CHANGING URBAN CONSUMER BEHAVIOUR AND THE ROLE OF DIFFERENT RETAIL OUTLETS IN THE FOOD INDUSTRY OF FIJI

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The food industry is undergoing transformation globally. The set of circumstances specific to Fiji provides important insights into the drivers of this change, which have implications for private, government and donor agency stakeholders. A novel study of 1,000 urban households in Fiji found that among those surveyed, modern supermarkets have overtaken traditional markets as the dominant food retail outlet and now have 100 per cent patronage and take in 54 per cent of total household food expenditures. However, the battle for the fresh fruit and vegetable category appears to be in its infancy, with 97 per cent of households still shopping for products in this category at the traditional main market. Although foreign investment is a key driver of the retail food sector transformation in more rapidly growing developing countries, in Fiji, where foreign investment is relatively low, this transformation appears to be predominantly supported by rising urban income and changing consumer preferences. Consequently, policy attention should be directed towards market channels that can take advantage of changing consumer preferences, while still supporting local farmers.

I. INTRODUCTION: RETAIL TRANSFORMATION
IN DEVELOPING COUNTRIES

Consumers globally are changing their food shopping behaviour, and the retail sector is transforming to meet their needs. In developing countries, this has resulted in an expansion in modern retail outlets along with a continuing trend of consumers purchasing a wider range of food products (Reardon and others, 2009). Some of the key factors behind this change are private sector investment in food chains, greater product choice, urbanization, time-poor consumers and greater disposable income (Godfray and others, 2010; Hazell and Wood, 2008; Pingali, 2007; Reardon, Timmer and Berdegue, 2004)

Evidence of "retail transformation" or a "supermarket revolution", and the subsequent transformation of global agricultural and food distribution and marketing systems, is well documented across the more rapidly growing developing countries (Pinstrup-Andersen, 2002; Reardon and Barrett, 2000; Reardon and others, 2003), with a number of studies targeting Asia (Cadilhon and others, 2006; Minten, Singh and Sutradhar, 2013; Reardon, Timmer and Minten, 2012; Tschirley and others, 2015) and Latin America (Alvarado and Charmel, 2002; Arda, 2006). Indonesia is an exemplar of rapid transformation in food retailing in a rapidly growing economy. In the decade from 1999 to 2009, modern food retailers increased more than ninefold (964 per cent) across the Indonesian archipelago, from 1,176 to 11,342 outlets (Dyck, Woolverton and Rangkuti, 2012).

Whether traditional outlets are capable of retaining their market share for fresh produce as modern retailers continue to grow — securing their continued importance to consumers, as suppliers of essential food, and to local producers, as reliable buyers of the fruits of their labour — is a matter of ongoing debate (Goldman, Ramaswami and Krider, 2002; Neven and others, 2006). The outcome of this retail tug-of-war has potentially profound implications in countries where agricultural production by smallholder farmers constitutes the dominant proportion of national economic activity.

The outcome is also not a foregone conclusion, as research shows considerable variation among different countries. In some development contexts, modern retailers tend to capture the processed food category first, while traditional outlets are able to hold market share for the fresh produce categories (Minten and Reardon, 2008). This has been the case in Hong Kong, China (Goldman, Ramaswami and Krider, 2002; Ho, 2005), Taiwan Province of China (Li and Houston, 2001), Thailand (Gorton, Sauer and Supatpongkul, 2009), Mexico (Anand, 2009) and Brazil (Zinkhan, Fontenelle and Balazs, 1999). However, in other countries, such as Malaysia (Chamhuri and Batt, 2009) and Kenya (Neven and others, 2006), traditional

retail outlets for perishable produce appear to be losing market share to modern outlets. Other contexts have produced conflicting results. In Viet Nam, for example, some studies suggest an ongoing role for traditional retailers (Maruyama and Trung, 2007), while others predict a continuing encroachment of modern retailing into the fresh food category (Mergenthaler, Weinberger and Qaim, 2009).

In virtually all of those countries, the transformation of the food retail landscape has been advanced by foreign direct investment, initially at least (Reardon and others, 2003). However, changing consumer demand and consumer preferences are other key factors behind retail change (Carpenter and Moore, 2006; Godfray and others, 2010). Understanding these preferences and how they lead to shopping behaviour, and then marshalling this knowledge to predict future trends is complex and difficult (Bawa and Ghosh, 1999; Cirera and Masset, 2010; Godfray and others, 2010). While food spending is typically correlated with income, and income is an important driver for change, it is not the only one, as shown by a recent comparison of food purchasing and the retail transformation in India and China. In both countries, culture played a significant role in how the retail food industry evolved. In India, for example, religious dietary restrictions prevented increases in the consumption of high-energy foods based on animal protein, which was a prominent feature in China, despite similar income levels in the two countries (Godfray and others, 2010).

Information concerning the transformation of food systems in small island developing States is strikingly limited, but much needed. The economies of these countries tend to have low levels of manufacturing, volatile agricultural production and share a cluster of identifiable challenges to productivity improvements in this sector (Douglas, 2006; McGillivray, Naudé and Santos-Paulino, 2008; Pelling and Uitto, 2001). In Fiji, for example, agriculture, livestock and subsistence farming generate income for approximately 65 per cent of the total population (Fiji, Department of Agriculture, 2009) and 13.1 per cent of gross domestic product (McGregor and others, 2010). Development of the entire food industry is a priority for the private sector, government and donor agency stakeholders, including Australia, which has a long-standing donor relationship with Fiji, and is strategically concerned with its economic development.

In 2010, the Government of Australia funded the Pacific Agribusiness Research for Development Initiative, a multidisciplinary research programme aimed at improving agricultural livelihoods in a number of Pacific Island countries, namely Fiji, Kiribati, Samoa, Solomon Islands, Tonga and Vanuatu. The collaborative project involved several Australian universities, Pacific government agencies, non-governmental organizations and the private sector on the respective islands where research was carried out. The strategy was to identify and prioritize potential development

inventions based on value chain and market analysis. A value chain analysis is a flexible framework capable of investigating food industry networks (Francis, Simons and Bourlakis, 2008; Simons and others, 2003; Taylor, 2005), with implications for poverty alleviation and policy development (Altenburg, 2006; Gereffi and Lee, 2012; Trienekens, 2011).

Fiji presents an interesting case study because its food retailing sector has developed in recent decades without the high level of foreign direct investment upon which other developing economies have relied. Nevertheless, Fiji features many of the other known drivers of food retail transformation at the consumer end of the value chain, for example, urbanization, rising urban income and changing consumer preferences. Thus, in Fiji, the usual significant "supply push" factors influencing consumer behaviour were notably absent, which led researchers to focus more strongly on the "demand pull" from consumers.

Understanding consumers and how they may be advancing change is particularly important with regard to small island developing States because the modernization of food retailing can bring a number of socioeconomic and health concerns. Although the impact of supermarket may differ by country and circumstance (Hawkes, 2008), one area of interest for a number of developing small island developing States, including Fiji, is the effect that increased consumption of heavily processed, imported food is having on diets, the prevalence of diet-related diseases and general health (Hughes and Lawrence, 2005; Popkin, 2006; Stamoulis, Pingali and Shetty, 2004; Thow and others, 2011a; 2011b). Increasing dependence on food imports is also raising food security concerns in Fiji, where it is feared that smallholder farmers may be being squeezed out of the value chain by supermarkets demanding higher quality, larger and more regular supply, and different payment methods, as what has already occurred in Africa and Asia (Boselie, Henson and Weatherspoon, 2003; Farina and Reardon, 2000; Hughes and Lawrence, 2005; Reardon and others, 2009). In small island developing States, if the local agricultural industry is at a disadvantage, this becomes a major development and political problem.

Under the auspices of the Pacific Agribusiness Research for Development Initiative, mapping of the entire horticultural industry in Fiji was conducted through surveys of consumers, producers and traders and interviews with the major supermarkets, food processors, hotels and municipal markets across the main island of Viti Levu, where 70 per cent of the population lives and works and the main urban centres of Fiji are located. The study of the entire horticultural industry was designed to better understand the changes occurring at each link in the value chain. While trying to understand this in the broad context of the entire horticultural industry, it has been hypothesized that consumer behaviour could be a leading factor in changes to

food retailing. The consumer survey, which is the focus of the present article, was conducted to better understand shopping patterns in the retail outlet and food category, and changes in consumption over the previous five years.

II. THE CONTEXT OF FIJI

While traditional markets (rural and urban) remain important for purchasing a variety of local foodstuffs in the urban areas of Fiji, over the years, it has become apparent that supermarkets have taken over a significant percentage of the market, with a mix of local, imported, processed and fresh food products. As elsewhere in the world, rural populations are dwindling in the Pacific as urbanization takes place (Jones, 2012). From 2002 to 2008, the rural population in Fiji is estimated to have declined by 2 per cent, while the total population grew by 6 per cent (to 815,408) and the urban population increased by 16 per cent (Narsey, 2011). During this period, the income of the average urban household increased by 51 per cent in nominal terms and 19 per cent in real terms, with about 25 per cent of the average household income being spent on food (Narsey, 2011).

The tourist industry has also affected the overall mix of products produced, imported and sold in Fiji. While these changes have been noted in a few studies (Chandra, 1979; Owen, 1999; Thaman, 1990), very little detailed analysis of the recent consumer behaviour in Fiji is available.

As part of the wider value chain mapping project in Fiji, a household consumer survey was designed to better understand changing urban consumer behaviour and the role of different retail outlets. In the absence of the kind of foreign retail investment seen in other developing countries, the focus of the present study was on how consumer behaviour might be influencing changes in food demand and how those changes could affect the horticultural industry. Furthermore, the study focused on the related policy implications for a range of public and private sector stakeholders. Throughout the evolution of different value chain methodologies, researchers have highlighted the importance of the final consumer in determining a product's or service's real value and hence the demand for it (Sahay, Gupta and Mohan, 2006; Zokaei and Hines, 2007). In a similar way, this study analyses consumer behaviour to better understand the effect it has along the value chain, and across the horticultural industry. The household food survey thus is the necessary first step to carrying out a value chain analysis of the horticultural industry in Fiji. While previous research has either looked at consumers or focused on specific sectors or links in the chain, it appears that this type of detailed analysis of an entire value chain has not been attempted in a small island developing State, such as Fiji.

III. METHODS AND DATA

Methods used by the Fiji Bureau of Statistics for previous surveys produced a representative sample of 1,000 households on opposite sides of the main island of Viti Levu in two of the key urban areas: Nadi, which hosts the international airport, and Suva, the capital city. Pre-existing enumeration area codes were used to distinguish between seven different income classes (high, middle, low, housing, squatter, urban village and misc./mixed). Using sampling procedures developed by the bureau, a representative sample of 50 enumeration area codes were selected across the Suva and Nadi urban areas. A random sample of 20 households was then chosen from each enumeration area code to make up the sample of 1,000 urban households in Fiji.

The survey questions and initial format were based on a similar survey conducted in Indonesia to investigate consumer and shopping behaviour across different food categories and retail outlets (Minot and others, 2015; Toiba, Umberger and Minot, 2015; Umberger and others, 2015). While the research provided a useful template for the study in Fiji, considerable effort was expended with the Fiji Bureau of Statistics and other project partners to tailor the survey to the context of Fiji. For example, previous food-related surveys in Fiji, including a 2008 household income and expenditure survey, were reviewed to help guide the methodology and identify gaps in the research. Thorough pre-testing was then conducted to further hone the questionnaire before it was finalized.

Through the questionnaire, information on household characteristics, assets and expenditure as well as on cooking and shopping attitudes and behaviour were collected. A major component of the survey covered 79 different food categories and captured the consumption of each category during the last month, including what was purchased, homegrown or exchanged. Novel questions that had not been previously asked in Fiji, identified the retail source from which each of the 79 food categories was normally purchased. These retail outlets were separated into the modern outlets of supermarkets, corner shops/butcher/bakery, restaurants, and fast food and service stations, and the more traditional outlets of the main market, fish market and roadside stall/hawker.

In the absence of suitable baseline data, questions were included to estimate how respondents' consumption and shopping patterns had changed in the previous five years. While subjective assessments of trends in purchasing behaviour are not an ideal comparator with current behaviour, they should provide some insight into self-perceived change over the recent past. The Fiji Bureau of Statistics has recently shown some interest in incorporating these types of questions into their household income and expenditure survey, so it is hoped that the current surveys will provide baseline data for future studies.

The survey was conducted in June and July 2012 using a team of 27 trained enumerators. While intercepting consumers in public areas, such as supermarkets and traditional markets, has become popular for its flexibility and lower cost (Hornik and Ellis, 1988), for this survey, face-to-face interviews targeting the person in the household most knowledgeable about food purchases were used. This method allows for a longer survey time and random representation across income levels, thus avoiding the issues associated with self-selection (Winship and Mare, 1992).

When surveys were completed by the enumerators, the quality of each one was checked in the field by team leaders to rectify any issues while access to the respondents was still possible. Completed surveys were then sent back to the Fiji Bureau of Statistics where the data were entered using a CSPro template to limit the number of entry errors before being cleaned and analysed.
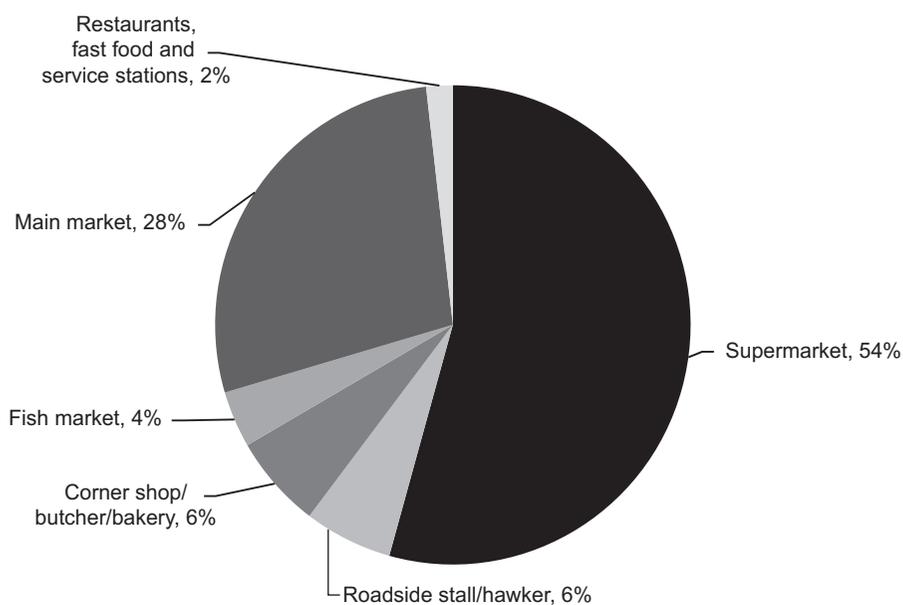
IV. RESULTS

The results are reported in four sections. The first section describes the current shopping patterns of urban households in Fiji by retail outlet. The second section shows how household food purchasing is distributed across different food groups. The third explores respondents' beliefs about changes in consumption and shopping behaviour over the preceding five years and why these changes occurred. The fourth section investigates the share of food spending at different retail outlets by income level.

Current shopping patterns by retail outlet

Figure 1 displays the breakdown of urban household food expenditures in Fiji by retail outlet type. Most striking is how supermarkets have captured more than 50 per cent of the market share. In addition to supermarkets having the largest slice of urban food expenditures, table 1 illustrates that they have also recorded an impressive 100 per cent patronage from all the households surveyed, with 65 per cent of respondents reporting that they patronized a supermarket at least once per week.

While the urban population of Fiji has embraced modern supermarkets, the main traditional markets retain a substantial 28 per cent share of urban household food expenditure. Almost all, 97 per cent of the survey respondents, also reported patronage of traditional main markets. Thus, households' reported use of traditional markets is not far below supermarkets, with 63 per cent reporting that they visited a traditional market at least once a week. This suggests that urban consumers in Fiji make use of both modern and traditional outlets for their food purchases, with traditional markets still largely being preferred for fresh fruit and vegetables.

Figure 1. Share of urban food expenditure in Fiji by type of retail outlet

Restaurants, fast food and service stations, 2%

Main market, 28%

Fish market, 4%

Corner shop/ butcher/bakery, 6%

Roadside stall/hawker, 6%

Supermarket, 54%

Source: Authors.

Table 1. Percentage frequency of food retail outlet use, n = 1,000

	Supermarket	Main market	Roadside stall/ hawker	Corner shop/ butcher/ bakery	Fish market	Restaurants, fast food and service stations
Every day	1	1	1	10	1	0
2-6 times/week	9	9	23	45	2	3
Once a week	55	53	22	18	30	4
2-3 times/month	27	23	15	12	26	7
Once a month	8	8	8	5	21	8
Few times a year	0	3	11	4	10	25
Never	0	3	20	6	10	53

Source: Authors.

Roadside stalls/hawkers present an interesting blend of traditional amenities and modern convenience, and enjoy a 6 per cent share of food expenditure by the urban dwellers in Fiji. Twenty-three per cent of survey respondents reported visiting roadside stalls/hawkers two to six times per week, while 22 per cent went once a week. However, approximately 20 per cent of households surveyed reported not patronizing roadside stalls/hawkers at all. On the other hand, corner shops/butchers/bakeries have a 6 per cent share of food expenditure but the highest rate of frequency of use. About 10 per cent of respondents said they had visited such shops every day, while 45 per cent went two to six times per week.

Perhaps surprisingly for citizens of an island country, dedicated fish markets command only a 4 per cent share of food expenditure among the urban population, with 77 per cent of urban households fairly evenly split between visiting once a week, two to three times per month, or once a month.

The remaining 2 per cent of food expenditure is shared among the following types of modern outlets: restaurants, fast food stations and service stations. However, more than half (53 per cent) of the households surveyed said they did not visit those outlets at all, which suggests they may be serving tourists more than the local population.

One factor in understanding the shopping patterns in Fiji is the distance to retail outlets and mode of transport from the surveyed households. One of the very few studies to cover this research topic in Fiji was undertaken in 1976 by Chandra (1979). Although restricted to intercept surveys at a limited number of retail outlets, the research of Chandra is interesting because he concluded that location and distance from the outlet was not a major factor behind purchasing behaviour. Even four decades ago, 45 per cent of people of Fiji surveyed had access to automobiles, and buses were also commonly used to get into town for food.

Similarly, the present study found that public transport, which consists mainly of buses, was the preferred method of transport to supermarkets (49 per cent), followed by walking (21 per cent) and automobile transport (21 per cent). Main market shoppers also used public transport, with 65 per cent preferring this mode of transport. By contrast, the roadside stalls/hawkers and corner shop/butcher/bakery outlets, which are visited more frequently, were generally accessed on foot. The majority of consumers walked to roadside stalls/hawkers (66 per cent) and corner shop/butcher/bakery outlets (79 per cent), which tended to be, on average, less than a kilometre from the patrons' homes (0.9 km and 0.7 km, respectively). This compares to the longer average distances travelled to supermarkets (1.9 km) and further to the main town market (3.1 km).

Shopping patterns by food category

To simplify the interpretation and gain clearer insights from the results, 79 food products were aggregated into seven core food groups to separate the fresh and processed food products and to categorize them nutritionally:

1 *Fresh fruit:* all fresh fruit and tamarind products

2 *Protein sources:* all fresh chicken, beef, lamb, mutton, duck, pork, seafood, eggs and nuts

3 *Fresh vegetables:* all fresh vegetables

4 *Fats, oils and seasoning:* all fats, oils, sugar, salt, herbs and seasoning

5 *Processed and manufactured food:* all processed food, snacks, meat and bottled drinks

6 *Carbohydrates:* all rice, wheat, flour, bread products, biscuits, noodles and breakfast cereals

7 *Dairy, cheese and yogurt:* all fresh milk and other dairy products (see appendix table A.1 for more details).

Table 2 shows the results of the survey, in which the average urban household in Fiji spends 568 Fiji dollar (F$) (US$273) per month on food. Processed and manufactured food accounts for approximately 28 per cent of this expenditure, followed by fresh vegetables (22 per cent), carbohydrates (18 per cent), protein sources (14 per cent), fresh fruit (11 per cent), fats, oils and seasoning (6 per cent) and dairy, cheese and yogurt (1 per cent). The protein sources category can be further broken down into fresh seafood 6.6 per cent, other fresh meat 4.4 per cent, eggs 2.5 per cent and nuts 0.4 per cent.

Table 2. Average household expenditure by food groups

Food group	Percentage
Processed and manufactured food	27.8
Fresh vegetables	22.3
Carbohydrates	18.4
Protein sources	13.9
Fresh fruit	10.6
Fats, oils and seasoning	5.8
Dairy, cheese and yogurt	1.2

Source: Authors.

Shopping patterns in the urban locations of Fiji also vary significantly, depending on the food category and type of retailer. Figure 2 highlights how supermarkets lead the processed food categories, while the main traditional markets dominate the fresh produce categories. As expected, the fish market collects a significant share of the protein sources category expenditure (27 per cent), with fresh fish dominating those figures. The specialty stores play a role in the carbohydrates, meat and processed food categories. When the meat category figures are explored in more detail, it becomes clear that butcher shops hold a significant market share in specific products, for example, non-processed pork (57 per cent), beef, lamb and mutton (47 per cent), other meat products (35 per cent), processed meat (20 per cent) and fresh poultry (17 per cent). Similarly, bakeries command 50 per cent of food expenditure for bread and bread products, although their overall share of the carbohydrates category is only 13 per cent.

Figure 2. Share of spending on each food category by type of retailer
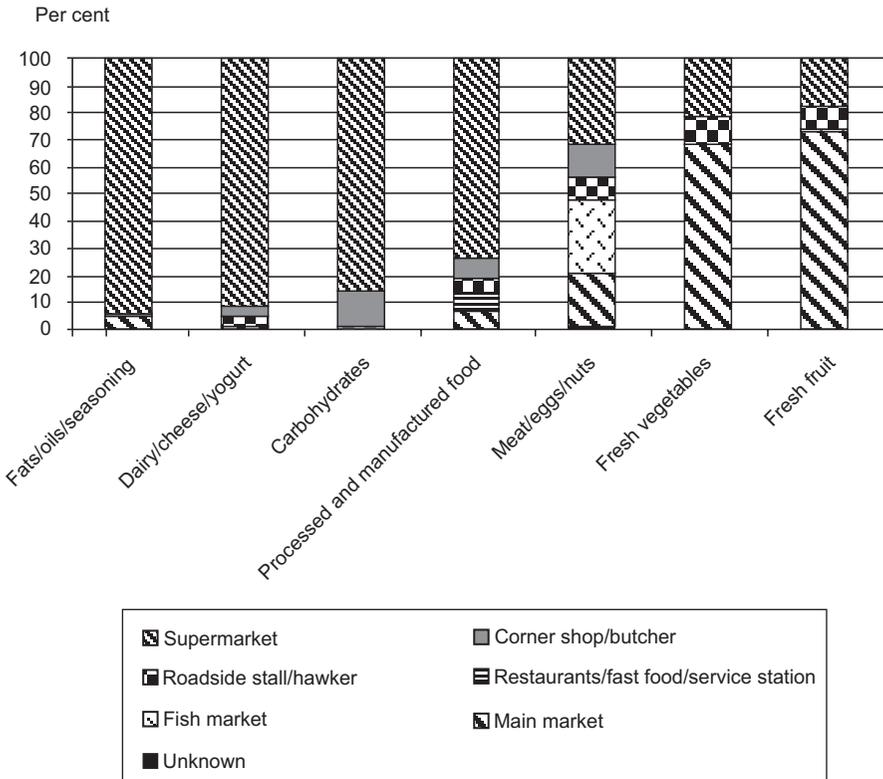
Source: Authors.

Based on these results, it is clear that consumers strongly favour supermarkets for most of their processed and manufactured food products, but they choose alternative outlets for the majority of their fresh produce. Onions, garlic and potatoes seem to be the exceptions to this trend. Historically, those products were imported, which probably explains why supermarkets, which can source products through existing importer relationships, dominate the sales of them. In the future, this situation may change for potatoes, whose cultivation by local farmers is actively being encouraged by the Fiji Ministry of Agriculture. If potatoes become a successful local crop, they will join the other popular root crops of cassava, taro, sweet potato and yams. These traditional carbohydrates have a long history as subsistence crops in Fiji (Chandra, Evenson and De Boer, 1976) and are sold mainly through the main traditional markets.

In contrast to the supermarkets, main traditional markets focus much less on processed food products; instead, they tend to dominate the fresh and produce-based product categories. Of the 79 different food products included in the survey, respondents preferred to purchase about 50 per cent from the main traditional market. The vast majority of those products consisted of fresh produce.

The fish markets, along with the main traditional market, account for most of the purchases of fresh fish in Fiji, including tilapia, milkfish, kai, nama and prawns. Processed seafood that is not part of the product offering at traditional markets is predominately sourced from supermarkets.

Roadside stalls/hawkers provide a surprising array of foodstuffs, despite their size. Of the 79 products included in the survey, only four were not featured in the responses of those household consumers who frequent roadside stalls/hawkers. These outlets ranked second behind supermarkets for the sale of poultry (20.1 per cent), and are popular for other products, such as fresh milk, eggplant, rourou (a local green leafy vegetable), brassica (cabbage, cauliflower, broccoli and Brussel sprouts) and certain types of seafood (fresh tilapia and fresh water prawns). Roadside stalls/hawkers are the most popular retail outlet for kava (35.9 per cent), a culturally significant drink that is consumed in "kava bars". The drink, which is popular across the Pacific islands, is made from the roots of the yaqona plant and has a sedative and calming effect.

Corner shops, butchers and bakeries, which are modern innovations, provide a variety of different types of food products. If it is assumed the butcher and bakery visits were predominantly for meat and bread products, respectively, then the results suggest that corner shops represent an alternative to the major suppliers for certain processed and fresh products. Although the percentages of purchasing at this type of outlet were low, corner shops represented a retail option for processed products,

including spreads (7.7 per cent), alcoholic beverages (7.7 per cent), snacks (7.2 per cent), soda (7.2 per cent), other dairy products (3.9 per cent), breakfast crackers (3.5 per cent), chocolate and sweets (3.5 per cent) and noodles (3.2 per cent).

The remaining retail outlets (restaurants, service and fast food stations) collectively account for only 2 per cent urban food expenditure in Fiji, but it will be interesting to see whether consumer preferences for these modern outlets change over time if socioeconomic conditions continue to improve.

Changes in consumption

Respondents were asked to estimate how their household consumption of each of the 79 food categories had changed over the previous five years. In the absence of baseline data, the basis used was respondents' estimates of whether their household had consumed larger quantities, smaller quantities or "about the same" amounts compared to 2007. Again, to analyse the results, the food products were aggregated into seven core food categories (see appendix table A.1).

As illustrated in figure 3, a significant proportion of the respondents said they had either maintained their consumption level or did not eat the product in the first place. For those who did shift their consumption during that period, it appears that the food categories of "carbohydrates", "fats, oils and seasoning", and "vegetables" grew the most.

More respondents reported reducing rather than expanding their consumption of processed food products over the previous five years, along with fruit, protein and dairy. While a reduction by households in their consumption of processed food was not expected, in the period 2007-2012, a number of national and global changes took place, which were expected to have had an effect on expenditures for this category. This period was associated with a rise in global food prices along with the global financial crisis in 2008 (Brinkman and others, 2010). In April 2009, the Fiji dollar was depreciated by 20 per cent (Narayan and others, 2012) and although the real effective exchange rate (REER) recovered by 2012 (Gottschalk and others, 2016), the depreciation was a key factor behind an increase in the price of imported food products. As 79 per cent of processed food products sold in Fiji are imported (Snowdon and Thow, 2013), these changes appeared to have had an influence, particularly in comparison to a large number of essential local food items, which were under price control and are value-added tax (VAT) exempt. Sugar sweetened beverages are one of these imported processed products for which an import tariff has been applied since 2006 (Snowdon and Thow, 2013). These observations highlight the advantages of refining and repeating the survey in the future to allow for more meaningful comparisons and a longer-term analysis of trends.

**Figure 3. Subjective estimates of respondents of changes
in household food consumption**

Per cent
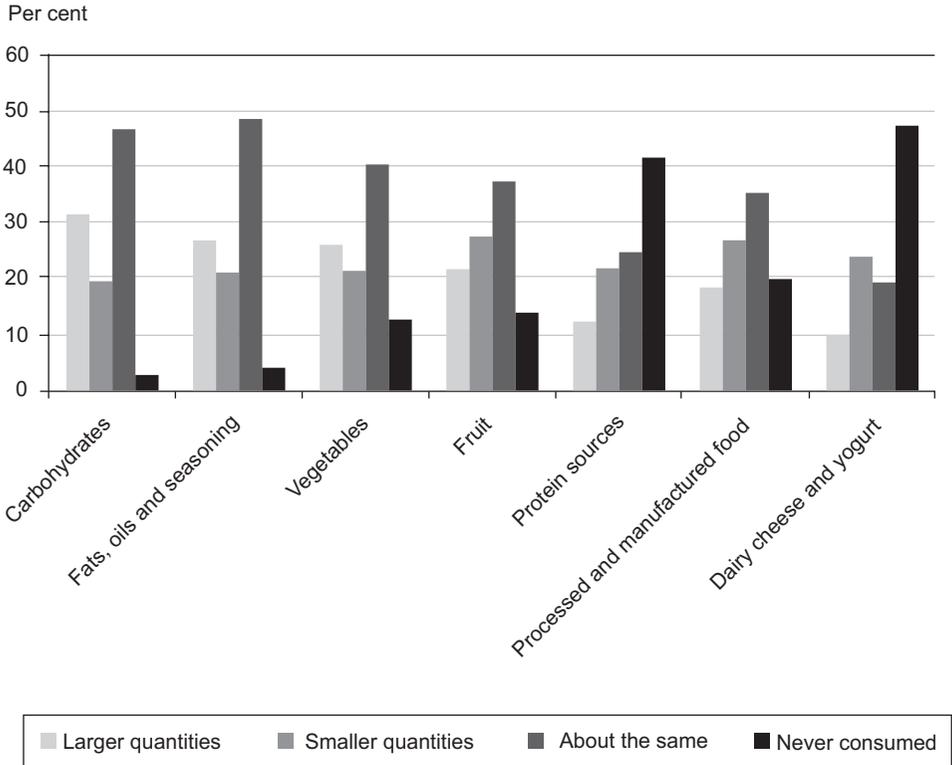
Source:　Authors.

　　　　A cross-sectional subset of 21 food products split into five food categories (see appendix table A.2) was investigated in more detail by asking household consumers why their purchasing habits for those products had changed in the previous five years. Figures 4 and 5 illustrate that the primary reasons given were a shift in household income and changing food preferences. These two reasons dominated the responses across the six food categories, with more than 70 per cent of households indicating income or food preferences were the driving force behind the behaviour change, whether it resulted in an increase or a decrease in consumption.

Analysis of household characteristics demonstrates that the standard of living of the vast majority of households surveyed (>90 per cent) has either remained the same or improved over the five-year period. Of those who said their standard of living had improved, 39 per cent reported a slight improvement (by 10 to 20 per cent overall), while 22 per cent reported a significant improvement (>30 per cent). Rising income allows the household to buy a wider range of products. However, increasing disposable income may be the result of extra work, which can affect time availability and increase the importance of convenience as a factor in the choice of both food products and retail outlets (Jabs and Devine, 2006).

Figure 4. Primary reason the purchasing habit of consumers has shifted to smaller quantities
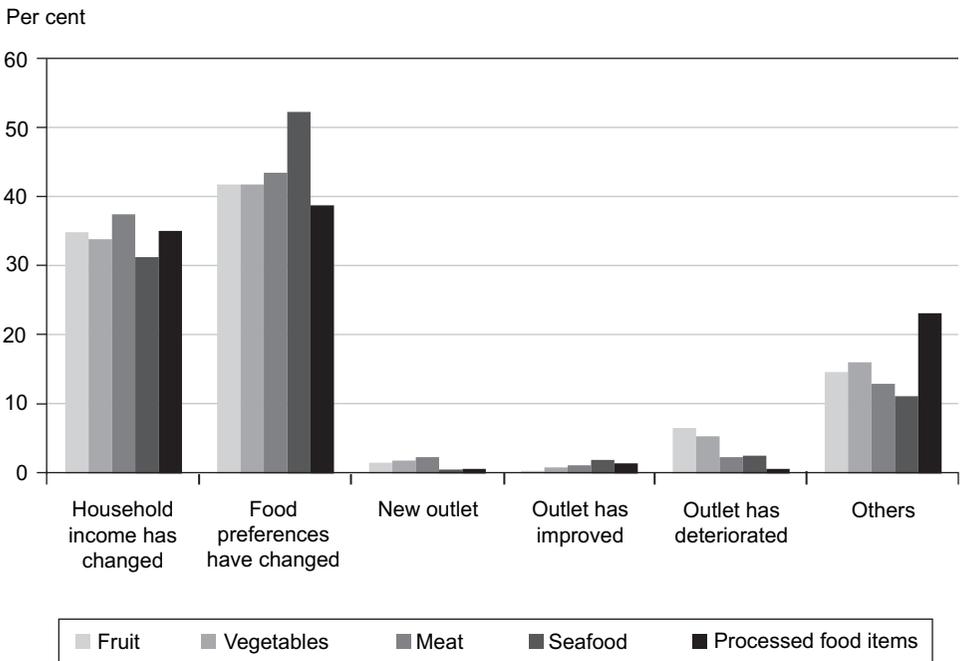
Source: Authors.

**Figure 5. Primary reason purchasing habit of consumers has shifted
to larger quantities**

Per cent
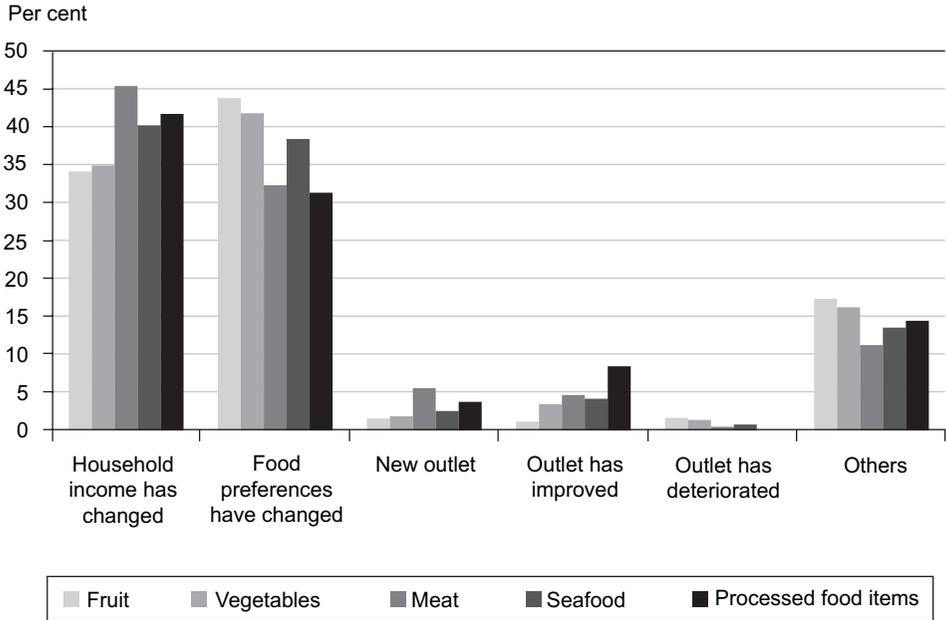
Source: Authors.

**Food expenditure across different income levels**

      Figure 6 highlights how food expenditure varies little across the eight income levels. While this seems to contradict research from a number of other developing countries, parallels exist in East and Southern Africa (Tschirley and others, 2015) and Kenya (Neven and others, 2006). The Kenyan case study looked at food purchasing patterns across food categories and retail outlets, and found that 60 per cent of the poor and low income groups living in Nairobi bought some of their food from supermarkets (Neven and others, 2006). When low-income consumers in Kenya were asked why they shopped in supermarkets, the survey results showed that they found supermarkets cheaper for processed food and close enough to home to make the trip worthwhile (Neven and others, 2006). In the example of Kenya, researchers noted that modern retailing had penetrated the processed food category first to capture 20 per cent of urban food retailing, but only 4 per cent of the fresh fruit and vegetable category (Neven and others, 2006).

**Figure 6. Share of food spending at different retail outlets by decile
of per capita expenditure (F$)**
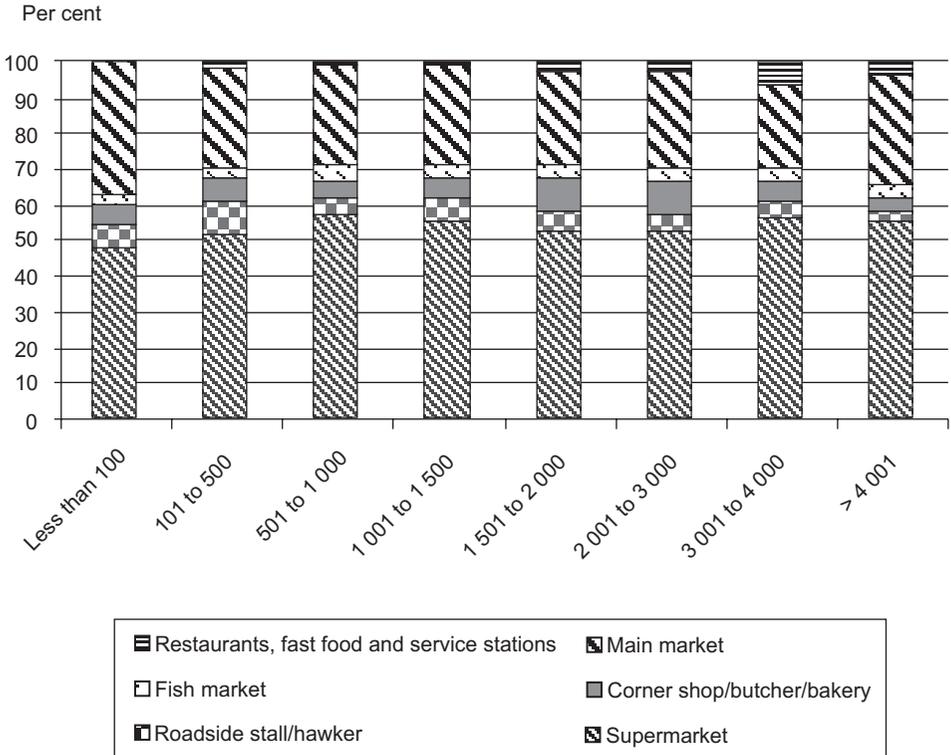
In figure 7, only data for household expenditures on fresh fruit and vegetable are presented. What stands out clearly is the dominance of the main market for sales of fresh fruit and vegetables across all income levels. If those figures are averaged, the main market enjoys a 69 per cent market share of fresh fruit and vegetables food expenditure. While expenditure is still fairly even across the income levels, supermarkets appear to gain more market share in the two higher income levels, columns 7 and 8. This suggests that higher income earners may be switching more of their fresh fruit and vegetable shopping to supermarkets, which may be because of insufficient time for multiple-outlet shopping.

Figure 7. Share of fresh fruit and vegetable spending at different retail outlets by decile of per capita expenditure (F$)
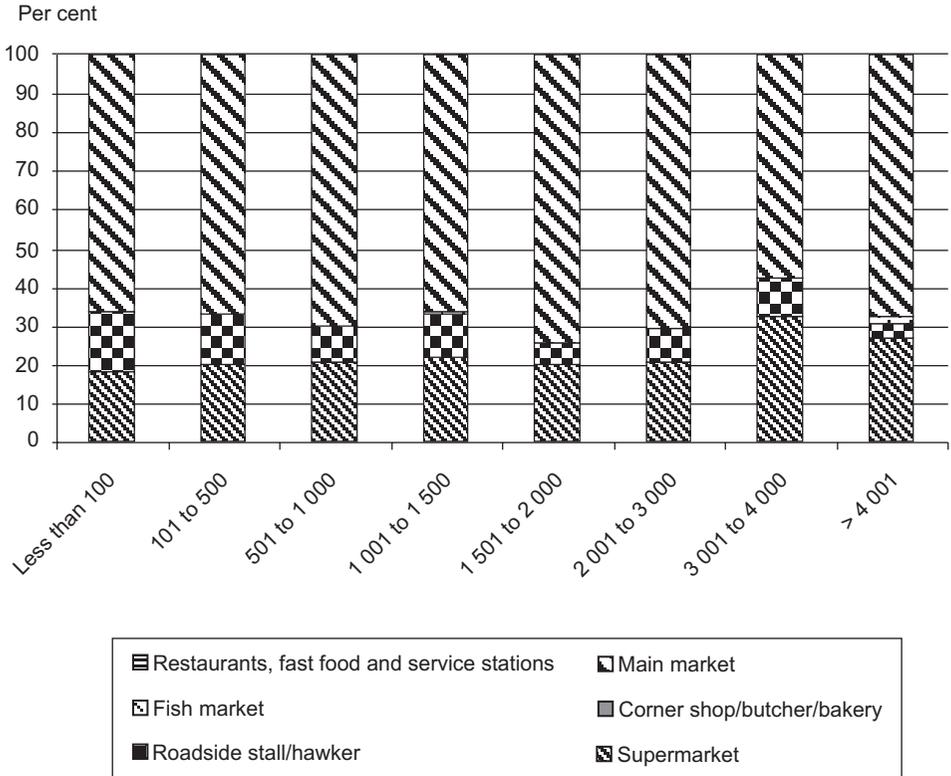
V. DISCUSSION

Responses to a novel household survey show that consumers in the main cities of Fiji patronize an array of different food retail outlets. However, 82 per cent of the urban food expenditures in the country are shared between supermarkets and traditional main markets. The fact that more than 50 per cent of urban food expenditure in Fiji are now spent in supermarkets is highly significant, particularly considering that the country was historically a traditional-market food economy. While not ideal for comparative purposes, a study investigating the share of trade in rapidly moving consumer goods in several developing countries found that modern retail outlets accounted for less than 50 per cent of total expenditures (Nielsen, 2007). The countries included Malaysia (48 per cent), Thailand (45 per cent), Philippines (43 per cent) and Indonesia (35 per cent). All have had far greater foreign investment into

modern food retailing, and would be considered significantly more developed than Fiji. Another study in the Philippines two years later confirmed that supermarkets had expanded their share of urban food expenditure to 45 per cent (Romo, Digal and Reardon, 2009). A similar study in China showed that between 1999 and 2009, urban food expenditure in supermarkets increased from 30 per cent to 48 per cent (Reardon and Timmer, 2007; Stringer, Sang and Croppenstedt, 2009).

When net inflow figures for foreign direct investment are compared for those countries, it is clear that Fiji, at $0.27 billion, in 2013 is well behind the other more developed countries, such as the Philippines ($3.66 billion), Malaysia ($9.73 billion), Thailand ($10.69 billion), Indonesia ($19.62 billion) and China ($295.63 billion) (World Bank, 2013). Comparisons with other more developed countries highlight why understanding the "demand pull" drivers of retail transformation in Fiji is so important; precisely because the usual "supply push" of foreign investment has not been the principal engine of change.

The level of urban food expenditure in supermarkets is even more impressive considering that the increased cost of imported food over this five-year period, and its impact on disposable income, may have induced slight reductions in consumption of processed food by the average household. At the same time, however, the trend towards shopping at supermarkets has not resulted in households moving their expenditures away from the main traditional market to a significant extent. Instead, urban inhabitants in Fiji tend to patronize supermarkets and the main market to meet their food shopping needs. In a general sense, supermarkets offer a full range of food products, but dominate the sales in the processed food category, while the traditional main market is still the preferred choice for fresh produce, such as fresh fruit, vegetables and certain types of meat.

While expenditure at the supermarket did not vary greatly across different income levels, higher income households tended to spend more on fresh fruit and vegetables at the supermarket.

The remaining 18 per cent of urban food expenditure is shared between roadside stalls/hawkers, fish markets, specialty stores, restaurants, and fast food and service stations. While roadside stalls/hawkers only had a 6 per cent share of total food expenditure, their range of products is impressive. This variety coupled with their proximity to households enables them to compete with the supermarkets, while their connection to local farmers and the freshness of their produce compares well to the main traditional market. This combination of the best of both the modern and traditional outlet traits may stand them in good favour with consumer preferences for some time to come.

With the benefit of hindsight, it would have been prudent to separate the retail outlets of corner shops, butchers and bakeries. They are all examples of more modern retail outlets, and collectively account for a relatively small percentage of the total urban food expenditure (6 per cent). However, they deal in specialty products (meat and bread), which would have given greater clarity to the results had they been kept separately.

The other modern food retail outlets in Fiji (restaurants and fast food and service stations) together account for a mere 2 per cent of total food expenditure, with 78 per cent of urban households patronizing those outlets a few times a year at most. This suggests that those outlets survive mainly on tourists.

VI. CONCLUSION

The research shows that consumer preferences and changing urban household income are key drivers for food purchasing habits in Fiji. This has resulted in households spending more than one half of their food budget at supermarkets. In contrast to other developing countries experiencing a "supermarket revolution", there has been limited investment in Fiji in food retailing, which highlights the strong role consumer preferences may have had in shaping food shopping patterns.

If household income or investment into supermarkets were to increase in the future then previous studies in developing countries have indicated that the supermarket share of food expenditure would also continue to rise (Alvarado and Charmel, 2002; D'Haese and Van Huylenbroeck, 2005; Reardon and others, 2003). Further studies have shown that additional supermarket growth can involve a shift from the processed food category into the fresh produce area (Brown, 2005; Neven and others, 2006). Considering that smallholder farmers currently rely on traditional market channels to sell their fresh produce, shrinking of these traditional markets would have significant implications for them. Furthermore, if smallholder farmers are affected, then these changes raise broader concerns about the livelihoods, health and food security of the people of Fiji, which is of vital interest to local government departments and donor development agencies.

However, the future of the food industry in Fiji is far from clear. While higher income level households are showing some early signs of purchasing small amounts of fresh fruit and vegetables from supermarkets, 97 per cent of households are still shopping at the traditional main market, indicating that the competition for the fresh produce category is only in its infancy. There is also a body of research showing that traditional food retail outlets cannot only hold their market share but compete fiercely with modern supermarkets to retain their dominance in the fresh produce category

(Cadilhon and others, 2006; Humphrey, 2007). For this reason, it is important that these types of studies and surveys on consumers are repeated to better understand how these changes are affecting the whole value chain and what can be done to ensure that local farmers and the local economy are not being detrimentally affected.

Policy attention will need to be directed towards further investigation of how smallholder farmers can integrate into supply chains, which are growing as a result of changing consumer food and shopping preferences. These insights will also be vitally important for private sector and donor agency stakeholders trying to predict the future constraints and opportunities within the Fiji food system. While Fiji is a special case study in itself, it is also hoped that this type of research will provide insights for other small island developing countries that are experiencing similar global pressures.

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APPENDIX

Appendix table A.1. Aggregation of food products into seven core food groups

Fats, oils and seasoning	Dairy, cheese and yogurt	Carbohy-drates	Processed and manufactured food	Protein sources	Fresh vegetables	Fresh fruit
Cooking oil, vegetable oil, canola oil, etc.	Fresh milk	Rice	"Other" milk	Chicken not processed	Eggplant	Pawpaw
Sugar and salt	Other dairy	Wheat and flour	Spreads	Beef, lamb, mutton not processed	Mushrooms	Banana
Herbs and seasoning		Bread and bread products	Snacks	Duck not processed	Assorted beans	Lemon
		Noodles	Chocolate and sweets	Pork not processed	Ota	Mango
		Breakfast crackers and other biscuits	Chili sauce	Other meats	Brassica/cabbage	Melon
		Breakfast cereals	Coffee, milo, tea	Eggs	Rourou	Pineapple
			Alcohol	Nuts	Other leafy vegetables	Papaya
			Kava	Fresh tilapia	Tomato	Apple
			Bottled water	Fresh nama	Capsicum	Orange
			Soda	Fresh water prawns	Broccoli	Grape
			Coconut milk	Fresh milkfish	Celery	Breadfruit
			Ready-to-eat meals	Fresh kai	Lettuce	Coconut
			Processed or frozen fruit	Other fresh seafood	Cucumber	Other fruit

Appendix table A.1. *(continued)*

Fats, oils and seasoning	Dairy, cheese and yogurt	Carbohy-drates	Processed and manufactured food	Protein sources	Fresh vegetables	Fresh fruit
			Processed or frozen vegetables		Carrot	Tamarind paste
			Processed meat (sausages etc.)		Chillies	Other tamarind products
			Processed seafood		Okra/bhindi	
					Cassava	
					Taro	
					Sweet yams	
					Potato	
					Onion	
					Garlic	
					Ginger	
					Other vegetables	

Appendix table A.2. Subset of 21 food products aggregated into five food categories

Fruit	Vegetables	Meat	Seafood	Processed
Breadfruit	Lettuce	Fresh meat and poultry	Tilapia (maleya)	Processed food items
Tomatoes	Capsicum		Nama caulerpa (sea grapes)	
Melons	Eggplant		Fresh water prawns (ura dina)	
Other fresh fruit	Brassica		Milkfish (yawa)	
	Taro		Kai	
	Cucumber		Other fresh fish and seafood	
	Beans			
	Other fresh vegetables			