the relative influence of price, convenience, availability and taste preference which can then be used to develop a strategy that integrates production, marketing and consumer education. Alternatively, effort may be better expended in promoting new styles of food preparation that incorporate nutrient-rich food or in product development to improve the nutrient base of existing foods. It just remains for the questions to be asked.

Table 3: Food domains and key food choice drivers

| Food domains | Social / cultural drivers          | Food types  | Key choice drivers |              |          |             |          |                 |       |
|--------------|------------------------------------|---|--------------------|--------------|----------|-------------|----------|-----------------|-------|
|              |                                    |   | Relative prices    | Availability | Storable | Convenience | Cultural | Kinship /status | Taste |
| Daily meals  | Functional Time Filling            | Taro, rice, cassava, pumpkin, flour products, breadfruit, plantain. | √                  | √            | √        | √           |          |                 |       |
|              |                                    | Meat, fish, coconut, vegetables                                     |                    | √            | √        | √           | √        |                 |       |
| Sunday lunch | Social interaction Cultural values | Taro, rice, cassava, pumpkin, flour products, breadfruit, plantain. |                    | √            |          |             | √        | √               |       |
|              |                                    | Meat, fish, coconut, vegetables                                     | √                  | √            |          |             | √        | √               |       |
| Refreshments | Social                             | Cakes, biscuits, tea, cooked coconut sweets                         |                    |              |          | √           |          | √               | √     |
| Snacks       | Individual                         | Sweets, fruits, coconut   |                    |              |          |             | √        |                 | √     |

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