Patterns and Trends in Food Consumption in Poor Urban and Rural Households in Bangladesh: The Field Survey Results

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September 2003

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1. Introduction

The "food system" in Bangladesh is rapidly changing. Changes are taking place in the patterns of consumption and expenditure in urban and rural areas in terms of: (i) market purchases versus own production; (ii) the commodity base of diets; (iii) a long term tendency towards a growing role of international trade in food commodities, and hence greater influence of trade policies and international prices on domestic prices; (iv) more processing of food commodities outside the immediate producing or consuming households (v) the expansion of the retail sector. These latter developments may be providing substantial growth in income opportunities for poorer households as processors and traders. Also changes in the food system are expected to have important nutritional implications for the general population, particularly for the poor.

To develop understanding of different components of the changes occurring in food system and to ascertain how these changes are creating or reducing job and income opportunities for the poor, a project was undertaken for implementation in two phases. In phase I, a review was made of available information on the patterns and trends in food consumption in poor urban and rural households in the country during the decade of 1991-2000. Phase 2 was designed to conduct in-depth surveys, both at the household and at the retailer shop levels, to have direct information on current developments in food system changes and to assess the implications these changes might have had on job/income opportunities, food consumption and nutritional status of the households from urban to peri-urban through to rural areas.

The present report describes the findings of the household survey and retailer survey followed by the focus group discussions preceded by a short review of changes in the trends and patterns of food consumption and nutritional status of the poor.

2.Changing Food Consumption and Supply Chains in Bangladesh and Implications for Livelihoods: The Review Results.

A review report was prepared on the trends and patterns of food intake and nutritional status of the poor rural and urban households of Bangladesh during the decade of 1991-2000. As agricultural production is the main determinant of the quantity and quality of the die in a poor agrarian country like Bangladesh, a thorough review of trends in gross production and gross per capita availability of commonly consumed foods was first made. The 1990s were marked by a substantial increase in food production, particularly rice during the second half of the decade, along with other food items like wheat, potato, vegetables, fish, meat and milk. This resulted in increases in the average national intake in 2000 to 892 g/capita/day, 2,112 Kcal energy and 53g protein. This was an improvement on all previous survey years. However, the country has yet to achieve a desirable dietary status. The diet is still highly imbalanced, with rice and other cereals contributing nearly 80% of total energy and fruits and vegetables contributing only 3%. The diet is thus deficient in vitamins and minerals.

The 1990s saw substantial economic growth, with an associated decline in the incidence of both absolute poverty and extreme poverty, by 9 percentage points in each. The rate was higher in urban areas, although the rate of decline in urban poverty slowed down in the latter years of the decade. However, in 2000, the incidence of absolute poverty was still 50% and the incidence of extreme poverty was 34%. In absolute terms, during the decade, the number of poor in rural areas decreased from 58 million to 42 million, while the number of poor in urban areas showed a disturbing 100% increase from 7 million to 15 million.

Since food distribution inequity is heavily weighted against the poor, the food intake of the poor in both rural and urban areas remained inadequate in quantity (around 700 g/day), energy (1790 Kcal, 25% less than the

requirement) as well as in protein (40 g/day, 30% less than required). The diet of the poor is also seriously imbalanced, nearly 90% of energy coming from cereals, 85% from rice alone, an inevitable consequence of which is malnutrition. Analysis shows that, between 1991-2000 no improvement occurred in the quantity or in the quality of the diet of the poor and the poorest groups (bottom 40% expenditure category). This is true for both rural and urban areas. The record in urban slums was even worse.

In poor households of both rural and urban areas, allocation of household expenditure for food is 70%. So, more than two-thirds of the income is spent on food, yet this was still inadequate in quantity and quality. Needless to say, the remaining 30% can barely meet the other necessities of life. Market dependence is very high in the rural areas, where only one-quarter of major foods like rice, vegetables and fish are procured from own production and the remainder is purchased from the market. Only in the case of eggs was the proportion of own production in both poor and rich households higher at 32-54%. This is indicative of the traditional poultry raising in rural areas.

Parallel with national average economic growth, poverty reduction, increased food production and food intake, Bangladesh achieved notable reductions in child malnutrition rates during the nineties. Night blindness due to vitamin A deficiency in children under 6 years of age decreased to almost non-existence levels (0.3%). Despite these improvements, 50% of preschool children were still stunted or underweight, 18-19% severely, in 2000. The percentage of malnourished children coming from poor families was even higher, over 60%. The prevalence was higher in rural than in urban areas and girls are more affected than boys. Over 50% of children are anaemic.

Chronic energy deficiency (CED) prevalence in women of childbearing age has also decreased over the years of the decade, but still, 45% of rural and 35% of urban (slum) mothers suffer from CED. Still, about half of all pregnant mothers are anaemic.

Correct infant feeding practice has a strong bearing on children's nutritional status. Enriching the family food may be achieved with eggs, fish, pulses and oil. A disturbing finding was that 65% of poor families eat no eggs, even though they have eggs in the house, preferring to save eggs to hatchings or sell them for hard cash.

Thus poor households, rural and urban alike, did not benefit proportionately from the increased food production and the economic growth that the country achieved during the nineties. In 2000 the food intake of the poor was as low and imbalanced as it was in 1991.
There were important changes in food system during the 1990s. The development of an improved transport network and the increasing urbanization of the country led to a more integrated national food network. The volume and the length of food supply chains have increased. Many commodities including the main components of the diet, rice and fish, have changing marketing chains with increasing concentration in the hands of the larger traders.

There has been substantial growth in the import / export sector, with large volumes of cross border trade with India. These trade volumes could in reality be much higher with high levels of suspected unofficial trade. Bangladesh imports many products including livestock products, oilseeds, wheat, fruits, and rice during periods of shortfall. Export of food commodities is becoming more important. Shrimp and prawn export is well established and there are developments in the fruit and vegetable sector. If the increasing trend in rice production is maintained then Bangladesh could conceivably become a rice exporter in the future.

Based on the above review results, a number of hypotheses have been developed which were used as the basis for designing and implementation the present field surveys. These hypotheses were tested through field-testing of households and retailers. The hypotheses were:

1. Trends in food consumption patterns witnessed in higher income groups are increasingly transferring to lower income groups.
2. Trends in food consumption patterns witnessed in urban areas are increasingly transferring to more rural areas.
3. Consumption of a wider range of commodities should improve dietary diversity and nutrition.
4. Consumption of a wider range of commodities should increase employment opportunities.
5. The increasing complexity of the food system will lead to increased opportunities in sorting, processing, packaging, transporting, marketing, and retailing. These opportunities will be poverty reducing.
6. Food items processed and packaged outside the home are increasing in availability nationwide.
7. Increasing transportation of food commodities will provide increased employment opportunities in the food supply chain.
8. The availability of processed and packaged foods will increase the shelf life of food items and consequently encourage the development of the retail sector.
9. Development of retail services will lead to increased employment and income generating opportunities for poor households.
10. The increasing complexity of processing chain should lead to increased income generation from wage employment.
11. The increasing availability and consumption of processed food will decrease the requirement for household labour and free this for income generating opportunities.

3. The Study Objectives

General: The general objective of the study was to investigate the changes in the patterns and trends of food consumption together with associated changes in food system/food processing chain in rural and urban poor households in Bangladesh during the last five years.

Specific: The principal specific objectives of the household survey were:

1) To ascertain the extent to which changes in food consumption patterns have penetrated from higher income groups to lower income groups during this period.
2) To ascertain the extent to which changes in food consumption patterns have dispersed from urban to peri-urban through to rural areas.

The principal specific objectives of the retailer survey were:

1. To ascertain the extent to which the food system has changed in relation to retailing, processing, packaging, distribution networks, employment, and profitability.
2. To ascertain how widespread is the distribution of processed and packaged foods.
3. To ascertain the extent to which employment/income opportunities have changed (increased or decreased) with changes in the food system, accompanied by changes in food consumption patterns.

A further specific objective of both surveys was to look into the nutritional implications of all above changes for poor rural and urban households.

4.Study Methodology

The study applied an integrated approach to test and verify all the study hypotheses and to attain the general and specific objectives. The methodologies applied include household and retailer surveys, focus group discussions, in-depth individual interviews, and personal observations.

4.1 Household survey

The household survey was conducted using a pre-coded questionnaire. The survey included detail re-call consumption expenditure data by food items for the last 72 hours, item-wise frequency of consumption, consumer profile, information on market sources of food consumed, and changes in consumption over the last five-year period. The survey also included some background information on the socio-economic status of the households, their involvement in the food system, cash income received from work in the system, sources of cooked food purchased, and monthly expenses for such consumption items.

Sampling for household survey

As this was an exploratory study with a strict one-year time line, it was decided to restrict the geographical coverage to Dhaka Division, this facilitated the management of fieldwork within the given time. Within Dhaka Division two districts - Tangail and Kishoregonj were selected as the high and low vibrant areas respectively. From each district one high vibrant and one low vibrant upazila and from each upazila 4 villages were selected as primary units for geographical sampling. Villages were selected on the basis of their vibrancy. Of the four villages selected, one was near to the upazila centre (considered as high vibrant) and the other was in a remote

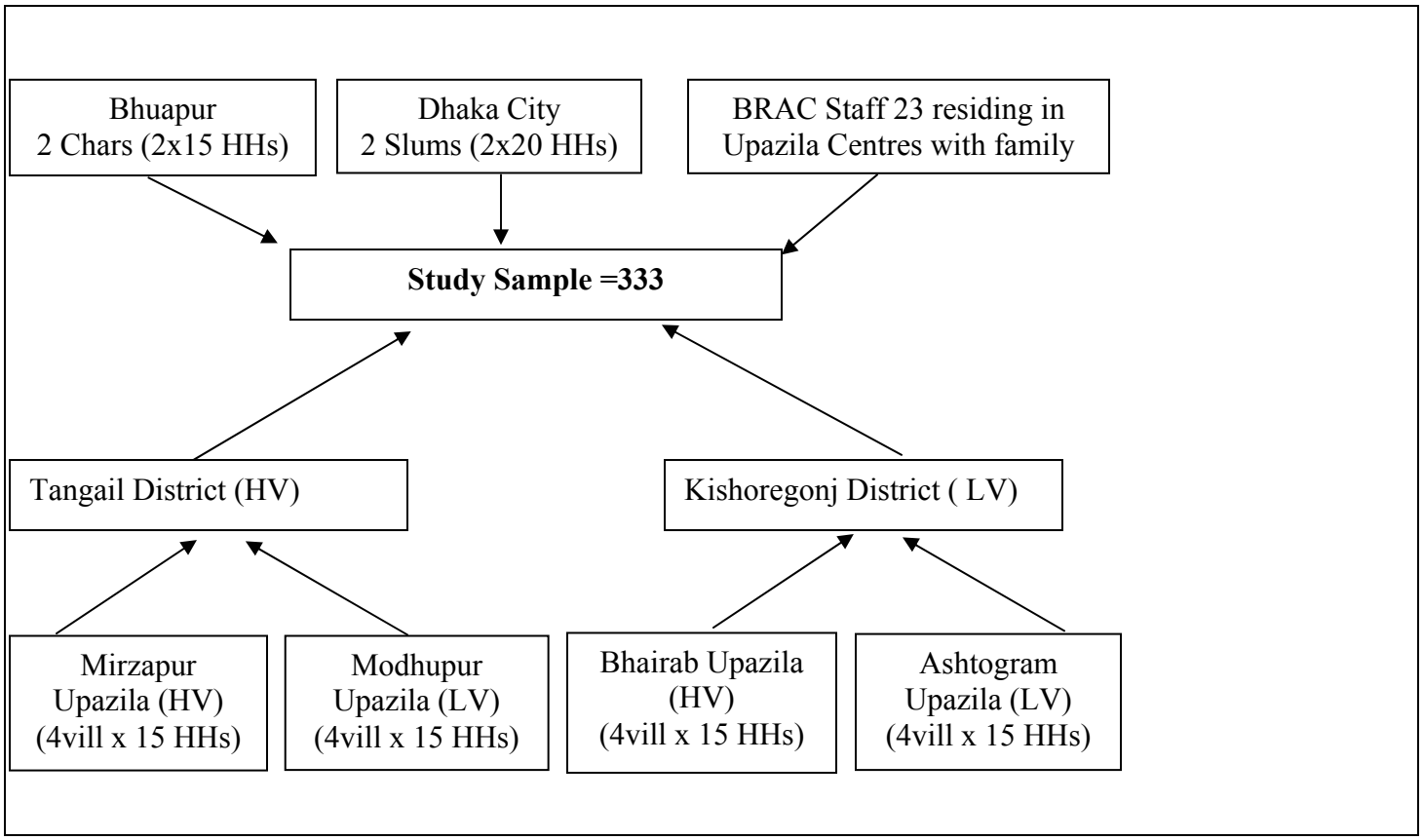
area (considered as least vibrant) far away from the Upazila centre. The remaining two were taken from middle vibrancy areas. In each village a total of 15 households were selected as primary units for the survey, which were representative of the total village population. Households were selected using a proportionate random sampling method.

After village selection a poverty wealth ranking exercise was conducted to assess the total number of poor/deficit, middle/break-even and rich/surplus households living in the village and to locate their residences. Although we used a proportionate random sampling method, in the final selection of households it was necessary to consider at least 3 households from a particular poverty group as the minimum sample. In selecting households the geographical distribution over a particular village was also considered.

The consumption pattern of poor and vulnerable groups was one of the major concerns of the study. To assess consumption trends of vulnerable people living in risk prone areas, we decided to include 30 households from two established chars (15 from each) under Bhuapur Upazila and 40 households from two slums of Dhaka city (20 from each). Household selection was again based on poverty wealth ranking and proportionate random sampling. Finally in our sample population we decided to include 20 BRAC staff residing with their family in different study upazila centres as a proxy for a middle urban income group (we realize that there are limitations in using this group as a proxy, nevertheless they do provide an interesting contrast in the survey analysis)

Figure 1 gives a graphical presentation of study sampling. The total sample size for the survey was thus 330 households: {16 x 15) village households + (2 x 15) char households + (2 x 20) slum households + 20 BRAC staff}.

Figure 1. Graphical Presentation of Study Sampling



Survey procedure

As a new area of research and we had limited prior experience upon which to base the study. The household survey questionnaire was developed jointly by the team members and then shared with agriculture, nutrition, and marketing experts. Their suggestions and comments were then incorporated. Before finalization the questionnaire was extensively field-tested in four different locations for question and answer sensitivity. During field investigator training the survey was further tested and the questionnaire was finalized by incorporating the constructive suggestions made by the experienced field investigators.

A total of 8 enumerators were selected for the work and they received one week in-house and field training. The enumerators were divided into 4 teams and sent to four different locations for data collection. Each team had to conduct 3-4 questionnaires a day. In the evenings the teams cross-checked the questionnaires to ensure data accuracy. The principal investigators at BRAC visited every survey location and did a resurvey of a few randomly selected questionnaires to provide quality control for the data. The data was collected during April 2003; ideally data should have been collected in different seasons to view seasonal changes in consumption patterns. The duration of the project did not allow this, nevertheless an interesting snapshot of the consumption patterns of different groups has been produced.

4.2 Retailer survey

A retailer survey questionnaire was administered to gain insights into the extent of food system changes, especially in the retail and food distribution sectors. The extent to which changes have dispersed geographically (urban to rural), and to what extent these changes have brought about changes in food consumption patterns and employment/income opportunities for the rural and urban poor.

The questionnaire was designed with reference to the 11 hypotheses and included information related to availability of different food items, item-wise changes in sale since starting the business, profit per unit sale, current customer profile and profile five years ago, intra-household distribution of consumption, and changes in trade with low income groups. The questionnaire also included the retailer's perceptions of changes affecting their business, including the number of retailers involved, daily sale and profit, and customer profile since the inception of their business. In addition, changes in employment in the food marketing chain, changes in the use of credit in retail business and their source, and finally perceptions of the retailers about the benefits of packaging in trading, were also included in the questionnaire. Clearly certain items in the survey are sensitive to the retailer and without building longer term relationships information such as profits are likely to be inaccurate, probably underestimated.

Sample size and sampling

One retailer shop was selected from each village selected for the household survey. There were thus 18 shops from 18 villages (8 from 8 high vibrant, 8 from 8 low vibrant and 2 from 2 char villages). Two shops were also selected from each upazila centre (i.e., 5 x 2=10 shops) and each slum area (2 x 2 = 4 shops). In total, therefore, there were 18+10+4=32 shops selected for the retailer survey.

Survey procedure

A similar procedure was followed for the retailer survey as for the household survey. The questionnaire was developed jointly by the team, which was then reviewed, pre-tested and revised. The enumerators selected for household survey conducted the retailer survey in those survey areas. The retailer survey data was collected during April 2003.

4.3 Focus group discussions

In addition to the household and retailer surveys, focus group discussions (FGD) were conducted with village consumers and retailers to get qualitative information to highlight certain issues within the changing food system. With the help of BRAC local level staff and the local elites one representative village from a particular Upazila was selected to conduct the community based discussions. The over-riding focus of the interviewers or the focus group facilitators was identification of changes, if any, within the food system.

Information was collected on the availability of different food products, the nature of their production and consumption, geographical sources of the products and also the socio economic status of the consumers of different food products in a particular region. Availability of imported items, their sources and consumer profile of those products and their changes over time were also included in the discussion. In the discussion we included 10 broad food groups which were: 1) rice and rice products, 2) wheat and wheat products, 3) biscuits, 4) vegetables, 5) pulses, 6) edible oil, 7) milk, 8) animal food including meat, fish and egg, 9) spices and 10) all kinds of soft drinks.

Sampling

A total of 15 focus group discussions (FGDs) were conducted with consumers and food traders. One consumer FGD with a socio-economic mix of people was conducted in each chosen Upazila. Similarly in each selected Upazila another FGD with traders involved in food retail business at village level was conducted. Four FGDs (2 with the consumers and 2 with the retailers) were conducted in two selected Dhaka slums and another two in Bhuapur char area. An additional FGD was held in Mirzapur where one discussion was conducted close to the thana centre and another was conducted with more distant village dwellers, to see any contrast.

Data collection procedure

The focus group discussions were conducted by an anthropologist with prior experience of facilitating such discussions, assisted by a junior level researcher at BRAC. Both received the one-week training provided for the field enumerators to have a clear understanding of the nature of the information required to be collected by survey work. In addition, they were given a specific 2-day training on the focus group discussions. A checklist was provided in order to lead the discussion. The discussions were recorded on a tape recorder and then transcribed in the BRAC Head Office, field notes were also used in the analysis of the data.

4.4 Food group case studies

In addition to surveys and focus group discussions mainly describing the overall changes in consumption patterns of different food items in the country, several case studies were undertaken for a selected group of food items. These included rice, wheat, fish, dairy, poultry, vegetables and fruits. The objective of these case studies was to reinforce and develop the survey findings.

One particular sector selected for case study was the dairy sector, as this provided a contrast between a traditional food distribution system and the modernized systems associated with NGO and private sector dairy development. A combined approach was used in collecting information for this case study. Initially a thorough literature review was undertaken to get an overview of production, consumption and marketing of the dairy sector in Bangladesh. We also collected primary data from Milk Vita and Aarong milk – the two big actors in manufacturing fresh milk by using a structured questionnaire. We also organized several focus group and individual discussions with different actors involved with milk production, collection, processing and marketing. Personal observations of the researchers were also included as source of information.

The remaining case studies groups were primarily based on secondary data, each of these case studies with a distinct focus.

4.5. Food Chain Case Studies

It was also decided to conduct some individual case studies on food processing industries to gain an insight into new trends in food consumption. Issues were discussed linking into certain sections of the retailer survey looking at growth in the sector, distribution and supply networks, and employment opportunities.

Our qualitative data collection team conducted the discussions; they interviewed owners or managers of small-scale processing operations in the selected locations. The purpose was to support and develop findings relating to changes in the processing sector and implications for employment generation. Only a small number of interviews could be conducted given the constraints of the project but the sample aimed to have good spatial as well as operational coverage.

The selected sites were:

Rice mill (Chatal) in Mirzapur (RMI)
Rice mill (Chatal) in Modhupur (RMO)
Bakery in Ostogram near Bharaib (BB)
Spice grinding mill in Mirzapur (SM)
Spice grinding mill in Chilmahal (SC).

5. Study limitations

As mentioned this is a relatively new area of research and has considerable scope for development. Due to the lack of previous studies and experience, we attempted to explore some of our own hypotheses developed on the basis of the review work. This is an exploratory study and, therefore, we limited our geographical coverage to only two districts of Dhaka Division. Clearly there will be variations in consumption patterns between different geographical regions, based on economic vibrancy, agricultural production, infrastructure development and cultural preferences. The Dhaka division survey sites are likely to exhibit higher levels of vibrancy and market development due to their proximity to the primate city.

Also the survey could only be conducted once within the time frame and consequently issues relating to seasonality could not be explored. It is likely that consumption of highly perishable seasonal items such as fruit and vegetables would vary considerably if the survey were to be conducted throughout the year.

The survey could not really operate using well-established base lines, and much of the information pertaining to trends has been based on perceptions given by respondents, these are always likely to contain inaccuracies based on whether respondents see the past through "rose-tinted spectacles" or have a negative image of past conditions. Also respondents are unlikely to provide accurate information to various lines of questioning, for example the profits involved in trading activities.

In spite of the limitations of the research the overall feeling was that the data was of good quality, the majority of the findings were fairly intuitive and few surprises emerged. There was a remarkable degree of support and corroboration between the various elements of the research, notably the focus group discussion provided issues that were clearly supported by the household and retailer survey data.

As a scoping study issues raised and highlighted in this project should be followed up with more in depth analysis focusing on specific issues, groups or locations.

6. Data processing and analysis

After collecting the data from the field, a meticulous editing process was conducted, the survey data was entered into the computer, cleaned and analysed using SPSS. The qualitative data collected through FGDs and individual in-depth interviews were initially recorded on tapes and transcribed in Bangla. These were then translated into English, synthesised and converted into a report form.

7. Results

7.1 Socio-economic characteristics of the sample households

The sample profile and some socio-economic characteristics of the sample households are shown in Tables 1 and 2.

On average 95% of the selected households in the low and high vibrant villages, and char and urban middle income areas were male headed; in contrast, in the slums, nearly one-third (32.5%) of the households were female-headed, probably reflecting high rate of divorce or separation among the poor urban population.

Agriculture is, as expected, the main occupation in low vibrant (45.8%) and char areas (56.7%), followed by only 27.5% in high vibrant villages. Wage labour is the second largest occupation in all these areas. In the slum areas, households have more diversified livelihoods, with wage labour (25%) and services (17.5%) being the major occupational activities. As the name implies, the BRAC staff households (representing an urban middle income group) are almost all service holders. Small business operation is a significant occupational category in the village, with 15% in high vibrant and 10% in low vibrant villages.

The main source of income of the households parallels the predominant occupation. Ranking the study households by wealth status shows that nearly 63% of the households in char and slum areas are poor, compared to slightly over 50% in the villages (agreeing with current national averages). On the other hand, only 17.4% of the households in the BRAC group were considered to rank as poor. The rich category was highest in the BRAC group (43.5%) and lowest in the slum (5.0%).

Only one-third of the households in the villages (high or low vibrant alike) have electricity facility, compared to nearly 100% in the urban areas. The char areas do not have an electric supply. The family size was highest in the villages (6.0-6.3), compared to 4.8 in char, 4.5 in slum and 3.6 in urban middle-income households. Demographic dependence (ratio of household members aged <10 years and ≥60 years to total household members) and economic dependence (ratio of number of dependents to number of income earners) are also highest in the villages. Land owning is higher in low vibrant than in high vibrant villages, particularly cultivable land. Land owning in the slums is almost zero, whilst in the BRAC group it is quite high (140 dec.), indicating that they live in urban areas (upazila centers) but possess land in the countryside.

The level of education is very low in the villages (class IV passed on average), char (not even class II passed) and slum (only class II passed). Only in the BRAC households was a high level of education recorded (up to college level).

The villages and the char areas are on average 7-9 km away from the upazila centres, the high vibrant villages being slightly nearer (7.2 km) compared to the low vibrant ones (8.2 km). The low vibrant villages and the char villages were also quite far away from the rural growth centres (market places) (3-5 km) and the all weather (pucca) roads (5-6 km).

Table 1. Socio-economic characteristics of the sampled households (%)

INDICATORS	LOW VIBRANT AREA N=120	HIGH VIBRANT AREA N=120	CHAR N=30	SLUM N=40	BRAC STAFF N=23	TOTAL N=333
Sex of the hh head						
Male	93.3	94.2	96.7	67.5	95.7	91.0
Female	6.7	5.8	3.3	32.5	4.3	9.0
Main occupation of the hh head						
Agriculture	45.8	27.5	56.7			31.5
Wage labour	19.2	21.7	36.7	25.0		21.0
Service	5.0	5.0		17.5	95.7	12.3
Business	10.8	15.0	3.3	2.5	4.3	10.2
Rural transport	4.2	9.2	3.3	30.0		8.7
Hh work	10.0	3.3		10.0		6.0
Others	5.0	18.3		15.0		10.2
	100.0	100.0	100.0	100.0	100.0	100.0
Main source of income						
Agriculture	40.8	20.8	66.7		4.3	28.5
Wage	23.3	20.0	26.7	27.5		21.3
Service	6.7	6.7		22.5	91.3	13.8
Business	14.2	20.8	3.3	5.0	4.3	13.8
Transport	6.7	9.2	3.3	27.5		9.3
Others	8.3	22.5		17.5		13.2
Poverty status						
Poor	50.8	52.5	63.3	62.5	17.4	51.7
Middle class	26.7	28.3	20.0	32.5	39.1	28.2
Rich	22.5	19.2	16.7	5.0	43.5	20.1
	100.0	100.0	100.0	100.0	100.0	100.0
Availability of electricity						
Yes	35.0	31.7		100.0	95.7	38.0
No	65.0	68.3	100.0		4.3	62.0
Total	100.0	100.0	100.0	100.0	100.0	100.0

Table 2. Mean results on socio-economic characteristics of the sample population

INDICATORS	LOW VIBRANT AREA N=120	HIGH VIBRANT AREA N=120	CHAR N=30	SLUM N=40	BRAC STAFF N=23	TOTAL N=333
HH size	6	6.3	4.8	4.5	3.6	5.6
Members <10 yrs	1.8	2.3	2	1.8	1.3	1.9
Members ≥60 yrs	1.1	1.3	1	1.3	1	1.2
No of income earners	1.7	1.6	1.6	1.4	1.3	1.6
Land total (decile.)	305	120	160	1.8	140	173
Cultivable land (decile.)	283	103	73	0.2	121	154
Homestead land (decile.)	15	12	12	1.6	15	12
Other land (decile.)	6.8	4.5	31	0	3.8	7.1
No of income sources	2.0	1.9	2.4	1.3	1.1	1.9
Av. class of complete education of the hh head	4.2	3.7	1.7	2.2	13.5	4.2
Distance to upazila centre (km.)	8.2	7.2	9.2	2.2	1.1	7.1
Distance to market place (km.)	3.1	1.5	4.7	0.3	0.9	2.4
Distance from all weather road (km.)	5.7	2.9	5	0.7	0.6	3.9
Demographic dependency* (%)	12	13	8	3	4	10
Economic dependency** (%)	304	333	237	263	202	297
Age of the hh head (yrs)	47	44	42	39	33	44

*Ratio of hh members below 10 and 60 and above yrs to total population

** Ratio of No of dependents to No of income earners

Key Findings

Section A Food Consumption Pattern

A.1. Food consumption by sample groups

Information on food consumption patterns was obtained from the household survey, retailer survey and focus group discussions. The findings from the 3 sources were broadly similar which provides support for their accuracy.

Household survey data is shown in Table A1, this shows the percentage of households consuming the 33 food items during the 3-day period preceding the survey by sample group areas. The salient findings presented in the table and their significance are described below.

As rice is consumed in all households at all major meal times, unsurprisingly 100% of households record consumption.

Wheat flour is more commonly consumed by the BRAC group (39%) compared with slum, chars and low vibrant village dwellers (25-31%). Surprisingly, the high vibrant villages had the lowest levels (13.5%) of wheat flour consumption. Consumption of bread, on the other hand, was found to be highest in the high vibrant villages (41.1%), even higher than in the BRAC group (34.8%), perhaps reflecting more rapid food consumption transitions changes amongst the rural elites.

Chira/puffed rice consumption was highest in the BRAC group, almost as high as rice (82.6%) and lowest in the char villages (6.7%). This probably reflects the absolute dependence of the poor char dwellers on rice, with limited opportunities to enjoy alternative varieties of processed rice (chira/muri).

Potato, a carbohydrate rich food, but generally considered as a 'vegetable' in Bangladesh, is consumed by a high percentage of households, over 80% in most of the sample groups, with a slightly lower consumption rate in the char area. Among the villages, the consumption was a little higher in high vibrant compared to low vibrant villages. Leafy vegetables and other vegetables are also very commonly consumed in all sample areas.

Pulses combined with rice is a traditional meal in Bangladeshi and is commonly consumed. However, data shows that pulses are now consumed to a much lower extent in the villages (high vibrant or low vibrant alike) compared to the BRAC group, char and even slum households. Increasing prices, generally caused by a reduction in supply associated with rice monoculture, is cited as a reason why village dwellers can no longer afford large quantities. The char dwellers home-produce pulses and are able keep a portion for own consumption. Slum dwellers consume some pulses, often as a substitute to compensate for low intake of animal foods.

Consumption of fish, which was once an integral part of a traditional Bangladeshi meal, is now becoming increasingly confined to the rich, declining availability and high prices can account for this concentration in the diet of the rich. Fish is still consumed by all BRAC group households, but only 57.5% of slum households have consumed any fish in the last 3 days.

Meat consumption is very low even in the BRAC group, the char area has the lowest levels, with meat consumption a rarity. The fact that consumption is low across all samples suggests an acute shortage, even deny access for middle-income groups.

Higher levels of consumption for milk are recorded, excepting the slum dwellers. Milk and eggs appear to be cheaper sources of animal protein and more readily available for the rural poor. However, char households, with only 13% of households recording consumption, seldom consume eggs. Char dwellers appear to compensate for the low meat and egg intake with a higher percentage of households consuming milk, in fact the highest recording at 78%. Increased availability of milk through cow and buffalo rearing is a likely explanation. This interesting difference between milk (78%) and egg (13%) consumption in the char areas is doubtless related to the type of livestock being reared in these areas. It also demonstrates that the char diet is still heavily dependent on home production rather than market procurement. Consumption of milk was lowest in the slum areas. Egg intake in the slum households is better, comparable to that in the villages. These households try to compensate their low fish, meat and milk intake by a somewhat increased intake of eggs and pulses, though levels are still low. It is a little surprising that no discernible difference was found between low vibrant and high vibrant villages with regard to intake of any of these animal foods.

Banana, with widespread production, is consumed by all sample groups and across the geographical locations selected. A relatively higher consumption was seen among the urban population (slum and BRAC groups). Excepting this, fruits in general do not appear to form a major part of the diet for any of the sample groups. This finding must be viewed carefully, noting that April, when the data was collected, is not a month with high availability of seasonal fruits.

Oil intake is very low in Bangladesh but the survey notes clear differences in the type of oil being consumed. The focus group discussions noted the shift from domestically produced mustard seed oil to imported soya and palm oil. Most households, over 90% in high or low vibrant villages, slum and char areas prefer loose oil in open containers Packaged oil (in bottles or sealed cans) is seldom purchased by these households. The picture is a little different in case of BRAC group households, two-thirds of which consume loose oil and one-third packaged oil, this provides some evidence of a shift to bottled oil for this middle income group and the entry of bottled produce into the market in rural centers.

There is a clear difference between high vibrancy (HV) and low vibrancy (LV) villages in the consumption of locally produced biscuits, with higher consumption in the HV villages. Local biscuits are also consumed by low percentages of households in the char areas. This indicates that bakeries are yet to develop in LV and char villages. This is supported by high consumption of locally produced biscuits in urban areas, both poor slum and BRAC group households. Far fewer households in these areas consume branded biscuits. High percentages of households consuming loose biscuits are found in the slums and HV villages, this provides evidence of the growth in cheap market based consumption patterns.

Branded biscuit consumption is strangely higher in the village households rather than the BRAC Staff households. Biscuits appear to be becoming an important new food source for poor groups. Biscuits are relatively cheap and can provide energy for poor workers such as rickshaw pullers, in urban areas and farm workers in rural areas.

Chanachur is commonly consumed in all the sample groups but the majority of items termed as “new food items” such as like chips, soft drinks, juice, noodles, and semai are still only consumed by the BRAC group households. A closer look at the data reveals that the HV villages are slowly increasing consumption of items such as chips and soft drinks (19.8% and 14.3%) compared to the LV villages (10.5% and 7.5%). This illustrates that the consumption pattern of fashionable new foods is slowly dispersing from urban to rural areas.

The high intake in the category chanachur/nuts in the char areas might appear surprising, but it should be noted that nuts grow abundantly in the alluvial sandy soils and they are consumed and traded by the char dwellers.

Coffee still has limited consumption in Bangladesh, but tea is very popular as a hot beverage, the highest levels of consumption are found amongst the BRAC group households, followed by the villages and slums. Its use in char villages is still very low (16.7%), indicating that the growth in tea stalls seen elsewhere has yet to really develop in the char area. However, snack foods such as singara, puri, and samucha do have a market in char and low vibrant villages.

Luxury snack items, such as ice cream and chocolate demonstrate very low consumption levels in LV villages, char areas and BRAC households, surprisingly the consumption levels are very high in the slum areas (82.5%). However, the quality of these items must be considered as the focus group discussions highlighted the production of poor quality, and often unhygienic substitutes, for these luxury items. Nevertheless consumption of luxury items in HV villages is far higher than LV villages. This indicates that the market demand for these items is diffusing from the urban centres to the rural growth centres. The relatively low consumption levels of ice cream and chocolates among the BRAC households could result from high levels of health awareness within this group.

The "new food" items (chips, soft drinks, juice, etc) followed the anticipated pattern of declining consumption levels through BRAC Staff → high vibrant village → low vibrant village → slum → char. This would appear to be both a feature of market development and income. The char area where income is low also has poor transport links and the availability of products sourced outside the area is limited. The slum areas also have low income, but market development is better and the availability of these and other market-sourced items is clearly higher. The higher consumption of the 'new' foods in the slums gives an indication that income could be secondary to the availability of food items in the local market. These items are consumed, even on a limited basis, if available. Whether this is the best use of scarce financial resources in terms of nutrition is an interesting research area.

The slum areas have high levels of hot snack consumption and eating outside the home. This can be explained by lifestyle differences, such as urban dwellers being more involved in wage employment and eating food on journeys to and from work. Also the facilities and resources to prepare and cook food in the home may not be available to slum dwellers.

There is a clear evidence of a specific urban poor diet. Elements of this can be seen to be spreading into rural areas. This could mean that the rural poor and rural middle-income group will increase their involvement in the market sourcing of food. Distribution networks will therefore have to expand to meet this increasing market demand.

Notable positive differences (more than 25%) between HV and LV villages (i.e. consumption more in high vibrant than in low vibrant villages) were found in the following food items (in ascending order): bread, chira, ice cream, snacks, local biscuits, fruits (local and imported), chips, soft drinks, and noodles. The notable negative differences (i.e. consumption more in low vibrant than in high vibrant villages) were seen for wheat flour, probably due to its ready availability from the food-for-work programme. All other food items were consumed at similar levels in the two areas. Eating outside was more common in the HV than in the LV villages, probably indicative of greater wage labour and other economic opportunities in high vibrancy villages.

A comparison between the char and the slum households is of interest because it highlights the contrast between the rural poor and the urban poor food consumption patterns. The largest positive differences (consumption in slums more than in char) were found in the following food items (in ascending order): local biscuits, meat,

chira/puffed rice, snacks, juice, tea/coffee, egg, ice cream, imported fruits and soft drinks. Conversely the food items with higher consumption in the char areas are (in ascending order): sugar/gur, fish, nuts, chips and milk. As mentioned earlier, milk is a major animal food item in char households, due to ownership and/or rearing of cows and buffalos. Few of the modern packaged items are yet to enter into the food basket of the rural poor living in remote char areas away from the growth centres.

A.2. Food consumption by poverty status

Analysis of the data was also made on the basis of socio-economic status (Table A2). As expected most food items were consumed by a higher percentage of "rich" households than of the "poor". *Due to the nature of the sample when we consider the "rich" we are really only dealing with the "rural rich" group.*

Where the differences in consumption between the rich and poor groups were at the lowest were in traditional items such as wheat, bread, leafy vegetables, potato, and other vegetables. The largest differences were found for high protein items such as pulses, fish, other animal products, and fruits. Also large differences were recorded for the "new food" items such as packaged oil, biscuits, chips, soft drink, juices, ice creams and snacks. The largest difference was found for branded biscuits. The fact that it is a modern packaged and branded item is illustrative of the divergence in diets and the development of a distinctive, more westernized diet, for the elites.

Table A.3. considers the items that show the largest differences in the percentage of households consuming these items in the last 3-day period. The first 3 items together with juice and chips (crisps) are all modern packaged items that are clearly entering into the consumption patterns of the rich but have not become a regular consumption item for the poor. As well as these new "luxury " items there are also a number of traditional high value animal protein items that have a wide divergence in the percentage of poor and rich households consuming these items, these include, meat, milk and milk products and eggs.

Three categories of fruits both home produced and imported occur in this list illustrating again this is a nutritious item that is failing to enter the consumption pattern of the poor at the required levels. Though seasonality must be considered in this case. The only food item where the percentage of households consuming this item in the last 3 –day period is higher for the poor than the rich is loose edible oil. This is as a result of the rich making the switch to bottled oil. The surplus group clearly has a diet based on more animal proteins, more packaged and processed items and more nutritious fruit items.

Table A1 Percentage of households consuming different food items over the last three days by sample type (%)

SL. NO.	FOOD STUFF	LOW VIBRANT VILLAGE	HIGH VIBRANT VILLAGE	SLUM	CHAR	BRAC STAFF	TOTAL
1.	Rice	100	100	100	100	100	100
2.	Wheat flour	31	14	25	23	39	23
3.	Bread	32	41	38	33	35	37
4.	Chira/Puffed rice	37	48	30	6.7	83	38
5.	Leafy Vegetables	81	88	85	93	100	85
6.	Potato	84	94	90	77	100	88
7.	Vegetables	93	91	88	100	96	92
8.	Pulses	69	72	85	87	91	74
9.	Fish	80	82	58	73	100	78
10.	Meat	22	21	15	6.7	39	20
11.	Milk and milk product	62	59	43	73	70	60
12.	Egg	48	48	45	13	65	44
13.	Onion/Garlic/Ginger	99	98	100	100	100	99
14.	Salt	100	100	100	100	100	100
15.	Other spices	85	90	98	70	96	87
16.	Banana	41	41	53	47	65	43
17.	Apple/orange/grapes/pomegranate	12	20	20		39	15
18.	Other fruits	15	25	18	20	30	20
19.	Edible oil/ Ghee (loose)	87	94	98	100	70	93
20.	Edible oil/ Ghee (Packaged)	13	5.6	2.5		34	7.8
21.	Biscuit (local bakery)	39	61	55	37	48	49
22.	Biscuit (branded)	20	21	5	10	17	17
23.	Chanachur, chick pea, nut	41	41	50	80	48	45
24.	Chips	11	20	10	6.7	39	14
25.	Soft drinks	7.5	14	10	3.3	26	9.9
26.	Juice	6	7.9	10		44	7.2
27.	Tea/coffee	59	49	53	17	78	51
28.	Sweet meat/sugar/Gur	59	66	43	50	65	59
29.	Snacks (Singara, Puri, Samucha)	23	36	48	23	35	31
30.	Eating outside	16	33	40	13	26	25
31.	Ice cream/ chocolate	42	60	83	30	35	53
32.	Noodles/Samai	5.3	9.5	5		13	6.3
33.	Betel leaf /cigarette/betel nut	76	67	73	73	52	72

Table A.2. Percentage of households consuming items in the last 3 days by sample group and poverty status

FOOD ITEM	POOR	MIDDLE	RICH	% DIFFERENCE (4-2)/2*100)	LOW VIB. VILLAGE	HIGH VIB. VILLAGE	% DIFF. (8-7) /7*100)	CHAR	SLUM	% DIFF. (12-11)/11*100)
1	2	3	4	6	7	8	10	11	12	14
Rice	100	100	100	0	100	100	0	100	100	0
Wheat flour	22.7	22.3	26.9	18.5	30.8	13.5	-56.2	29.4	25	-15
Bread	32	41.5	41.8	30.6	32.3	41.3	27.9	35.3	37.5	6.23
Chira/Puffed rice	26.2	48.9	52.2	99.2	36.8	47.6	29.4	14.7	30	104
Leafy Vegetables	80.2	90.4	91	13.5	80.5	88.1	9.44	94.1	85	-9.67
Potato	85.5	88.3	95.5	11.7	84.2	94.4	12.1	79.4	90	13.4
Vegetables	87.2	95.7	98.5	13	92.5	90.5	-2.16	100	87.5	-12.5
Pulses	62.8	81.9	91	44.9	69.2	72.2	4.34	85.3	85	-0.35
Fish	68	83	94	38.2	79.7	81.7	2.51	76.5	57.5	-24.8
Meat	8.1	24.5	41.8	416	21.8	21.4	-1.83	8.8	15	70.5
Milk and milk product	43.6	69.1	88.1	102	61.7	58.7	-4.86	76.5	42.5	-44.4
Egg	32.6	51.1	65.7	102	48.1	47.6	-1.04	17.6	45	156
Onion/Garlic/Ginger	98.3	100	100	1.73	99.2	98.4	-0.81	100	100	0
Salt	100	100	100	0	100	100	0	100	100	0
Other spices	82	89.4	97	18.3	85	89.7	5.53	73.5	97.5	32.7
Banana	33.1	42.6	68.7	108	40.6	40.5	-0.25	50	52.5	5
Apple/orange/grapes/pomegranate	9.3	17	28.4	205	12	19.8	65	5.9	20	239
Other fruits	8.7	29.8	34.3	294	15	25.4	69.3	20.6	17.5	-15
Edible oil/ Ghee (loose)	99.4	91.5	76.1	-23.4	87.2	94.4	8.26	100	97.5	-2.5
Edible oil/ Ghee (Packaged)	1.2	9.6	22.4	1767	12.8	5.6	-56.3	2.9	2.5	-13.8
Biscuit (local bakery)	37.8	58.5	65.7	73.8	39.1	61.1	56.3	38.2	55	44
Biscuit (branded)	2.9	24.5	43.3	1393	19.5	20.6	5.64	8.8	5	-43.2
Chanachur, chick pea, nut	37.2	50	59.7	60.5	40.6	41.3	1.72	73.5	50	-32
Chips	7	19.1	26.9	284	10.5	19.8	88.6	14.7	10	-32
Soft drinks	2.3	9.6	29.9	1200	7.5	14.3	90.7	2.9	10	245
Juice	3.5	7.4	16.4	369	6	7.9	31.7	5.9	10	69.5
Tea/coffee	39.5	52.1	79.1	100	59.4	49.2	-17.2	23.5	52.5	123
Sweet meat/sugar/Gur	44.8	67	85.1	90	59.4	65.9	10.9	52.9	42.5	-19.7
Snacks (Singara, Puri, Samucha)	26.7	36.2	35.8	34.1	23.3	35.7	53.2	26.5	47.5	79.3
Eating outside	19.8	26.6	34.3	73.2	15.8	32.5	106	11.8	40	239
Ice cream/ chocolate	45.9	60.6	58.2	26.8	42.1	60.3	43.2	29.4	82.5	181
Noodles/Samai	1.7	6.4	17.9	953	5.3	9.5	79.3	0	5	-
Betel leaf /cigarette/betel nut	70.9	68.1	77.6	9.45	75.9	66.7	-12.1	70.6	72.5	2.69

Table A3 Items with the largest percentage consumption difference between rich and poor groups

FOOD ITEM	POOR (1)	MIDDLE (2)	RICH (3)	% DIFFERENCE (3-1)/2*100)
Edible oil (Packaged)	1.2	9.6	22.4	1767
Biscuit (branded)	2.9	24.5	43.3	1393
Soft drinks	2.3	9.6	29.9	1200
Noodles/Samai	1.7	6.4	17.9	953
Meat	8.1	24.5	41.8	416
Juice	3.5	7.4	16.4	369
Other fruits	8.7	29.8	34.3	294
Chips	7	19.1	26.9	284
Apple/orange/grapes	9.3	17	28.4	205
Banana	33.1	42.6	68.7	108
Milk and milk product	43.6	69.1	88.1	102
Egg	32.6	51.1	65.7	102
Tea/coffee	39.5	52.1	79.1	100
Edible oil/ Ghee (loose)	99.4	91.5	76.1	-23.4

A.3. Food consumption frequency

Survey respondents were asked how frequently they consumed different food items in their households. The responses were computed and presented in detail in Annex 1 and Annex 2

In the HV villages rice was consumed three times a day by 84% of the households but wheat flour was prepared and eaten very rarely, once a day by only about 6 % of households. The figures in the LV villages were 73% and 18% respectively, indicating that wheat has a more significant role in the food basket of LV villages. This contrasts with char households where rice is eaten 3 times a day by 87% but wheat by only 7%, compared with 80% and 18% respectively in slums. This may result from low availability of wheat in the char areas or a food preference against wheat. Likewise very few households in the chars eat bread with 3.3% eating once a day (20% not at all), compared to 18-23% households eating bread once a day in the other areas. Village households more frequently consumed puffed rice than slum or char households. The char households ate puffed rice very infrequently,

Leafy vegetables are most frequently eaten in the char households, with 43% eating twice daily, followed by the villages with 25-28% of households eating once daily. The char diet had higher frequencies of consumption for pulses and potato with 30-37% of households consuming 3 times a day. Thus, rice, pulses, leafy vegetables and potatoes were the main components of the char dwellers diet.

Among animal food sources, fish was most frequently eaten in the villages and least frequently in slums and chars. Meat was a rare item in all areas but milk was a common item in the villages and chars but not in the slums. On the contrary, egg was very rarely eaten in char households, compared to households in other sample areas.

Banana was consumed frequently in all areas, slum dwellers consumed imported fruits (apple, grapes etc.) relatively more frequently but overall the consumption levels were negligible.

Consumption of packaged oil has not been established by households in either type of villages, slum or chars, with over 70% of households never buying packaged oil, this figure rises to 97% for the char area. The general preference is for the purchase of loose oil, which can be bought in smaller quantities.

Biscuits from local bakeries are consumed in the HV villages and slums much more frequently than in the LV villages and char areas. Branded biscuits do not feature heavily in the dietary pattern of any of the samples. Whilst chanachur is eaten frequently in all areas, chips are still very infrequently eaten in the LV and the char areas. In these less vibrant areas, nearly half the households never eat chips, the same situation occurs for soft drinks and juice.

Hot snacks are frequently consumed in the HV villages and slums in comparison to very infrequent consumption in LV and char areas. The same pattern is demonstrated for the consumption of ice cream and chocolates. Noodles/samai are very infrequently eaten in any of the areas studied.

High frequency items in the BRAC households include rice, bread, wheat flour, chira/puffed rice, leafy vegetables, potato and other vegetables, pulses, all kinds of animal food (meat less frequently), fruits, both loose and packaged oil, local biscuits, chanachur, juice, sugar and snacks. The items they consume infrequently are: chips, soft drinks, ice cream/chocolates and noodles.

Eating out is also not frequent amongst by this group. In this respect the group may not represent a good proxy for the middle-income urban group, who are likely to eat out more often. These BRAC employees are likely to work at the local offices, which may not be near the upazila centre and in easy reach of the cooked food outlets.

A.4 Food Sales figures from the retailer survey

As a crosscheck on the accuracy of the household survey data, retailers were also asked about the nature of the changing sales patterns for their outlets. The sales patterns were broadly consistent with the consumption patterns recorded in the household survey. The retailer survey had a more detailed food list and hence more specific food items can be analysed. Tables A5 and A6 illustrate the food items with the largest increases and decreases in sales respectively

Sale of coarse rice increased in the villages and slums but decreased (3 fold) in upazila centres. On the other hand, sale of fine rice decreased in all areas. Sale of packaged rice increased by 12% in the upazila areas alone.

Packaged wheat increased sales by 30-76% in the study areas, excepting the char area. Wheat flour, in loose form, sales also increased in villages and upazila centres, but decreased slightly in the slums. A slight increase in the sale of noodles was seen all three areas (6-12%).

A very large increase in sale of packaged branded biscuits was seen in the upazila centres (by 150%); with more modest increases (28-60%) in villages and slums as well. Loaf (sweetened round-shaped baked bread), cake, sweet singara and sweet samucha have become popular in the villages, the sale of these items increased by up to 6 fold in the period. However, the picture was not so obvious in the upazila centres or in the slums. To compensate, bread sold more in upazila centres and slums, but less in villages than previously.

Luxury food items such as like chanachur, potato chips, chocolates, chewing gums, laddu (a kind of sweetmeat), have all registered remarkable increases in sales in the upazila centres (100-400%). The sale of laddu has also increased in villages and slums, and the sale of chewing gum also increased in the villages. A notable change in the char areas was in case of chocolate, the sale of which increased by 20% during the period. Bottled and canned juice also sold in the upazila centres at higher levels than previously.

The sale of farm eggs increased in the upazila centres (3 fold), farm eggs sold more, even in villages and slums, but to a lesser extent.

The sale of locally produced mustard oil decreased in both slums (by 65%) and upazila centres (by 16%). In contrast, sale of both bottled and loose oil increased in the upazila centres.

Large increases were seen in the sale of branded packaged liquid milk in the slums (by about 100%). Interestingly, unlike other areas, the sale of condensed milk increased in the upazila centres. Also increases were seen in the sale of ice-cream (both local and branded) and drinks (canned/packaged) in the upazila centres.

Thus, sale of most of the food items, particularly, the modern packaged and branded items, increased in all study areas with the exception of the char area. The greatest changes in sales have occurred in the upazila centres, the new growth-centres in rural Bangladesh.

Table A.5. Items with highest percentage increase in sale by sample areas

Village	Upazila Centre	Slum	Char
Laddu (candy)	Pickle	Bananas	Chocolates local
Sweet samcha	Ice cream non-branded	Coarse rice	Packaged salt
Sweet *Singara*	Chewing gum imported	*Laddu* (candy)	Local eggs
Chewing gum imported	Imported rice	Pickle	Potato chips local
Loaf	HYV Eggs	HYV Eggs	Toast biscuits
Cake	Bananas	Spices branded packed	Biscuits unpacked
Coarse rice	Potato chips branded	Potatoes	Sweet *Singara*
Bananas	*Laddu* (candy)	Canned liquid milk	Duck's eggs
Spices locally packed	Morali	Branded Fresh milk	Unpackaged pulses
HYV Eggs	Monakka	Ice cream non-branded	Unpackaged sugar
Morali	Biscuits packed branded	Tang	Molasses
Monakka	Spices branded packed	Biscuits packed branded	Non-bottled vegetable oil
Local eggs	Ice cream branded	Round bread	
Tang	Chocolates local	Chewing gum local	
Chocolates local	Wheat flour loose	Wheat flour packaged	

Table A.6. Items with highest percentage decrease in sale by sample areas

Village	Upazila Centre	Slum	Char
Round bread	Loaf	Chocolates imported	Molasses
Semai/Suji/Sagu	Coarse rice	Chewing gum imported	Non-bottled vegetable oil
Fine rice	Duck's eggs	Mustard oil	Unpackaged pulses
Toast biscuits	Potatoes	Fine rice	Unpackaged sugar
Powder Milk (packaged)	Mustard oil	*Moa* (flattened rice)	Duck's eggs
Hot spice	Spices locally unpacked	Nut chanachur	Biscuits unpacked
Cumin	Onion/garlic/ginger	Unpackaged pulses	Sweet *Singara*
Nut	Toast biscuits	Bottled/canned c. Drinks	Toast biscuits
Sugar candy (misri)	Saline	Loaf	Local eggs
Swandesh	Canned powdered milk	Puffed rice/flattened rice	Potato chips local
Potatoes	Marguli	Aromatic rice	Packaged salt
Spices branded packed	Spices	Unpackaged sugar	Chocolates local

A.5. Intra-household food distribution

A close look at the data on intra-household food distribution shows that the majority of the food items are eaten by all household members in all study areas with little preference for any particular member or group of members. Tables A7 and A8 show the findings by sample area and poverty status respectively.

Examples of items that are consumed by all household members include: rice, wheat flour, vegetables, fish, meat, fruits, oil and noodles.

However, there are important examples of intra-household preferences. Under-5 and school-going children, in the villages, slums, and chars, eat bread more frequently. In the BRAC households, old and ill members were found to take higher shares of both wheat flour and bread, this is not seen in other groups.

Milk and eggs have higher consumption by both pre-school and school children in most areas. Also in the LV villages, slums and chars the male wage earners have a higher consumption level of eggs. In contrast to the rural or urban low-income families, the BRAC households allocate milk and egg to the children to a much higher extent than to male earners.

Children, in the villages, slum and char areas, consume biscuits, both local and branded, but in the BRAC households, the consumption of biscuits amongst the school-going children is rather low. Thus, a contrasting picture emerges between poor (rural or urban) and rich (urban) in terms of child nutrition. The children of rich households get appropriate protein nutrition from eggs and milk, whilst the children of poor families get energy from biscuits but have lower protein content in their diet.

Chanachur as a snack item was eaten by all members of the households in all areas, whilst chips were found to be an exclusive item for children only, particularly pre-school children of HV villages, slums and BRAC households. Thus, consumption of chips among children appears to be related to vibrancy of the area, independent of economic status.

Similar patterns are seen with the consumption of soft drinks and juice. Young children in slums and BRAC households, in particular, consume juice. In slums, however, the wage earner is the predominant consumer in 50 % of the households, unlike the wage earners of any other area. Snacks are another item that are consumed mainly by male wage earners and children in all study areas except the BRAC households. Ice cream and chocolates are, as expected, child consumption items in all areas except the chars.

Tea/coffee, snacks and eating outside are primarily the preserve of male wage earners. This indicates that the trend to eat out is not shared by all household members and the trend to socialize over tea and coffee is primarily a male one, leaving females and female-headed households with a very different consumption pattern, especially in urban areas (see cluster analysis).

Table A.7. Intra-household food consumption by sample area

Items	Low vibrant village							High vibrant village							Slum							Char							BRAC Staff				
	1	2	3	4	5	6	7	1	2	3	4	5	6	7	1	2	3	4	5	6	7	1	2	3	4	5	6	7	1	2	3	5	7
Rice	100							100							97		3.3					98				2.5			95.7				4.3
Wheat flour	87		1	2	8		2	94				2.1		4.2	82		3.6		14			94				6.3			81				19
Bread	17	41	24	0.9	18			23	45	19		12		1.8	17	50	21		13			31	26	29		5.7	2.9	5.7	36.8	32	11		16
Chira/Puffed rice	83	7.6	5.9		1.7		0.8	77	9.7	2.7		4.4		6.2	92	3.8					3.8	82	10	2.6				5.1	73.9	17			4.3
Leafy Vegetables	100							99	0.8						100							98				2.5			95.7				4.3
Potato	100							100							100							98				2.5			95.7				4.3
Vegetables	100							100							100							97				2.6			91.3				8.7
Pulses	100							99			0.8				100							97				2.6			95.5				4.5
Fish	100							98	1.7			0.8			100							97				2.7			95.7				4.3
Meat	98		0.8		0.8	0.8		99	0.9						100							92	2.6			2.6	2.6		95.7				4.3
Milk and milk product	81	13	5.1		0.9			83	17						93	6.9						70	24			6.1			47.8	35	8.7		8.7
Egg	78	7.6	4.2	0.8	8.4		0.8	80	11	5.1	0.9	1.7	0.9		86	3.4			10			87		5.3		7.9			39.1	30	8.7		22
Onion/Garlic/Ginger	99		0.8					99	0.8						100							98				2.5			95.7				4.3
Salt	100							100							100							100							95.7				4.3
Other spices	100							100							100							97				2.6			95.7				4.3
Banana	71	18	7.6	0.8	3.4			75	17	5.9		1.7		0.8	83	17						73	10	13		5			47.8	39	8.7		4.3
Apple/orange /grapes/pomegranate	82	8.5	6.4		3.2			82	15	2.8				0.9	82		5.9	5.9	5.9			91	3	6.1					52.2	35	8.7		4.3
Other fruits	93	5.2	1.7					92	4.3	1.7		1.7			100							94	2.9	2.9					91.3				8.7
Edible oil/ *Ghee* (loose)	100							100							100							98				2.5			100				
Edible oil/ *Ghee* (Packaged)	100							97				2.8			100							100							94.1				5.9
Biscuit (local bakery)	29	33	29		5.7	2.8		24	43	20		7.5	1.7	3.3	22	52	26					19	32	35		2.7	5.4	5.4	42.9	24	9.5		24
Biscuit (branded)	40	27	20		2	10		45	26	12		6.4	10	0.9	44	25	13		6.3	13		23	26	32			19		59.1	23	4.5		
Chanachur, chick pea, nut	21	41	29	1	6.7		1	30	42	22		4.3	0.9	0.9	79	21						28	33	30		2.5	2.5	5	52.4	38			9.5
Chips	4.5	41	44		7.6	1.5		3.4	60	26	2.3	5.7	2.3			60	33						45	45		3.2		6.5	22.7	68	9.1		
Soft drinks	41	14	17		18	9.9		49	9.9	8.6	1.2	25	6.2		44	11	33		11			66	3.4	6.9		14	10		47.8	13			26
Juice	7.5	47	36		1.9	7.5		12	55	20	3.3	8.3	1.7			50			50				64	29					5.9	77	5.9		5.9
Tea/coffee	26		2.1	1	63	2.1	6.2	28		3.3	1.1	59	1.1	7.7				7.1	93			19	3.8			62	7.7	7.7	8.7				87
Sweet meat/ Sugar/*Gur*	85	7.5	2.8		2.8		1.9	74	16	2.6		5.1	0.9	0.9	95				5			68	16	5.3		5.3	5.3		56.5	39			
Snacks (*Singara, Puri, Samucha*)	20	15	13	3.3	48			26	18	22	0.9	33			19	33	33		14			24	24	24		24		5.3	38.1				62
Eating outside	1.4		1.4	5.6	92			1.3		7.6	2.5	89							100							96		3.8	11.8				88
Ice cream/ chocolate	2.9	52	41		3.9			6.3	61	26		7.1			5.3	47	37	5.3	5.3			2.6	46	39		5.1		7.7	23.5	65	12		
Noodles/*Samai*	96	0.9				2.8		93	1.8	0.9			4.5		100							97					2.6		82.6	8.7	4.3		
Betel leaf /cigarette/betel nut	13				78	4.1	5.1	6			1.2	77		16	9.1				86		4.5	3.3				77		20					93

1. All hh members; 2. Children below 5; 3. School going children; 4. College going children; 5. Male earners; 6 guests, 7 ill, old people

Note: Figures highlighted in gray colours show importance of the findings explained in the text

Table A.8. Intra-household food consumption by poverty status

Items	Poor							Middle class							Rich						
	1	2	3	4	5	6	7	1	2	3	4	5	6	7	1	2	3	4	5	6	7
Rice	100							99				1.1			97		1.5		1.5		
Wheat flour	94				4.8		1.4	89			1.3	8		1.3	76		3.7	1.9	13		5.6
Bread	21	39	20		18	0.7	2	18	47	21	1.1	10		2.3	32	35	26		7		
Chira/Puffed rice	81	8.8	2.5		2.5		5	81	8.6	3.2		4.3		3.2	82	10	6				1.5
Leafy Vegetables	99	0.6						99				1.1			99				1.5		
Potato	100							99				1.1			99				1.5		
Vegetables	99				0.6			99				1.1			99				1.5		
Pulses	99			0.6				99				1.1			99				1.5		
Fish	99	0.6			0.6			98	1.1			1.1			99				1.5		
Meat	98	0.6			1.2	0.6		98	1.1			1.1			97		1.5			1.5	
Milk and milk product	80	17	2.6		0.6			80	16	2.2		2.2			79	15	3		3		
Egg	83	7.8	1.2	0.6	6.6	0.6	0.6	77	8.6	5.4		8.6			67	13	12	1.5	6		
Onion/Garlic/Ginger	99	0.6						99				1.1			97		1.5		1.5		
Salt	100							100							99				1.5		
Other spices	100							99				1.1			99				1.5		
Banana	73	19	4.7		2.9		0.6	67	22	9.6		1.1			76	9	9	1.5	4.5		
Apple/orange /grapes/pomegranate	80	15	4.2		0.8			81	10	5.6		2.2		1.1	80	9.1	6.1	1.5	3		
Other fruits	91	4.3	2.5		1.9			96	2.3	1.1		1.1			95	4.8					
Edible oil/ *Ghee* (loose)	100							99				1.1			100						
Edible oil/ *Ghee* (Packaged)	93				6.7			100							98				2.2		
Biscuit (local bakery)	23	39	25		7.7	2.6	3.2	31	41	22		5.7	1.1		30	30	30		6.3	3.1	1.6
Biscuit (branded)	36	25	19		3.8	15	0.8	45	29	13		2.4	11		49	24	18		4.8	4.8	
Chanachur, chick pea, nut	28	39	24		6.4		2.6	34	44	17	1.1	3.3	1.1		43	29	24		3.2	1.6	
Chips	3.3	50	37	1.1	5.4	1.1	2.2	5.3	61	25		6.7	1.3		7.5	49	38	1.9	1.9	1.9	
Soft drinks	39	11	8	1.3	29	12		50	15	13		16	6.6		58	6.5	13		16	6.5	
Juice	5.9	63	16	2	7.8	5.9		6.1	61	25		8.2			13	42	36	2.2		4.4	2.2
Tea/coffee	18	0.9	0.9		71	2.6	7	24		2.7		65	2.7	5.3	31		3.2	4.8	55		6.5
Sweet meat/sugar/*Gur*	78	13	2		4.6	2	0.7	72	18	4.5		3.4	1.1	1.1	83	11	1.6		3.1		1.6
Snacks (*Singara, Puri, Samucha*)	20	17	18		44		1.5	24	22	19	1.2	34			34	12	20	5.1	29		
Eating outside	2.2		1.1		96		1.1	3.1		4.7	3.1	89					5.8	7.7	87		
Ice cream/ chocolate	4.8	53	35	0.7	5.4		1.4	3.4	60	29		6.9		1.1	11	54	34		1.8		
Noodles/*Samai*	96		0.7			3.3		91	4.4	1.1			3.3		95	1.5				3.1	
Total	70	11	6.1	0.1	9.8	1.1	1.3	68	14	6.4	0.2	9.8	0.8	0.6	70	10	8.3	0.8	9.6	0.9	0.7

1. All hh members; 2. Children below 5; 3. School going children; 4. College going children; 5. Male earners; 6 guests, 7 ill, old people

Note: Figures highlighted in gray colours show importance of the findings explained in the text

A.6. Food expenditure and share of different food items to total expenditure

Table A.9 presents per capita food expenditure and Table A.10 presents the share of selected food items to total expenditure.

Households living in char and slum areas are the poorest sections of the population with per capita per day food expenditures of Tk. 20.6 and Tk. 21.6 respectively. The village households, HV and LV alike, are a little better with food expenditure of Tk. 25.6 and Tk. 24.7 per person per day respectively, whilst the BRAC group has food expenditure of Tk. 32 per person per day, much higher than the other groups.

Although total food expenditure in char and slum areas is the same, striking differences were observed in their expenditure share to different food items. For example, the slum households spend much less on cereals (rice and wheat) and egg. In fact their expenditure for rice is the lowest compared to all other groups of the present study but they spend more on fish, meat, fruit and egg and also for the luxury items such as coca cola/juice, noodles, snacks, spices, sugar and eating outside compared to the char households.

Interestingly, expenditure for fish is almost the same in the two areas, although fish consumption in char areas is much higher than in slums (73.3% vs. 57.5%, see Table A1). This is presumably due to the fact that char dwellers are not market dependent for fish. The expenditure share on eggs in the slum households is the highest for all groups.

The HV villages in comparison to LV villages spend less on cereals (rice and wheat), but spend more on fish, milk, fruit, meat, oil, noodles, snacks, spices, sugar, and for eating out. This food expenditure pattern shows that the HV villages are developing a less traditional consumption pattern with the entry of "new food" items into the diet. The BRAC group spends a smaller budget share on rice compared to other groups, they have a more diversified expenditure pattern spending more on vegetables, fish and meat.

Interestingly rice has the highest share of total food expenditure in the poor rural char areas, whilst the lowest budget share for rice is for the poor urban slum households. When the food expenditure pattern was examined between char and slum areas, it was found that while expenditure for fish in the two areas is comparable (5.81% and 6.07%), the percentage expenditures for meat and egg in the slum households are much higher, but for milk lower than in the char households. Slum households are unable to allocate a large budget share for milk due to the high price and the limited availability in urban areas. In char areas the allocation for milk is not high, but consumption is higher because of greater local availability from non-market sources.

The percentage expenditure on "new food and drinks" such as coca cola/juice, noodles, imported fruits, snacks, spices, sugar, and outside eating is higher in the slum than in the char areas. Similar trends, although to lesser extents, are found in the HV villages compared to the LV ones. This is presumably because there are fewer wage income opportunities in LV villages and char areas, which limits the poor's market access for high energy and high protein items.

Table A10 shows the food expenditure profile of the population according to income. The total food expenditure for the rich group is Tk. 36.6, for the middle-income group it is Tk. 26.3 and for the poor group it is only Tk. 18.4 per person per day. The rich have the highest expenditure for all items, except wheat flour and potato, in these cases the expenditure share is similar across the income profile.

In terms of the share of food items to total food expenditure, the rice share is lowest for the rich group at 29 % and highest for the poor group at 45%. Clearly the poorer spend a higher budget share on the staple foods. The following food items have a decreasing budget share with increasing income: rice, wheat, vegetables and potato.

Conversely, the budget share increases with income in case of: pulses, fish, meat, egg, milk, and most packaged items, these items are priced out of low income food baskets.

Table A.9. Share of different food item to total food expenditure by vibrancy (%)

AREA	RICE	WHEAT	VEG.	POTATO	PULSE	FISH	MEAT	EGG	BISC	COCA COLA/ JUICE	FRUIT	MILK	SNACKS	EATING OUT	P/C DAILY FOOD EXP. (TK.)
Low vibrant village	40.5	3.51	7.25	4.49	2.73	8.36	3.74	1.82	1.19	0.47	2.39	4.68	1.74	1.62	24.7
High vibrant village	36.4	1.66	7.24	4.08	2.81	9.27	3.35	1.71	1.96	0.74	4.1	4.36	3.11	2.71	25.6
Char	44.6	3.02	7.89	3.59	4.18	5.81	0.63	0.47	0.93	0.32	2.68	7.58	3.47	1.08	20.6
Slum	32.4	2.08	6.66	4.56	3.96	6.07	2.63	3.1	1.53	0.96	5.01	2.61	4.5	4.5	21.6
BRAC staff	25	3.11	8.69	3.22	3.81	10.1	5.95	2.07	1.87	2.77	5.83	5.34	2.93	2.98	32
Total	38.4	2.59	7.24	4.25	3.06	8.17	3.14	1.8	1.5	0.61	3.38	4.61	2.77	2.33	24.3

Table A.10. Share of different food items to total food expenditure by poverty groups (%)

POVERTY	RICE	WHEAT	VEG.	POTO	PULSE	FISH	MEAT	EGG	BISCUIT	COCA COLA/ JUICE	FRUIT	MILK	SNACKS	SPIC	EATING OUT	P/C DAILY FOOD EXP. (TK.)
Poor	44.9	2.93	7.19	5.03	2.94	6.7	1.42	1.7	0.99	0.27	1.98	3.28	2.71	6.5	2.01	18.4
Middle	33.2	2.42	7.58	3.49	3.11	8.79	4.4	1.87	1.94	0.68	4.55	5.8	2.9	6.92	2.75	26.3
Rich	29.3	1.95	6.88	3.33	3.29	11.1	5.79	1.93	2.18	1.4	5.33	6.35	2.75	6.18	2.56	36.6
Total	38.4	2.59	7.24	4.25	3.06	8.17	3.14	1.8	1.5	0.61	3.38	4.61	2.77	6.56	2.33	24.3

A.7. Perceived changes in consumption over the last five years

Respondents were asked to recollect whether any changes had occurred (increases or decreases) in the consumption of specific food items in their households during the previous five years. The responses were analyzed by sample group (Annex 3) and by poverty category (Annex 4).

Table A.11 examines the food items considered in the household survey for which over 50% of the households declared either increasing or decreasing perceptions of consumption of the selected food items. The figures for over 50% have been highlighted.

Clearly the middle group and the rich group have a substantial number of increasing perceptions, with only wheat flour in the middle group showing a overall decrease in consumption. The poor on the other hand have only 4 items that have an overall increasing perception, 3 of which are marginal food items, with bread the only staple food item show an increasing.

The poor have 3 items recording an overall decrease in consumption, wheat flour, fish and meat. The latter two are illustrative of the worsening imbalance in the diet of the poor. The items for which the highest percentage of households perceive an increase are many of the new processed, packaged items and luxury items, such as crisps, chocolates, branded biscuits and bottled oil. Interestingly the same pattern occurs in the middle, which suggests the consumption trends are not limited to a minority of the wealthiest but are percolating down into middle-income groupings.

Table A.11. Items showing overall perceived increase or decreases by poverty group

ITEM	POOR			MIDDLE			RICH		
	Inc.	Dec.	No change	Inc.	Dec.	No change	Inc.	Dec.	No change
Wheat flour	10	58	32	13	**51**	36	20	37	43
Bread	53	25	22	71	9.2	20	51	16	33
Leafy Vegetables	43	23	34	61	9.6	30	49	16	34
Potato	47	20	32	53	12	35	57	4.5	39
Vegetables	32	32	36	48	11	41	52	7.5	40
Fish	17	61	22	22	48	30	49	28	22
Meat	12	62	25	21	41	37	36	21	43
Edible oil/ (Packaged)	47	27	27	66	5.3	29	72	4.3	24
Biscuit (local bakery)	44	29	27	73	13	15	70	6.3	23
Biscuit (branded)	37	29	34	68	16	15	76	6.3	17
Chanachur, chick pea,	54	23	23	71	8.8	20	74	6.5	19
Chips	58	20	23	81	5.3	13	81	5.7	13
Soft drinks	41	32	27	67	11	22	68	6.5	26
Juice	49	25	25	69	14	16	71	8.9	20
Tea/coffee	34	29	37	51	17	32	61	9.7	29
Sweet meat/sugar/Gur	33	31	36	54	17	29	59	11	30
Snacks (Singara, Puri)	40	25	35	65	16	19	53	14	34
Eating outside	29	21	49	47	17	36	51	12	37
Ice cream/ chocolate	66	14	19	85	6.9	8	79	14	7.1

The poor perceive widespread decreases in the consumption of meat and fish suggesting that inequality between the dietary patterns of the rich and poor groups is growing. This goes someway to support the general finding that the diet of the poor remained largely unchanged in the 1990s, whilst the diet of the rich increased in terms of both the quantity, protein and energy. However, the suggestion from this data is that the diet of the poor is now worsening. Obviously these are only perceived changes and there could be a tendency to exaggerate declining consumption levels for the poor.

Generally the perceptions of increasing consumption items were similar across all income groups. The data indicates that during the last 5 years, the food bundle has shifted towards more fashionable, nutritionally poor items at the cost of traditional nutritious items. Increasing availability and market development together with attractive advertising and packaging may account for this trend.

The contrast of increasing perceptions between the sample areas is not so marked but patterns can be discerned (Table A12). Interestingly the char area exhibits some of the highest percentages of households perceiving increase in consumption for a range of items, especially some of the new food items. Such as juice and soft drinks. Although, as previous tables have shown, the levels of consumption and the percentage of food expenditure on these items in the char areas is very low. Nevertheless these figures do indicate that these items are now available in the char areas, indicating an expansion of the retail sector and the distribution network. Although low consumption does appear to be increasing for many of these items, some of which will be new items in the char consumption pattern in the last 5 years.

Table A.12 Perceived changes in food consumption by sample groups

ITEM	LOW VIBRANT VILLAGE			HIGH VIBRANT VILLAGE			SLUM			CHAR			BRAC STAFF		
	Inc.	Dec.	No change	Inc.	Dec.	No change	Inc.	Dec.	No change	Inc.	Dec.	No change	Inc.	Dec.	No change
Rice	43	6.7	50	44	13	43	28	20	53	57	0	43	35	13	52
Wheat flour	17	44	39	9.5	49	41	16	44	41	3.6	89	7.1	19	62	19
Bread	58	14	28	**63**	15	23	51	31	17	67	21	13	37	37	26
Leafy Vegetables	45	18	36	48	14	38	43	38	20	60	13	27	70	8.7	22
Pulses	26	28	46	43	29	29	56	18	26	67	6.7	27	55	4.5	41
Fish	31	47	23	25	52	23	16	57	27	10	67	23	26	35	39
Meat	21	40	39	23	43	34	15	72	13	3.4	66	31	22	52	26
Banana	32	26	43	33	33	34	33	48	20	30	37	33	**61**	17	22
Edible oil (P)	70	0	30	67	8.3	25	80	20	0	100	0	0	47	24	29
Biscuit (local)	**62**	11	26	55	22	23	51	35	14	65	17	17	48	24	29
Biscuit (B)	**65**	11	24	54	21	25	30	40	30	69	6.3	25	50	36	14
Chips	77	0	23	70	11	18	55	29	16	93	0	7.1	68	27	4.5
Soft drinks	69	5.6	25	54	22	23	48	31	21	100	0	0	35	22	44
Juice	66	7.5	26	63	25	12	43		57	100	0	0	59	29	12
Tea/coffee	57	16	27	43	20	37	27	39	35	43	7.1	50	35	35	30
Hot Snacks	45	12	43	55	21	24	45	37	18	67	4.8	29	38	38	24
Eating outside	36	11	53	44	22	34	27	12	62	58	17	25	47	35	18
Ice cream/ Choc	73	15	13	81	9	9.9	59	15	26	84	5.3	11	65	18	18

Items whose consumption has reportedly decreased in the char area are wheat flour, meat, and fruits. Wheat flour, no doubt, due to a preference for rice and processed wheat products and meat and fruits due to declining availability for poor groups.

The decline in wheat flour consumption is counterbalanced by the increase in processed wheat products. This market may be developing due to increasing wealth and changing domestic roles, one consequence of which is reduced labour for the preparation of home made wheat products. Women are increasingly finding wage

employment in the manufacturing sector (textiles and garments) and agricultural sectors, therefore finding less and less time for household chores.

Pulse consumption increased in the slum area. This may be due to pulses being a cheaper alternative source of protein than meat or fish or milk. Imported pulses may also have become available at cheaper prices. This is an interesting example of cheaper products entering the market and helping the poor to find alternative cheaper sources of protein, at least for the urban poor.

The HV villages show increases in potato consumption, which may be evidence of diversification of the diet in the vibrant/wealthier areas. Although there are low consumption levels of many of the "new food" items the perceptions do show that consumption of these items is increasing and that consequently these items must be entering the market and that the market is expanding into more remote areas.

Section B Sources of food consumed

B.1. Home production or market sourcing of food items

The respondents were asked to identify the sources of food items for household consumption, whether home produced, bought from a neighbour, local retailer, or *haat* (termed local level market) or from a fixed bazaar or shop (termed higher level market). The responses are presented both by area of residence and by poverty status in Table B1.

Generally rice had a high level of home production or local procurement in the char area (46%) and in the villages (49% in HV and 57% in LV). In the slums rice was mostly procured from the lower level market, which was the main source of rice for both rich and poor.

Interestingly, the BRAC group bought most of their food items, including rice, from higher-level markets. This could indicate a preference for higher income groups to shop in the more formal sector, possibly for quality or status reasons. Other locally produced/procured items in the char and village areas were chira/puffed rice (56-61%) egg (38-52%), leafy vegetables (56-61%) and to some extent milk (39-49%).

The other food items were all purchased principally from the lower level market, irrespective of the sample group or poverty status. A group of food items was identified that were purchased mostly from higher level markets in the char and village areas: These included: edible oil (packaged and not loose), biscuit (local and branded), chanachur, chips, soft drinks, juice and sugar/gur. Except sugar/gur, all these items are processed, packaged or bottled, indicating that these 'new' foods have yet to get to local markets to any significant degree in the rural areas.

Clear trends were noted for the market source of food items by poverty group: The poor tend to utilise lower level markets (such as local traders and haats), the middle-income groups tend to utilise the high level markets (fixed shops and bazaars), whilst the rich group appear to source more food from own production and the local market. This suggests that the rich are in fact landowners who have greater access to food from home production. In this respect our proxy group of BRAC staff as a middle- income urban groups may be skewing the results. It is likely that a middle/rich group containing the urban rich would have a significantly different sourcing pattern based more on fixed markets.

The char area differs from the poor group in general by sourcing more of the traditional food items from local and home production. These are landowners but poor marginal ones. In Bangladesh the poor in general are composed of landless households.

Very few of the "new food" items are sourced at the local level, and clearly not from home production. These goods are only sourced at fixed markets and not from traders or haats.

Table B.1. Market based sources of food consumed (%)

	Food items	Poor			Middle class			Rich			Slum			Char			BRAC staff			High vibrant			Low vibrant		
		Local	Lower level market	Higher level market	Local	Lower level market	Higher level market	Local	Lower level market	Higher level market	Local	Lower level market	Higher level market	Local	Lower level market	Higher level market	Local	Lower level market	Higher level market	Local	Lower level market	Higher level market	Local	Lower level market	Higher level market
1	Rice	9.9	48	40		7.5	90	20	80		8.7	78	13	46	32	20	27	37	37	49	27	24	57	18	25
2	Wheat flour	2.6	54	36			100	14	57	14	11	67	22	12	54	32	12	41	41	4.8	48	48	33	22	44
3	Bread		45	55		20	80		80	20		63	38		53	47		58	42		69	31		46	54
4	*Chira*/Puffed rice	22	38	40		17	75		100		5.3	47	47	53	20	27	33	37	28	46	30	22	43	17	37
5	Leafy Vegetables	60	11	23	5.9	2.9	79	86	11	3.6		78	22	61	17	19	68	15	14	58	16	24	56	18	25
6	Potato	4.8	54	41		2.8	94	4.3	87	8.7		78	22	21	51	28	21	49	30	28	40	33	31	39	30
7	Vegetables	17	47	34			91	23	70	6.7		86	14	39	42	18	29	45	25	38	39	22	44	32	24
8	Pulses	10	44	46		12	88	69	27	3.8	4.8	62	33	1.1	55	43	8.8	44	47	10	43	47	13	39	48
9	Fish	12	39	47			100	23	68	4.5		74	26	10	55	32	15	46	40	13	53	33	11	54	33
10	Meat	21	36	36			83		100			78	22	24	52	21	15	44	41	17	52	30	14	43	39
11	Milk and milk product	36	47	15		35	53	86	14			69	31	39	39	22	36	58	4.1	34	43	22	49	37	14
12	Egg	36	38	27	11	22	67	75	25			73	27	52	28	20	33	42	25	38	29	33	45	32	23
13	Onion/Garlic/Ginger	3	50	47			98		100			70	30	14	49	37	15	51	35	19	47	34	19	45	34
14	Salt	0.6	48	52		15	85		83	17		52	48	0.8	50	48		54	46		52	48		52	46
15	Other spices	2.8	45	51	7.7	7.7	85		100		9.1	45	45	8	47	44	12	46	42	14	48	38	14	40	46
16	Banana	5.3	49	40		43	48	7.1	79	14		67	33	20	43	33	9.8	57	33	20	48	30	13	57	30
17	Apple/orange /grapes/pomegranate		50	44		25	63	33	67			67	33		38	63		56	44		44	56		37	63
18	Other fruits	27	33	33		14	71		87	13		86	14	45	40	15	63	31	6.3	61	25	14	43	48	8.7
19	Edible oil/ *Ghee* (loose)		46	53		13	85		82	18		63	38	0.9	53	46	11	42	46	8.1	53	38	14	39	47
20	Edible oil/ *Ghee* (Packaged)		50	50			100		100			38	63		24	76		29	71		22	78		20	80
21	Biscuit (local bakery)	1.5	38	58		14	86	88	8.3	4.2		36	64	1.9	38	60		49	49		49	51		41	59
22	Biscuit (branded)		20	80		50	50		100			25	75		15	85		35	65		35	65		28	72
23	*Chanachur*, chick pea, nut	20	42	36		35	65			100		55	45		41	59		75	23	6.4	60	34	13	38	50
24	Chips		92	8.3			100		80	20		44	56		29	71		64	36		28	72		44	56
25	Soft drinks		25	75			100		100			17	83		10	90		33	67		33	67		15	85
26	Juice		67	33			100		100			70	30		50	50		40	60		43	57		18	82
27	Tea/coffee	7.4	43	49	9.5	19	71		100		5.6	44	44	6.3	35	57	8.1	45	47	6.1	41	53	7.5	32	60
28	Sweet meat/sugar/*Gur*		43	56		5.9	94		100			47	53	1.3	41	58	1.2	41	57	1.6	48	51	1.8	33	65
29	Snacks (*Singara, Puri, Samucha*)		57	43		26	74		77	23		88	13		61	39		51	47		53	44		50	50
30	Eating outside		50	38		13	69	25	68	7		67	17		62	29		51	46		56	44		39	52
31	Ice cream/ chocolate		81	18		64	27					50	50		61	39		86	14		70	28		67	31
32	Noodles/*Samai*		33	67			100					67	33		29	71	8.3	42	50		33	67	8.3	33	58
33	Betel leaf /cigarette/betel nut	0.8	48	52		31	69					25	75	1	47	52	1.2	49	50		55	45	1.9	40	58
	Total	10	46	42	1.3	15	79				1.8	62	36	17	43	38	16	47	37	18	44	37	20	38	42

B.2. Geographical sources of food consumed

Respondents were asked to note the geographical source of the food items available in their locality; the results are presented in Tables B2 and B3 by sample groups and poverty status. This is not consumption data it merely reflects the availability of food in the area. Clearly consumers may have limited knowledge of the geographical source of food items and the results must therefore be carefully considered.

The HV villages show more evidence of imported goods being available e.g. biscuits, juice, tea/coffee. This is linked to their transport accessibility, which is no doubt also crucial in the levels of vibrancy in the villages. Otherwise the comparison between LV and HV villages is broadly similar.

Traditional food items tend to be sourced locally, except wheat flour, pulses, spices and salt. This suggests that the village consumption pattern is still largely based on the availability of locally grown produce and will no doubt be highly seasonal.

The pattern of sourcing for the slum is very different. Only bread, biscuits and noodles have substantial local sourcing, these items are in fact manufactured in the urban areas. The majority of the items come from within Bangladesh with limited availability of imported goods.

The char area demonstrates a contrasting picture. Most of the traditional food items are sourced from the local area, except potato, spices and salt. There are some strange results for the char area with crisps, ice cream and chocolate being recorded as sourced locally. This is possibly a misunderstanding between bought locally and manufactured locally.

In the BRAC Staff group there is more evidence of the availability of imported food items, biscuits, spices, and fruits. Increased income clearly influences the ability to buy imported goods. However, as with the imported pulses, all imported goods are not more expensive, and for these items the transport and distribution networks may be the crucial factor.

Most of the food items consumed in Bangladesh are produced within of the country (Table A7). Relatively few items are imported, though levels of imports are increasing. Imported items considered in the survey included imported fruits such as apples, oranges, grapes and pomegranate. Although overall consumption was very low, interestingly it was highest amongst the rural and urban poor. Also, although it is known that most of the oil consumed in Bangladesh is imported, most of study households irrespective of area of residence reported consumption of oil coming from other parts of Bangladesh. Reflecting the levels of awareness of the geographical source of many food items discussed above.

Table B.2 Geographical source of foods by sample groups (%)

Item	Low vibrant village			High vibrant village			Slum			Char			BRAC Staff		
	Local area	Other parts of Bang.	Imported	Local area	Other parts of Bang.	Imported	Local area	Other parts of Bang.	Imported	Local area	Other parts of Bang.	Imported	Local area	Other parts of Bang.	Imported
Rice	92	7.6		89	11			100		93	6.7		70	30	
Wheat flour	48	52		60	40			100		100			78	22	
Bread	86	14		91	9.1		53	47		100			88	13	
Chira/Puffed rice	94	5.9		95	5.3			100		100			84	16	
Leafy Vegetables	100			99	0.8		5.9	94		100			100		
Potato	85	15		97	3.3			100		47	53		87	13	
Vegetables	98	2.5		98	1.7		2.9	94		100			91	9.1	
Pulses	13	87		35	65			100		100			33	67	
Fish	98	2.5		97	3.4		13	83		100			100		
Meat	92	7.6		96	4.3			100		100			89	11	
Milk and milk product	99	0.9		99	0.9		18	77	5.9	100			100		
Egg	98	1.7		100			17	83		100			100		
Onion/Garlic/Ginger	83	17		87	13			100		77	20	3.3	78	22	
Salt	4.2	95	0.8	1.7	98			98	2.5	6.7	93		4.4	96	
Other spices	50	42	8.1	58	34	8.6		92	2.6	17	63	21	27	55	18
Banana	93	6.8		82	18			100		97	3.3		73	27	
Apple/orange /grapes/pomegranate		56	44	0.9	49	51		13	88		24	77	22	22	56
Other fruits															
Edible oil/ *Ghee* (loose)	90	8.8	0.9	87	11	1.7		100		95	4.8		71	14	
Edible oil/ *Ghee* (Packaged)	40	59	0.9	40	60		2.6	97		63	37		44	38	19
Biscuit (local bakery)		90	10	5.6	86	8.3		100			100			63	38
Biscuit (branded)	82	18		89	11		41	59		96	4.3		91	9.1	
Chanachur, chick pea, nut	4	95	1	0.9	98	0.9		100		6.3	88	6.3		100	
Chips	57	43		71	28	1.7	15	85		100			64	36	
Soft drinks	38	62		44	55	1.1	25	75		86	14		33	67	
Juice		100			96	3.7		100			100			100	
Tea/coffee		100		1.7	92	6.7	25	75			100			100	
Sweet meat/sugar/*Gur*	14	86		15	84	1.1		100			100		28	72	
Snacks (*Singara, Puri, Samucha*)	28	72		42	58		12	88		60	40		40	60	
Eating outside	91	8.8		97	2.8		63	37		100			100		
Ice cream/ chocolate	80	20		96	3.8		38	63		100			100		
Noodles/*Samai*	78	22		93	7.1		39	61		95	5.3		63	25	13
Betel leaf /cigarette/betel nut	18	82		20	79	0.9		100		11	89			100	

Table B.3. Geographical source of food by poverty category (%)

Items	Poor			Middle class			Rich			Total		
	Local area	Other parts of Bang.	Imported	Local area	Other parts of Bang.	Imported	Local area	Other parts of Bang.	Imported	Local area	Other parts of Bang.	Imported
Rice	78	22		76	25		85	15		79	21	
Wheat flour	53	47		53	47		52	48		55	44	
Bread	81	19		90	10		86	14		92	8.2	
Chira/Puffed rice	79	21		82	19		94	6		83	17	
Leafy Vegetables	85	15		86	14		99	1.5		88	12	
Potato	74	26		75	26		82	18		76	24	
Vegetables	85	15		84	16		94	6		87	13	
Pulses	27	73		33	67		30	70		29	71	
Fish	87	13		86	14		94	6		90	9.3	
Meat	82	18		85	15		90	10		85	15	
Milk and milk product	89	12		88	11	1.1	97	3		93	7	0.5
Egg	86	15		88	12		97	3		90	10	
Onion/Garlic/Ginger	71	28	0.6	71	29		82	18		73	26	0.3
Salt	4.7	95	0.6	2.2	98			99	1.5	3	96	0.6
Other spices	46	47	7.1	39	51	10	40	46	13	45	44	10
Banana	75	25		75	26		85	15		74	26	
Apple/orange/grapes/pomegranate	1.7	49	50		45	55	1.5	49	50	5.9	33	61
Other fruits	76	23	0.6	80	21		84	13	3.3			
Edible oil/ *Ghee* (loose)	36	64	0.6	44	54	2.2	33	65	1.6	83	12	3
Edible oil/ *Ghee* (Packaged)	13	87		2.6	79	18		87	13	39	59	1.3
Biscuit (local bakery)	81	20		85	15		81	19		3.9	85	12
Biscuit (branded)	3.1	95	2.3	3.5	97		1.6	98		79	20	
Chanachur, chick pea, nut	65	34	1.3	61	39		56	44		1.8	98	
Chips	47	52	1.1	41	59		19	81		61	38	
Soft drinks	1.3	96	2.7	1.3	97	1.3		100		29	71	
Juice		94	5.9	4.1	96			98	2.2		100	
Tea/coffee	12	87	0.9	11	89		23	77		4.2	96	
Sweet meat/sugar/*Gur*	32	68		33	67		41	59		12	88	
Snacks (*Singara, Puri, Samucha*)	86	14		93	7.1		92	8.5		33	67	
Eating outside	83	17		88	13		80	20		92	7.7	
Ice cream/ chocolate	80	20		83	17		71	27	1.8	82	18	
Noodles/*Samai*	22	77	0.7	14	86		7.7	91	1.5	78	22	0.6
Betel leaf /cigarette/betel nut	31	69		32	65	3	24	75	1.8	4.8	95	
Total	58	40	1.9	57	41	2.5	57	41	2.7			

Section C The Extent of food processing

C.1. The extent of food processing

In order to find how widespread the distribution of processed and packaged foods was in the survey areas, the respondents were asked to note where the food had been processed or packaged (at home, in the locality or outside the locality). Foods items tended to be grouped by these categories, for example, potato, vegetables, fish, meat and egg were reported to be produced and processed almost entirely in the home in all sample groups. Table C.1 presents the data by sample group.

Chira/puffed rice was processed at home in 59% of households in HV villages, compared with only 30% in LV villages, 39% in char and none in the slums. Similarly, while milk was produced/processed at home in 85-97% of village and char households, the figure was only 27% in slums, where more than 50% of the milk consumed was reported to be processed and packaged outside home. Obviously milk consumed in the village and char areas will not be processed packaged fresh milk, which is exclusively available in urban areas.

Processed flour reached 96% of households in char areas, compared with only 71% in HV villages, 83% in low vibrant villages and 78% in slums. While about 75% of households in char areas consumed home produced and processed pulses, more than 90% of households in other areas (villages and slums) consumed pulses processed outside home.

The major food items that were processed as well as packaged outside the home and reached the more remote char areas were: edible oil (packaged), branded biscuits, chips, soft drinks, juice, and noodles (samai). This data indicates that pre-processing and packaging of food items is becoming more and more extensive and reaching more isolated areas. This appears to confirm evidence of market expansion and development.

There was a slightly higher level of consumption of processed and packaged items in the HV areas e.g., wheat flour, salt, biscuits and crisps than in low vibrant villages. The LV villages have higher levels of home processing of wheat and rice, but not spices. This could be due to limited availability of processed items in the low vibrant villages or more households engaged in traditional home processing.

The char area shows still higher levels of home processing of rice and there was no evidence in the char of buying processed varieties of traditional food items e.g. wheat flour. In the char the only processed items bought, albeit at a very low level, are the “new food” items.

The slum area recorded no home processing of rice or wheat flour. Obviously in the slum no rice is from home production and all the rice is market sourced. The slum areas demonstrates higher consumption patterns of processed and packaged goods e.g. milk products, noodles/samai. Fresh milk is very expensive for slum dwellers and storage of this highly perishable product is impossible without refrigeration. Clearly powdered or tinned milk substitutes are likely to enter the urban diet when the price, accessibility and availability of fresh milk are low.

Urban groups (slum and BRAC Staff), clearly purchase more packaged items such as salt and spices. This is illustrative of the changing nature of the retail sector in urban areas. Retailers here are more likely to sell such items in packets for improved storage and quality control reasons rather than weighing quantities from sacks as might take place in rural areas. Smaller, easier to store items have clear advantages for the retailer in risk

reduction. A sack of food infested by mice, for example, represents a significant loss over a single package of destroyed food.

The pattern of consumption of processed and packaged foods by income groups is shown in Table C2 and coincides with the pattern of consumption in Table A4.

For rice and milk the rich group demonstrate higher levels of home processing and production. This suggests that the rich in this sample clearly have access to land and livestock. Remarkably similar patterns exist though the poverty profile for the traditional food items, again suggesting that availability in the area rather than income is the determinant of the consumption pattern. Only items such as spices, salt and noodles show increasing consumption of packaged items throughout the income profile.

Table C.1. Extent of processing of consumed food by sample areas (%)

	High vibrant areas			Low vibrant areas			Char			Slum			BRAC Staff			Total		
Items	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
Rice	7.6	92.4		9.2	90.8		10	90			100		4.3	95.7		7.2	92.8	
Wheat flour	1	71	28	5.3	83.2	11.6	3.7	96.3			78.1	21.9		81	19	2.5	79.3	18.2
Bread	0.9	93.4	5.7		99.1	0.9		100			97.1	2.9		100		0.3	96.9	2.7
Chira/Puffed rice	59.3	39.8	0.8	30.1	69.9		38.5	61.5			100		17.4	69.6	13	37.2	61.5	1.3
Leafy Vegetables	98.3	1.7		97.5	2.5		90	10		90	10		91.3	8.7		95.8	4.2	
Potato	94.1	5.9		95	5		86.7	13.3		97.5	2.5		91.3	8.7		94	6	
Vegetables	96.7	3.3		96.7	3.3		86.7	13.3		100			87	13		95.5	4.5	
Pulses	5	94.1	0.8	6.7	92.4	0.8	76.7	23.3		5.1	94.9		13.6	86.4		12.8	86.6	0.6
Fish	88.1	11.9		79.8	19.3	0.8	90	10		75.7	24.3		95.7	4.3		84.4	15.3	0.3
Meat	90.7	9.3		81.2	17.9	0.9	89.7	10.3		87.2	12.8		87	13		86.5	13.2	0.3
Milk and milk product	93.2	6.8		85.1	14.9		96.6	3.4		27.3	21.2	51.5	91.3	8.7		83.5	11.1	5.4
Egg	94.1	5.9		80.3	19.7		93.1	6.9		71.1	28.9		91.3	8.7		86.2	13.8	
Onion/Garlic/Ginger	85.7	14.3		76.5	23.5		90	10		65	35		77.3	22.7		79.7	20.3	
Salt	2.5	58.3	39.2	1.7	69.7	28.6	13.3	86.7			12.5	87.5	4.3	52.2	43.5	3	59	38
Other spices	50.5	49.5		44	54.3	1.7	83.3	16.7		36.8	55.3	7.9	17.4	69.6	13	46.5	51	2.6
Banana	4.2	95.8		5.9	94.1		3.3	96.7		7.5	92.5			100		4.8	95.2	
Apple/orange/grapes/pomegranate		80.9	19.1	0.9	88.9	10.2		100			39.4	60.6		95.7	4.3	0.4	81.5	18.2
Other fruits	20.9	79.1		20.5	79.5			100		42.9	54.3	2.9	4.3	95.7		20.6	79.1	0.3
Edible oil/ *Ghee* (loose)	2.6	96.6	0.9	5.1	94.9		3.3	96.7			100			100		3.1	96.6	0.3
Edible oil/ *Ghee* (Packaged)		57.5	42.5		47.2	52.8			100		40	60		23.5	76.5		46.5	53.5
Biscuit (local bakery)	0.9	98.1	0.9	0.8	99.2		4.3	95.7			100			95.2	4.8	1	98.4	0.7
Biscuit (branded)		7.1	92.9		19.1	80.9			100		6.5	93.5		18.2	81.8		12.2	87.8
Chanachur, chick pea, nut		94.2	5.8		95.7	4.3	92.9	7.1			97.5	2.5		85.7	14.3	8.4	86.7	4.9
Chips		28.8	71.2		36.4	63.6		57.1	42.9		25.8	74.2		31.8	68.2		33.5	66.5
Soft drinks		60.6	39.4		39.5	60.5		11.1	88.9		100			26.1	73.9		52.1	47.9
Juice		1.9	98.1		8.3	91.7			100		15.4	84.6		17.6	82.4		7.6	92.4
Tea/coffee	8.2	57.7	34	5.5	70.3	24.2		100				100	13	87		6.4	61.4	32.3
Sweet meat/sugar/*Gur*	1.9	97.2	0.9	1.7	98.3		10	90			100			100		2	97.7	0.3
Snacks (*Singara, Puri, Samucha*)		100		2.8	97.2			100			100		4.8	95.2		1.4	98.6	
Eating outside		100			100			100			100			100			100	
Ice cream/ chocolate		82.5	17.5		96.4	3.6		100			74.4	25.6		76.5	23.5		87.6	12.4
Noodles/*Samai*	17.8	30.8	51.4	10.8	45.9	43.2	25.9	48.1	25.9		38.5	61.5	30.4	39.1	30.4	14.7	39.4	45.9
Betel leaf /cigarette/betel nut	9.2	69.4	21.4	2.4	73.8	23.8	4.5	63.6	31.8		76.7	23.3	7.1	35.7	57.1	5.2	69.4	25.4
Total	32.3	53.8	13.9	28.3	59.5	12.2	41.6	52.1	6.2	23.9	56.9	19.2	26.8	56.1	17.1	30.1	56.3	13.5

1=Home produced and processed; 2=processed outside home; 3=processed and packaged

Table C.2. Extent of processing by poverty group

Items	Poor			Middle class			Rich			Total		
	Home produced and processed	Processed outside home	Processed and packaged	Home produced and processed	Processed outside home	Processed and packaged	Home produced and processed	Processed outside home	Processed and packaged	Home produced and processed	Processed outside home	Processed and packaged
Rice	5.8	94		6.4	94		12	88		7.2	92.8	
Wheat flour	2.7	84	13		83	17	5.6	61	33	2.5	79.3	18.2
Bread		99	1.3	1.1	94	4.6		97	3.5	0.3	96.9	2.7
Chira/Puffed rice	26	74		50	47	3.3	48	51	1.5	37.2	61.5	1.3
Leafy Vegetables	96	4.1		96	4.3		96	4.5		95.8	4.2	
Potato	94	5.8		94	6.4		94	6		94	6	
Vegetables	96	4.1		95	5.3		96	4.5		95.5	4.5	
Pulses	12	88		14	85	1.1	13	85	1.5	12.8	86.6	0.6
Fish	83	17		85	15		88	10	1.5	84.4	15.3	0.3
Meat	86	15		89	11		85	13	1.5	86.5	13.2	0.3
Milk and milk product	81	12	6.4	84	9.7	6.5	88	10	1.5	83.5	11.1	5.4
Egg	84	16		86	14		91	9		86.2	13.8	
Onion/Garlic/Ginger	74	26		89	11		80	20		79.7	20.3	
Salt	2.3	71	27	5.4	52	43	1.5	39	60	3	59	38
Other spices	52	46	1.9	47	51	2.2	33	63	4.5	46.5	51	2.6
Banana	5.3	95		4.3	96		4.5	96		4.8	95.2	
Apple/orange/grapes/pomegranate	0.8	75	24		85	15		88	12	0.4	81.5	18.2
Other fruits	22	78	0.6	19	81		19	81		20.6	79.1	0.3
Edible oil/ *Ghee* (loose)	1.8	98		6.6	92	1.1	1.6	98		3.1	96.6	0.3
Edible oil/ *Ghee* (Packaged)		47	53		47	53		46	54		46.5	53.5
Biscuit (local bakery)	1.9	98			98	2.3		100		1	98.4	0.7
Biscuit (branded)		12	88		11	89		14	86		12.2	87.8
Chanachur, chick pea, nut	9.7	89	1.3	6.6	90	3.3	7.9	76	16	8.4	86.7	4.9
Chips		42	58		33	67		19	81		33.5	66.5
Soft drinks		61	39		46	54		48	52		52.1	47.9
Juice		7.8	92		8.2	92		6.7	93		7.6	92.4
Tea/coffee	0.9	63	36	8	64	28	15	55	31	6.4	61.4	32.3
Sweet meat/sugar/*Gur*	2	98		1.1	98	1.1	3.1	97		2	97.7	0.3
Snacks (*Singara, Puri, Samucha*)	0.7	99		2.4	98		1.7	98		1.4	98.6	
Eating outside		100			100			100			100	
Ice cream/ chocolate		89	11		90	10		80	20		87.6	12.4
Noodles/*Samai*	17	47	36	11	36	53	14	26	60	14.7	39.4	45.9
Total	31	59	11	30	55	15	29	53	18	30.1	56.3	13.5

Section D Consumption of cooked food items.

This section looks specifically at the changes in the consumption from the cooked food outlets. Evidence from urban areas has noted the importance and growth in consumption of food not prepared in the home. With increasing urbanization and industrialization it might be anticipated that this consumption pattern may expand and spread into more rural areas. The term "restaurant" may be rather misleading in terms of establishment quality, but merely represents a fixed cooked food retailer. The findings are presented for the sample groups in Table D1.

For permanent restaurants high percentages, nearly a third of slum dwellers and a quarter of BRAC staff are recording daily use. This figures declines to 18 percent for high vibrancy villages and 9 percent for low vibrancy villages. Nevertheless, this demonstrates that the trend for eating out is not limited to the urban and upazila centres but is also a feature of village consumption patterns. The high vibrancy villages do demonstrate higher levels of usage, although it is interesting the even in the char area 17 % use restaurants at least daily. These figures must be balanced by the fact that in all sample groups, except BRAC staff, over 50% of households record never using permanent restaurants.

The idea that western style "fast food" restaurants form part of the Bangladeshi diet is widely dismissed and this is born out by high percentages of "never" purchasing from these establishments in the village, char and slum samples. However, their existence and entry into the consumption pattern of certain groups is demonstrated by the BRAC group recording over 20% of households using these facilities at some time and in the HV village 5 % of households use fast food outlets every day.

The Bangladeshi equivalent of the westernized idea of "fast food" would be the hot food street traders. In this category much higher usage levels are noted, in the BRAC staff group over 40 percent use these outlets daily and over 17% in the slum sample. Once again the contrast between HV village and LV village is marked, illustrating that perhaps this trend has already dispersed into less remote rural areas and is only beginning to form a part of the consumption pattern in less vibrant areas. Exactly the same pattern is observed for the tea stalls, but here the percentages using these establishments are even higher. These stalls appear to be expanding as part of a social development and a food consumption trend. In analyzing these figures one must bear in mind that information from the household survey and cluster analysis shows that this trend towards eating out is not available to females and consequently female-headed households exhibit a divergent consumption pattern.

Table D.1. How frequently purchased cooked food by source and sample areas

SOURCES OF PURCHASED COOKED FOOD	LOW VIBRANT VILLAGES			HIGH VIBRANT VILLAGES			CHAR			SLUM			BRAC STAFF			TOTAL		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
Permanent restaurants	9	20	71	18	22	60	17	16.6	67	32.5	12.5	55.5	26	30	43.7	17.1	10.2	63
Fast food outlets	0.8	4.2	94.8	5.0	2.5	92.7	0	0	100		5	95	4.3	17	78	2.4	4.2	93.5
Fixed stalls (tea/coffee stalls)	37	28.5	34.5	52	26	22.5	16.3	33	43	56	23	23	82.3	12	4.3	35.7	26.2	27.4
Hot food street trader s	11.8	49.4	40	23.5	56	21	17	66	17	17.5	62.5	20.5	43.3	39	17.3	19.3	53.9	26.4
Treat food trader sweets, chips, burger, hot-dogs	0.8	1.7	97.7	2.5	2.5	95	0	0	100	2.5	2.5	95	0	8.6	91	1.5	2.4	96.2
Total	2.4	11	68	6.1	13	57	0.5	4.8	72	10	16	57	22	5	55	12.7	19.9	65.9

1 At least daily, 2 less frequent but use these facilities, 3 hardly ever or never use these facilities

Table D.2. How frequently purchased cooked food by source and poverty status

SOURCES OF PURCHASED COOKED FOOD	POOR/DEFICIT			MIDDLE /BREAK EVEN			RICH/SURPLUS		
	1	2	3	1	2	3	1	2	3
Permanent restaurants	15.8	12.2	71.9	17.4	22.5	60.6	21	36	42
Fast food outlets	0	0	99.6	2.2	4.3	94.1	9	15	76.4
Fixed stalls (tea/coffee stalls)	34	28.2	35.9	47.5	29.1	22.1	71	16.5	12
Hot food street trader	6.9	51.5	32	24.5	55.3	20.2	17.5	57.5	23.5
Treat food trader sweets, chips, lacchi, burger, hot-dogs	0.6	0.6	98.6	1.1	3.3	96.1	4.5	6	90

1 At least daily, 2 less frequent but use these facilities, 3 hardly ever or never use these facilities

Table D.2 illustrates that poverty is clearly a factor in the purchase of cooked foods, over 70 % of the poor group never purchase from restaurants as opposed to 42 percent from the rich group. The same pattern can be seen for fast food outlets and fixed stalls. Only the hot food street traders do not demonstrate the same trend, with the highest level of daily users in the middle-income group. Consumption levels from tea stalls are high throughout the profile with over a third of poor households recording daily purchases and over 70 % for the rich group.

Table D.3 attempts to provide information on the trends in eating out of the last 5 years; this is based on household perceptions of consumption from these outlets. In the case of permanent restaurants increasing perceptions exceed decreasing in all samples, interestingly this was the most marked in the char area. This strong sense of increasing consumption from these sources is witnessed for all types of outlets, though it must be remembered that consumption is still low from facilities such as "fast food" outlets. Care must be taken in analyzing the data, as in many cases, the combination of "decreasing" and "no change" responses outweighs "increasing" perceptions. However the overall sense the data presents is one of growth is this sector throughout the sample groups.

Table D.3. Changes in purchase of food by source over the last five years by sample group

SOURCES OF PURCHASED COOKED FOOD	LOW VIBRANT VILLAGE.			HIGH VIBRANT VILLAGE.			CHAR			SLUM			BRAC STAFF		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
Permanent restaurants	48	14	38	52	20	28	70	20	10	53	21	26	53	40	6.7
Fast food outlets	57	0	43	73	9.1	18	0	0	0	75	0	25	60	0	40
Fixed stalls (tea/coffee stalls)	52	6.2	42	50	17	33	35	12	53	33	24	42	41	32	27
Hot food street trader	59	7.7	33	43	27	31	64	12	24	41	24	35	50	30	20
Treat food trader sweets, chips, burger, hot-dogs	40	0	60	83	17	0	0	0	0	75		25	0	0	100
Total	51	11	38	48	22	31	57	14	29	43	23	35	45	33	22

1-increase, 2=decrease, 3=no change

The same basic sense of increasing purchasing from cooked food outlets is seen when the data is analyzed by poverty groups, Table D.4. However for the poor group in the two most commonly used facilities, fixed stalls and street traders, the number of increasing perceptions does not exceed 50%. Therefore it is in this group that expansion in the consumption from this sector is less clear-cut. This finding is consistent with findings from the high value food groups, which show that the poor are not sharing in the food transition; they are in fact worsening in terms of diversity of consumption.

Table D.4. Changes in purchase of food by source over the last five years by poverty group

SOURCES OF PURCHASED COOKED FOOD	POOR/ DEFICIT			MIDDLE /BREAKEVEN			RICH/SURPLUS		
	1	2	3	1	2	3	1	2	3
Permanent restaurants	46	29	25	59	8.7	33	54	19	28
Fast food outlets	100			86		14	58	5.3	37
Fixed stalls (tea/coffee stalls)	36	21	43	50	12	38	62	8.2	30
Hot food street trader	37	29	34	64	13	23	59	7.4	33
Treat food trader sweets, chips, lacchi, burger, hot-dogs	67	33		60		40	56		44
Total	36	28	36	59	12	29	58	11	31

1-increase, 2=decrease, 3=no change

Table D.5 shows the relative importance of this form of consumption for the various sample groups. The expenditure by slum dwellers is high for most facilities, for permanent restaurants it exceeds the expenditure for the rich group. Expenditure obviously increases through the poverty profile and there is a clear divide between the low and high vibrancy villages. Expenditure on eating out is unsurprisingly lowest in the char areas

Table D.5. Mean monthly expenses of household that purchase from these establishments (Tk).

SOURCES OF PURCHASED COOKED FOOD	LOW VIBRANCY VILLAGE	HIGH VIBRANCY VILLAGE	CHAR	SLUM	BRAC STAFF	POOR	MIDDLE	RICH	TOTAL
Permanent restaurants	182	249	158	374	157	180	236	292	228
Fast food outlets	114	271		125	67	100	114	196	171
Fixed stalls (tea/coffee stalls)	110	117	30	136	65	66	95	199	107
Hot food street trader	69	79	43	78	48	50	75	110	70
Treat food trader,	32	145		88	7.5	53	80	93	82
Total	107	122	58	154	74	81	113	170	114

The frequency of purchasing cooked food is clearly linked to income levels. Looking at the "never" recordings these decline through the poverty profile for all categories. It is perhaps most marked for permanent restaurants and fast food outlets, decreasing from 62% to 36% “never purchasing” and 99% to 72 % “never purchasing” from the poor to rich category. Interestingly those who purchase from hot food traders at least once a day increases from the poor into the middle-income group but declines into the rich group. This may be seen as the shift of the rich group to higher order facilities such as permanent restaurants or the influence of the BRAC staff proxy group.

The mean monthly expenses of those who purchase cooked food show some interesting results. Looking at the total figure the mean rises through LV, HV village and is highest in the slum. The char area obviously has a much lower expenditure. All these findings are as expected. The BRAC group figure is surprising with very low monthly means, but the nature of the BRAC staff group and the location of their place of employment has been explained. The slum areas mean expense in permanent restaurants is very high. It is higher than that recorded for the rich grouping.

Section E. Employment in the food system

This section examines changes in food system employment during the last five years. Market expansion should create more income generating opportunities in the collection, distribution, processing and trading of food produce. Many opportunities could accrue to the poor; increasing wage employment and reducing poverty. However, as marketing chains lengthen and volumes increase larger players are likely to capture the market and smaller players forced to exit, this could have detrimental implications for the self employed poor unless compensatory wage employment grows in the larger concerns. Table E1 provides data from the survey on the changes in the percentages of households engaged in employment in the food sector in the sample areas, more than a quarter of the surveyed households are currently involved in the food system.

Table E.1. Percentage with employment in the food system (Current and 5 years ago) by sample group.

INDICATORS	LOW VIBRANT AREA		HIGH VIBRANT AREA		CHAR		SLUM	
	Current	5 years ago	Current	5 years ago	Current	5 years ago	Current	5 years ago
Involved in food processing	1.7	1.7	0.8			-		
Involved in food transportation	5.8	2.5	9.2	6.7	6.7	3.3	7.5	5.0
Involved in food trading	3.3	3.3	8.3	3.3				
Involved in food intermediate trading	20.8	19.2	19.2	19.2	3.3	3.3	15.0	20.0
Involved in food system (total)	31.7	26.7	35.8	28.3	10.0	6.7	22.5	25.0
% Of total income coming from the given activity	42.8		59.8		38.3	3.3	45.0	

Field survey

In the sample rural areas involvement in the food system as an employment source has increased in the last five years; this is especially true for food transportation in low vibrant and chars areas, and food trading in high vibrant areas.

In the village samples around one third of households have some employment in the food system. In the char areas with much less market development employment is markedly less at around 10%, expanded markets in the villages appear to be creating greater employment opportunities. Only in the slum areas does employment in the food system seem to be declining in the recall period. This may be due to the involvement of larger players servicing the urban market and a reduction in those directly involved in food transportation and trading as small-scale operators. Although there may be less direct employment created in the food system in transportation and trading, there could well be more employment indirectly in the sector, although figures for those involved in processing industries do not support this proposition.

Table E2 supports the pattern emerging from the sample areas. Employment in the food system by poverty status increased, if only slightly, for all poverty groups. The sector with the greatest expansion for the poor was “food transportation”, though they seem to be excluded from intermediate trading employment. This could be as a result of larger players entering the market for these roles or the availability of finance to enter

these roles. The rich have become more involved in trading and intermediate trading, which supports this reasoning. Overall there has been an increase of 5 percentage points in the number of households engaged in employment in the food system during the last five years.

Table E.2. Percentage with employment in the food system (current and five years ago) by poverty groups.

INDICATORS	POOR/ DEFICIT		MIDDLE/BREAK EVEN		RICH/SURPLUS		TOTAL	
	Current	5 years ago	Current	5 years ago	Current	5 years ago	Current	5 years ago
Involved in food processing	1.2	.6			1.5	1.5	0.9	.6
Involved in food transportation	10.5	5.8	2.1	2.1	4.5	3.0	6.9	4.2
Involved in food trading	1.2		3.2	1.1	14.9	10.4	4.5	2.4
Involved in food intermediate trading	16.3	18.0	22.3	20.2	9.0	7.5	16.5	16.5
Involved in food system (total)	27.9	23.8	27.7	23.4	29.9	22.4	28.2	23.4
% Of total income coming from the given activity	51.0		55.0		43.2		50.4	

Table E3 provides details of how those involved in the food system perceive their income to have changed in the last five years from this source. This appears to support the above findings, that of those involved in food transportation and food trading nearly 60% perceived increases in income from these sources. As markets and retailing opportunities are expanding so too is the income generating potential from involvement in the system.

Table E.3. Perception of changes in income over the last five year period for those involved in food system for both of these two points of time (%)

INDICATORS	INCOME INCREASED	INCOME DECREASED	NO CHANGE	TOTAL SAMPLE
Involved in food processing	-	-	100 (1)	100 (1)
Involved in food transportation	57.1 (8)	21.4 (3)	21.4 (3)	100 (14)
Involved in food trading	57.1 (4)	28.6 (2)	14.3 (1)	100 (7)
Involved in food Intermediate trading	27.7 (13)	48.9 (23)	25.4 (11)	100 (47)

Figures in parentheses indicate percentages

In intermediate trading nearly half those involved perceived decreases in income from this source. The explanation could again involve the concentration of intermediate trading with a few larger players, those still involved are operating in a more competitive environment, consequently profits have declined and some players are exiting the sector, as seen in Table E1.

Generally the high vibrant villages show higher percent of employment in food trading and transport. This is illustrative of the expanding market in these areas and a feature of the vibrancy of the village.

A significantly higher percent of income comes from involvement in the food system in the high vibrancy areas (nearly 60%), as compared to around 40-45% for the low vibrant villages and chars. These HV villages could be indicative of how the changing food system could impact on employment opportunities throughout rural Bangladesh as the market becomes increasingly important.

There are very low levels of employment in the food-processing sector compared to food transport and food trading. This is clearly an area of expansion opportunities with demand from the local market.

The comparison between the char and the slum is interesting. The char area has only 10% recording employment in the food system as compared to 22.5% in the slum. This is indicative of the greater complexity of market orientation of the food system in the urban areas. If the urban system is spreading into rural areas then employment opportunities are clearly likely to rise in the system. This is closely linked to the development of the transport system.

An analysis by poverty status shows that the poor are more involved in food transportation whereas the rich are involved in food trading and the middle-income groups more highly involved in intermediate trading. Total income from the food system is lower for the rich. As noted previously the rich appear to generate more income from production. Food system employment has the highest level for the middle-income groups. This finding could show that employment in the food system could be a pathway out of poverty, firstly by involvement in food transportation and then a progression into trading.

E.2. Changes in income with change in food system/chain

To assess trends in household income/employment opportunities in the sector respondents were asked about how their involvement had changed during the last during five years. Clearly figures relating to income are likely to be inaccurate but the findings do provide an overall picture of the changing nature of food system employment.

Results show that there was no change in income for those involved in food processing. However, more than half of the respondents (59%) said their income had increased by 8% through food transportation and same percentage had their income increased by 4% through food trade during the last five years. Income was reported to have decreased, in 21.4% and 28.6% of the households in these two employment categories respectively.

Of the group of traders known as intermediary traders (*farias*) only 27% reported that their income had increased (by 13%), but nearly half of them (49%) said their income had decreased (by as much as 23%). These results indicate either that marketing chains are becoming more direct with reduced involvement of intermediaries, or that the number of *farias* has grown during this period and income has decreased due to competition.

Section F Changes in the Retail sector

The retail sector in Bangladesh appears to be undergoing significant changes, the focus group studies and the retailer survey highlighted a growth in the number of retail food outlets being established. Also the expansion of the distribution networks appears to be making a wider range of products available in shops even in remote areas.

Retailers in the survey were asked questions about the number of shops, the profitability, the type of customers, the role of credit etc when they first started their businesses and the current position. Table F1 presents key findings from these interviews. Clearly definite trends can't be extrapolated from the data as the starting dates for businesses are different, also information pertaining to profits is likely to be inaccurate, and we are only dealing with perceptions. However the findings do provide a snapshot of the changing retail scene in Bangladesh.

The average business life in those selected shops was about 6 years, with an exception in char area where the shopkeepers entered this type of retail business only two years ago. The surveyed shops in char area are far from the upazila centre and there is no electricity supply. The char shopkeepers are illiterate without any formal education. In contrast with the char, 100% of the shops in upazila centre and in slums have access to electricity and the average level of education of the shopkeepers was more than five years.

Table F. 1.

AREA TYPE	AV. AGE OF RETAILERS (YRS)	BUSINESS LIFE (YRS)	DISTANCE FROM THE CENTER (KM.)	AVAILABILITY OF ELECTRICITY IN THE SHOP (%)	AV. YRS OF FORMAL EDUCATION
Village	27	5.4	7.2	63	5.0
Upazila sadar	27	6.8	.5	100	6.0
Slum	36	6.8	2.6	100	9.3
Char area	25	2.0	8.0	.0	.00
Total	28	5.8	4.6	75	5.5

F.1.Expansion of the Retail Sector

The number of retailers has increased substantially in villages, upazila centres and slum areas but retail expansion has yet to penetrate the char area to any degree. According to the retailers the business is now much more competitive. The number of shops has more than doubled during the period of their involvement in the business. In slum areas the growth rate was the highest, i.e., more than 900%.

The daily sales per shop have remained fairly constant, suggesting that the size of individual retail outlets has not increased and is still primarily small-scale. Profits at the village and upazila levels actually show declines, new entrants could to be making the sector more competitive or the retailers could be under recording profits.

Item-wise differentials were also noticed, for example, while the number of retailer shops for traditional staple items like rice, wheat, potato etc. increased in upazila centres and villages by 25-50%, the number of retailer shops for 'newer' kind of items like chanachur, potato chips, ice cream, canned juice and packaged liquid milk increased by 50-150% on average.

The shops show slight increases in the number of regular customers, this could be illustrative of population growth and also the increasing importance of the market in food sourcing. The largest increases in the number of customers occurs at the upazila level for irregular customers, this might suggest the importance of these upazila centers for trading and the increasing mobility of the population.

Table F.2. Changes in the retail sector from the survey findings

AREA TYPE	NO OF RETAILERS		DAILY SALE PER SHOP (TK.)		DAILY PROFIT PER SHOP (TK.)		DAILY REGULAR CUSTOMER PER SHOP (NO)		DAILY IRREGULAR CUSTOMER PER SHOP (NO.)	
	Current	Beginning	Current	Beginning	Current	Beginning	Current	Beginning	Current	Beginning
Village	17	8	859	904	87	111	34.8	29.7	50.7	50.6
Upazila sadar	286	162	2,690	2,540	268	316	34.8	28	60.1	46.3
Slum	247	30	1,375	1,375	158	143	22.5	27.5	31.3	33.5
Char area	1	0	80	63	13	11	8	8	15	12
Total	691	368	1447	1421	148	172	31.6	27.53	49	44.7

There were also some changes, which are area-specific. For example, number of shops for eggs was found to increase specifically in the slums (100%), whilst shops for packaged liquid milk increased only in upazila centres (50-100%). In rural areas, it had been a long tradition that milk is traded in open containers. Therefore, an increase in sale of liquid milk in packaged form reflects the changing food system/chain in the form of processing/packaging in the country.

Increase in the number of shops selling items like packaged chips, chanachur and canned juice occurred not only in slums and upazila sadars but also in villages this indicates a positive trend in the spread and distribution of processed and packaged foods from urban to peri-urban through to the high vibrant villages.

F.2. New items entering the retail sector

Shopkeepers were also asked to identify which products they retail now and those they retailed five years ago. This provides an insight into the types of products now entering the retail sector at village, upazila and slum levels. Table F3 provides the data, but it must be noted that the samples are quite small, nevertheless it does illustrate trends, especially in the introduction of packaged and branded items. Discussions with shopkeepers suggested that some of these branded and packaged goods were only for window dressing, and sales were limited, however it does illustrate their availability and the existent of distribution networks supplying them.

Table F.3. Changes in number of shops retailing various food items over the last 5 years.

	VILLAGE (16)			UPAZILA (10)			SLUM (4)			TOTAL (32)		
	Current	5-years ago	% Change	Current	5-years ago	% Change	Current	5-years ago	% Change	Current	5-years ago	% Change
TRADITIONAL												
Coarse rice	10	8	25	8	8	0	4	4	0	22	20	10
Fine rice	5	4	25	8	7	14.29	3	3	0	16	14	14.29
Wheat flour (L)	4	3	33.33	6	6	0	3	2	50	13	11	18.18
Spice (L)	12	10	20	6	6	0	4	3	33.33	22	19	15.79
Banana	3	2	50	2	2	0	2	0		7	4	75
Potatoes	8	6	33.33	2	1	100	0	0		17	13	30.77
Biscuits (L)	12	11	9.091	5	4	25	4	3	33.33	23	20	15
NEW ITEMS												
Wheat flour (P)	5	1	400	7	4	75	1		100	13	5	160
Liquid milk (B)	0	0	0	2	2	0	2	1	100	4	3	33.33
Powder milk (P)	6	6	0	6	3	100	2	2	0	14	11	27.27
Spice (B)	2	1	100	7	2	250	3	1	200	12	4	200
Spice (P)	6	1	500	3	3	0	1	1	0	10	5	100
Vegetable oil (P)	3	2	50	7	4	75	1		100	11	6	83.33
Biscuits (P & B)	16	14	14.29	7	4	75	4	3	33.33	27	21	28.57
Chanacur (P)	7	6	16.67	6	2	200	3	1	200	16	9	77.78
Potato chips (B)	10	7	42.86	7	3	133.3	4	3	33.33	21	13	61.54
Drinks (P)	8	6	33.33	5	3	66.67	2	1	100	15	10	50
Ice-cream (B)	0	0	0	3	2	50	2	1	281.2	5	3	66.67
Ice-cream (L)	2	1	100	2	1	100	2	1	150.0	6	3	100

Field Survey (L) loose, P (Packaged, bottled or canned) B (Branded)

Changes in traditional consumption items are limited, with only a few more of the shopkeepers interviewed stocking these items. The only larger increase was for bananas, with shops in the slum areas are stocking these. An explanation could be the expansion of marketing chains bringing in fruit from distant locations, though overall few shops stock bananas. Observations around Dhaka seem to support this widespread availability of bananas, though this is likely to be seasonal.

Interesting changes do occur with regard to processed and packaged items. The contrast between loose wheat flour and packaged wheat flour is illustrative. Packaged wheat flour is now available at all levels with four more retailers in the survey stocking it at village level. Over the whole sample there is a 160% increase in the number of shops stocking packet wheat flour. Other packaged items that appear to entering the village retail scene include, packaged and branded spices, and ice cream. More retailers also stock potato crisps but this trade was already well established in villages. In the upazila centres a similar pattern emerges of packaged and branded items being increasingly stocked. Chanacur, potato crisp and canned drinks show increasing numbers of shops stocking them, and the increases in general are larger at the upazila level.

Certain items are still not penetrating down to the village level, branded liquid milk and ice cream do not appear to have entered the retail sector in the survey.

Table F3 does demonstrate evidence of the changing retail scene at village and upazila level with a wider range of items entering the market and an apparent expansion in the nature of retailing outside urban areas, to what extent the poor are involved in this retail expansion is of importance.

F.3. Involvement of the poor in the retail sector

The retail traders were asked to estimate their trade levels with low-income groups, and perceived changes with this group over the last five years. Their responses give a clear indication that the majority of the retail traders believe their trade with low income groups has increased during the last five years with respect of almost all food items (Table F.4.). The number of shops in the char sample was too small to involve in the analysis.

Table F.4. presents strong evidence that the poor are increasing their involvement in the retail sector and perceptions of increasing trade with poor people is high for a number of items. For all the traditional food items there is an overwhelming perception of increasing trade with retailers.

Only fine rice displays some measure of decrease in the upazila centres. This could be as a result of the improved quality of coarse rice lessening the demand for fine rice, a feeling that emerged from the focus group discussions.

Clearly the retailers perceive that there is increasing trade with the poor for all of the new food items, including many of the packaged and branded items, though for the higher value items such as bottled oil and canned drinks the evidence is not so clear. These latter findings would be more consistent with the household survey, which suggests that the new food items are not entering the consumption patterns of the poor to any considerable extent.

The poor's increasing involvement with retail outlets seems to be in all areas, but the changes seem to be most marked at the village level, at the upazila level there are slightly more "no change" and "decreasing" responses, perhaps as result of a more established, older retail sector in the upazila centres.

Table F.4. Retailers' perceptions of trade changes with the poor.

	VILLAGE			UPAZILA			SLUM		
ITEMS	INC	DEC	N.C	INC	DEC	N.C	INC	DEC	N.C
Traditional									
Coarse rice	9	0	1	5	1	2	2	0	2
Fine rice	3	1	0	4	2	2	2	1	0
Potatoes	4	1	3	4	1	2	2	0	0
Loose pulses	8	0	6	5	0	5	2	0	0
Wheat flour (L)	3	0	1	2	1	3	2	0	1
New food items									
Wheat flour (P)	4	0	1	5	1	1	1	0	0
Vermicelli/semolina	10	3	2	7	0	2	3	0	0
Biscuits (P & B)	12	1	3	5	0	1	4	0	0
Biscuits (P)	8	0	3	1	0	2	3	0	1
Biscuits (L)	8	0	4	2	1	2	0	0	0
Loaf	4	0	3	0	0	1	0	0	2
Bread	5	0	3	1	0	2	1	0	1
Chanacur (P)	7	0	2	0	0	3	0	0	0
Potato chips	8	1	1	0	0	0	1	0	0
Eggs (local)	2	0	1	3	0	1	1	1	0
Eggs (HYV)	2	0	2	5	0	2	4	0	0
Spice (B)	0	1	1	5	1	1	2	0	1
Spice (P)	5	1	0	3	0	0	1	0	0
Spice (loose)	10	0	1	5	1	0	4	0	0
Veg. oil (bottled)	2	1	0	2	2	2	1	0	1
Veg. oil (loose)	11	0	4	3	1	6	3	0	1
Sugar (loose)	8	1	7	6	2	2	3	0	1
Drinks (canned/packaged)	4	2	3	2	1	1	2	0	0

F.4. New product lines

A number of factors assist the growth of the retail sector in more remote areas, improved transport links, expanding distribution networks, rural electrification, availability of refrigerators and the availability of new products lines. Table F.5. shows the responses of shopkeepers to the influence of new product lines on their business. Packaged goods usually have a better storage life and are better protected against loss from pests and damp etc. Shopkeepers, therefore, have reduced risk in stocking these items, which benefits the business. Also the packaged items are pre-weighed, removing a task for the retailer, one which can often led to disputes, and could lead to wastages.

Stocking certain branded items can reflect on the status of the outlet, and can help to ensure the quality of the product for retailers and consumers alike, this again helps to reduce the risk for retailers. Buying inferior produce that they are then unable to sell can lead to profit losses. Table F.5. clearly shows that packaged

goods have made a significant difference to the operation of the business for the retailers and the benefit of packaged items has been felt across the sample areas, including the char area. The influence of branded products is as important at the village and upazila level but less so in the slum and char areas, where branded products do not yet appear to have penetrated to any degree.

Table F.5. The influence of new product lines on retail business operation.

	VILLAGE	UPAZILA SADAR	SLUM	CHAR AREA	TOTAL
Have packaged products made the operation of the business easier?					
Yes	16	10	4	2	32
NO	0	0	0	0	0
Total	16	10	4	2	32
Have branded products made the operation of the business easier?					
Yes	16	10	3	0	29
NO	0	0	1	2	3
Total	16	10	4	2	32

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F.5. Changes in the nature of product suppliers

Alongside the growth in the retail sector there should be an associated growth in the food distribution networks supplying this sector. Retailers were asked to describe the changing nature of their supply network and findings are shown in Table F.6.

Clearly the number of suppliers involved has increased in all the survey areas, except the char. The growth is most marked at the village level. The shortening distances involved in supplying the shops, especially at the upazila level, indicate the fact that the distribution networks are spreading out from the centres.

In support of the expansion in the number of items entering the retail sector the number of items kept in stock have increased across the sample areas.

Table F.6.Changes in the nature of supply for the retail sector

AREA TYPE	NO OF SUPPLIERS		ITEMS KEPT IN THE SHOP		AV.KM FROM WHERE PRODUCTS ARE BEING SUPPLIED		DAYS STOCK	
Current/Start	C	S	C	S	C	S	C	S
Village	2.13	.75	23.44	19.44	8.5	10.7	7.25	6.75
Upazila sadar	3.90	1.70	27.50	18.00	6.7	17.6	6.60	7.40
Slum	8.00	6.75	32.25	22.00	2.8	2.6	4.00	5.75
Char area	.00	.00	5.50	5.00	3.5	3.5	2.00	2.00
Total	3.28	1.75	24.69	18.41	6.9	11.4	6.31	6.53

The market appears to be much more diversified than before; with product diversification and competition in the retail business the employment scenario in food marketing sector has also changed, especially at Upazila and also to some extent at village level. Retailers were asked to estimate the number of various traders operating in their areas (Table F.7).

The numbers operating in the wholesale business has increased, mainly it the upazila centres where naturally the business is still concentrated. The number of aratdars and bepari has also increased at the upazila level.

The largest increase recorded is for mobile venders, i.e. those with car transport, increases were noted in all areas for this category of traders. Many of these traders will be directly linked to individual manufactures. This is indicative of the modernization of the transport and distribution networks and the impact on retailing is likely to be significant. Retailers are likely gain many benefits from the modernization, they will be able to source more items, reduce their number of journeys to suppliers, reduce their stock levels, stock more perishable items, and perhaps have more stock on credit. This will significantly reduce their transaction costs and the risks involved, helping to develop the sector still further.

Table F.7. Mean employment in the marketing sector, with changes noted.

	VILLAGE		UPAZILA CENTRE		SLUM		CHAR	
	C	S	C	S	C	S	C	S
Wholesaler	1	0.3	80	64	1	0.5	0	0
Aratdars	-	-	23	18	-	-	-	-
Bepari	1.2	0.8	22	13	-	-	-	-
Mobile vendors	3	1.4	27	12	12	5	2.5	1.5
Food transporter	3.8	1.9	29	28	1	0	0	0

F.6. Changes in profit/loss over time

An attempt was made to assess the change in profits of the retailers over time, though clearly this is fraught with difficulties. The shop-owners were asked their current turnover and profit and those at the start of their business. The information was also asked on a product specific basis.

The overall data suggested that only a few traders had increased profits. In fact most traders reported either no change in profit, declining profits or in some cases losses. Though these findings must be debatable.

Table F8 illustrates which items have contributed to the changes in profit over time. The most notable items bringing good profit were branded packaged biscuit, branded potato chips, local chocolates, canned drinks, mithai (molasses) and the sweetmeats; moradi, mouakka, and sonapari. These gains were mainly in the upazila centres. Trade in potato, branded spices, mobile cake, imported chewing gum, and the sweetmeats brought good profit in the village areas. The responses of the traders in the slum were rather negative; most reported either income losses or only small income rises during the last five years.

Table F8 Making of profit/loss by the retail shops over time by items and areas

Items	Village	Upazila Sadar	Slum	Char	Items	Village	Upazila Sadar	Slum	Char
Coarse rice	⇑	⇓	⇑		Eggs (local)	⇑	⇑	⇑	⇑
Fine rice	⇓	⇓	⇓		Eggs (hyv)	⇑	⇑	⇑	
Aromatic rice	⇑	⇑	⇓		Duck's eggs	⇑	⇓	⇑	⇑
Packaged rice		⇑			Spice (brand)	⇑	⇑	⇑	
Imported rice		⇑			Spice (locally packaged)	⇑	⇑	⇑	
Potatoes	⇓	⇓	⇑		Spice (loose)	⇑	⇑	⇑	
Puffed rice/flattened rice	⇑	⇓	⇓		Salt (loose)	⇑	⇓	⇓	
Loose pulses	⇑		⇓		Salt (packaged)	⇑	⇑	⇓	⇑
Moa (puffed rice)			⇓		Onion/garlic/ginger	⇑	⇓	⇓	
Moa (flattened rice)			⇓		Spices		⇑		
Wheat flour (packaged)	⇑	⇑	⇑		Cumin	.0			
Wheat flour (loose)	⇑	⇑	⇓		Hot spices	⇓			
Noodles	⇑	⇑	⇑		Veg. oil (bottled)	⇑	⇑	⇑	
Vermicelli/semolina/sabu	⇓	⇑	⇓		Veg. oil (loose)	⇑	⇓	⇓	
Liquid milk (brand)		⇑	-		Mustard oil		⇓	⇓	
Powdered milk (lose)			⇓		**Dalda**		⇑		
Powdered milk (packaged)	⇓	⇑	⇓		Biscuits (packaged brand)	⇑	⇑	⇓	
Sugar (loose)	⇑	⇓	⇓		Biscuits (packaged non brand)	⇑	⇑		
Molasses	⇑	⇑	⇑		Biscuits (loose)	⇑	⇑	⇓	
Liquid milk (canned)		⇑	⇑		Loaf	⇑	⇓	0	
Condensed milk		⇑			Bread	⇓	⇓	.00	
Powdered milk (canned)		.0			Cake	⇑	⇑	⇑	
Tea (brand)		⇑			Toast	⇓	.0	⇑	
Chanacur (loose)	⇓	⇑	⇓		Mobile cake	⇑		⇑	
Potato chips (brand)	⇑	⇑	⇓		Sweet *singara*			⇑	
Potato chips (local)	⇑		⇑		Sweet *sawmucha*	⇑			
Chocolate (local)	⇑	⇑	⇓		*Chanacur* (packaged brand)	⇑	⇑	⇑	
Chocolate (imported)	⇑	⇑	⇓		*Chanacur* (packaged local)	⇑	⇑		
Chewing gum (local)	⇑		⇑		*Swandesh*	⇑			
Chewing gum (imported)	⇑	⇑	⇓		*Marguli*	⇑	.0		
Sugar candy	⇑	⇑	⇑		*Nut*	⇑			
Nut *chanachur*			⇓		*Batasha* (sweet drop of sugar)	⇑			
Laddu	⇑	⇑	⇑		Drinks (canned/packaged)	⇑	⇑	⇓	
Morali	⇑	⇑			Ice-cream (brand)		⇑	⇑	
Monakka	⇑	⇑			Ice-cream (local)	⇑	⇑	⇑	
Sonpapri		⇑			Bottle/canned juice	⇑	⇑	⇓	
Kadma	⇑				Raisin	⇑	⇑	⇓	
Nutri-C		⇑			Pickle	⇑	⇑	⇑	
Jelly		⇑			Tang	⇑	⇑	⇑	
Banana	⇑	⇑	⇑						
Saline		⇑							
Bottled water									

Section G. Changes in the nature of Credit in the system

The percentage of retailers who used loans varied between the sample areas, the highest level was in the villages with 75% of respondents using loans, whilst the lowest was in the upazila centers with only 33% of respondents using loans. The nature of the retail sector is often heavily influenced by the credit systems in operation.

The retailers in the study were asked to rank their major sources of credit, both current and those five years ago. The findings are presented in Table G.1. There seems to have been a decline in the importance of "Mohadjon" or informal moneylenders down from 17 responses five years ago to 9 currently. This could reflect the increasing formalization of the retail sector, however more formal sources of credit have not expanded, in fact most credit sources appear to be static in term of importance or declining. This could indicate a reduced dependence on credit or that credit is being provided in different terms, which traders have not interpreted as direct credit e.g. goods advanced from suppliers may not have appeared in the findings as credit. This credit from product suppliers may not have been seen as a direct loan from suppliers and so no evidence of increased credit from this sector has emerged. Yet it is clear from the focus group discussions that there has been a substantial increase in the importance and number or distributors supplying on credit.

Table G1 Sources of loan for retail business (Number of responses)

AREA	MOHADJON			BANK			SHOP OWNER			PRODUCT SUPPLIER			NGO			RELATIVES & OTHERS		
Choices of credit	1st	2nd	3rd	1st	2nd	3rd	1st	2nd	3rd	1st	2nd	3rd	1st	2nd	3rd	1st	2nd	3rd
Current																		
Village N=16	1	2	2	2	2	3		1					5	1		2	2	
Upazila sadar=10			3	4	5				3				3	4		2		2
Slum=4		1													1	2	1	
Char area=2										1								
Total	1	3	5	6	7	3	-	1	3	1			8	5	1	6	3	2
Five years ago																		
Village	2	3	2	5	2	2		1	1				5	5	1	2	1	3
Upazila sadar	1	3	2	4	5	1			4				5	2	2			2
Slum	2										1				1	1	2	
Char area	1	1							1				1	1		1		
Total	6	7	4	9	7	3		1	6		1		11	8	4	4	3	5

Focus Group Analysis Findings

The analyses of focus group discussions are presented in two sections: section one describes the changes in availability and consumption of food items and section two looks at changes in the food marketing system. Tables are presented which synthesize consumer and trader groups. The tables have been arranged from left to right to display increasing vibrancy of the areas; chars, slums , the low vibrancy villages and finally the high vibrancy villages. The codes for the discussion areas were as follows:

JC---Jongipur consumers	JT---Jongipur traders
UKC--- Uttar Kalshi consumers	UKT---Uttar Kalshi traders
MKC--- Maniknagar consumers	MKT---Maniknagar traders
AC---Ashtogram consumers	AT---Ashtogram traders
MOC--- Modhupur consumers	MOT---Modhupur traders
BC---Bhairab consumers	BT---Bhairab traders
MIC1---Mirzapur consumers (distant to thana centre)	MIT---Mirzapur traders
MIC2---Mirzapur consumers (close to thana centre)	

Key for the discussion group tables are:

Symbol	
⇑	Increasing
⇓	Decreasing
⇔	Static
√	Yes
X	No
na	No available information

A Food Groups
1.Cereals

Consumers

Findings	JC	UKC	MKC	AC	MOC	BC	MIC1	MIC2
Rice consumption	⇔	⇓	⇔	⇔	⇓	⇔	⇔	⇑
Wheat consumption	⇓	⇓	⇓	⇓	⇑	⇓	⇓	⇓
Predominantly coarse rice	√	√	√	√	√	√	√	X
Increased consumption of noodles/semai	X	X	X	X	X	X	X	√

Traders

Findings	JT	UKT	MKT	AT	MOT	BT	MIT
Rice consumption	⇔	⇔	⇔	⇔	⇔	⇓	⇔
Wheat Consumption	⇓	⇔	⇔	⇑	⇓	⇑	⇑
Predominantly coarse rice	X	√	√	X	√	X	√
Increased consumption of noodles/semai	X	X	X	√	X	√	√

The most salient point from the discussion was the declining consumption of wheat flour, especially noted by the consumers and the low vibrancy area trader groups. The overriding reason given was the equalization of the price of rice and wheat flour. At similar prices per kg, rice was preferred as it was a better stomach-filler. Wheat production in the areas had declined so less wheat flour was available from home production. The high cost of firewood, time required to prepare wheat based products at home, and the extra demand for water after eating wheat products were also explanations. Traders also noted the difficulty with transporting and storing the product, especially in the char area.

Wheat flour had previously been a low cost food at times of scarcity, and consumption was clearly very price-sensitive for the poor groups. Interestingly though packaged "atta" flour appears to have become a luxury item, especially for breakfast. Traders noted increased "atta" sales in the higher vibrancy areas. The low demand for wheat from the poor does not appear to be a taste based issue, rather it is an economic issue based on the relative price with rice, price of fuel and cost of time. This finding is supported by the high demand noted for prepared wheat products.

As can be expected the consumption of coarse rice dominated especially at the low vibrancy end. There was a certain amount of debate surrounding rice varieties. The most common was BR-28. Some participants classified BR-28 as coarse whilst others said it was neither coarse nor fine. What appears to be the case is that a shift to BR-28 is an improvement in quality and it was widely noted by traders that consumers would no longer accept poor quality rice. Fine rice was widely available but apart from the high vibrancy areas was only consumed at festivals or when guests were visiting.

The general consumption of rice appears to have remained static, with an increase noted in certain areas of puffed rice and chira (pressed rice). Interestingly decline in rice consumption were noted in some areas (BT) and the reason mentioned was the changing habit to take food outside home in the form of biscuits or wheat/bread products with tea. This observation was supported by later discussions on eating outside the home.

The level of consumption of noodles and semai (vermicelli) was negligible across the sample, although as expected it did appear more in the high vibrancy area as a fashion food, especially at festivals with the notion that noodle consumption will impress neighbours and guests. The consumption of suji (semolina) was also low following a similar pattern to noodles. However, there was also a strong consumption trend of suji by young children as a cheaper substitute for milk.

A final point is that some discussions commented on the increased demand for wheat from the bakeries and as poultry feed, so indirectly the demand for wheat had increased.

2.Processed Wheat Based Products

Consumers

Findings	JC	UKC	MKC	AC	MOC	BC	MIC1	MIC2
Biscuit consumption	⇑	⇑	⇑	⇑	⇑	⇑	⇑	⇑
Loose or packaged	L	L	L	L/P	L	L	P	P
Bread consumption	⇑	⇑	⇑	⇑	⇔	⇔	⇑	⇑

Traders

Findings	JT	UKT	MKT	AT	MOT	BT	MIT
Biscuit consumption	⇑	⇑	⇑	⇑	⇑	⇑	⇑
Loose or packaged	L	L/P	L	P	P	P	P
Bread consumption	NA	⇑	⇑	⇑	⇑	⇑	⇑

The unambiguous finding from both consumers and traders was the increasing consumption of biscuits and processed wheat products (bread, loaf). There were a number of reasons given, with examples of when people take biscuits or bread but the key issue behind most of these was convenience. Consumption of bread as a breakfast food by workers and school-going children was common and an interesting translation for this was " to avoid the botheration of cooking". Rickshaw pullers, labourers and school children might also consume these products as a daytime snack. They are easier to transport and require little preparation.

A common trend, especially in the high vibrant areas and the slums was to consume these products, especially tea and biscuits directly from food stalls. This was a common breakfast for factory workers and labourers.

There was a clear distinction between the consumption of loose local bakery biscuits and packaged biscuits, available income being the clear determinant. In the low vibrancy areas loose biscuits were consumed as they were much cheaper and could be bought in small batches, "stomach filling" being the primary concern. Moving up the income scale packaged biscuits were increasingly preferred with the distribution being increasingly widespread. Traders and consumers preferred packaged biscuits because of the improved shelf life, the reduced risk of loss due to mice and contamination with dust, and the perceived health benefits of quality biscuits.

This divergence in the standard of products for poor and non-poor was a common finding. The poor appear to be consuming very inferior imitations of "new" food items such as biscuits, cakes, and ice creams. Given the very low price of some of these products it is concerning to wonder about the ingredients going into them. Case study information from local bakeries also described very unsanitary conditions, this has clear nutritional and health implications from the increased consumption of these items. A number of discussions noted that if any extra income was available it was spent on these fashion items. Given the very tight income constraints this may not be an efficient use of scarce household resources.

As with many food items increased sale and consumption of bread and biscuits was recognised at festivals and for the visit of guests. Biscuits sales also increased during harvesting periods, presumably because of increased income from agricultural labour and the tendency for labourers to eat these items during working hours. Children were also considered to be important consumers of biscuits and wheat/bread products.

These food items exhibited the strongest tendency in terms of increased availability, increased variety, and increased consumption. This tendency had penetrated well into the poor groups including char dwellers, though not in packaged forms.

3.Vegetables and Pulses

Consumers

Findings	JC	UKC	MKC	AC	MOC	BC	MIC1	MIC2
Pulse consumption	⇔	⇔	⇔	⇑	⇔	⇑	⇓	⇔
Vegetable consumption	⇑	⇔	⇑	⇑	⇑	⇑	⇑	⇑
Mainly from home production	√	X	X	X	√	√	√	X

Traders

Findings	JT	UKT	MKT	AT	MOT	BT	MIT
Pulse consumption	NA	⇔	⇑	⇔	⇑	⇔	⇔
Vegetable consumption	NA	⇑	⇑	⇑	⇑	⇑	NA
Mainly from home production	√	X	X	NA	X	?	NA

Both consumers and traders observed increased vegetable consumption throughout the discussion groups; two reasons were commonly given to explain this. Firstly, the availability of fish and livestock had decreased and the price was very high. Consequently they were outside the budget of most consumers. Vegetable consumption had increased as a substitute for fish and livestock products. Secondly, advertising, health campaigns, and NGOs had all raised awareness of the importance of vegetables for good health. This had increased the demand to consume vegetables and increased the development of homestead gardens to meet household demand. The increased production of vegetables could also be a major factor but this did not feature in the discussions

There were important contrasts between the areas studied. In the char area, vegetable consumption was mainly from home production with a very limited market for fresh vegetables due to lack of purchasing power and transport difficulties. Large quantities could not be head-loaded and perishability issues deterred the traders. In the slums the common theme was that vegetables were available but they were of the poorest quality, usually the rotten and putrid waste from the large markets that traders brought into the slum to sell at very low prices. Even then certain items such as tomatoes were beyond the budget of slum dwellers. In the villages availability, variety (including Indian imports) and consumption had increased, however the over-riding issue was the scarcity of fish within budget range.

The discussion on pulses was less clear with little evidence of major changes in consumption patterns. Some interesting issues did arise in the discussion surrounding pulses. For example, a clear rich/poor divide was evident in the variety of pulse being consumed; although the poor char area often produce moshur (lentil) they generally sell it and buy low–cost khesari. Those who have greater available income prefer not to consume the khesari as it has negative health impacts in the stomach (flatulence) and legs (excessive intake causes paralysis).

The inability to afford fish and livestock products was also a key factor in the increase, if any, in pulse consumption, especially in the poor groups where increased vegetable consumption was also too expensive. Any decrease in pulse consumption was usually linked with production declines in the local area. The impact of these production declines appears to have been limited by the increase in the availability and consumption of Indian pulses (anchor)[4]. It was commonly noted that these were widely consumed, as they were cheap and tasty.

4. Edible Oil

Consumers

Findings	JC	UKC	MKC	AC	MOC	BC	MIC1	MIC2
Mustard oil	⇔	NA	⇓	⇓	⇓	⇓	⇔	⇓
Soyabean oil	⇑	NA	⇑	⇑	⇑	⇑	⇑	⇑

Traders

Findings	JT	UKT	MKT	AT	MOT	BT	MIT
Mustard oil consumption	⇓	na	⇓	⇓	⇓	⇓	⇓
Soyabean oil consumption	⇑	na	⇑	⇑	⇑	⇑	⇑

A strong change in consumption and trade patterns was observed in this sector over the last 5-6 years. There was unanimous support for the decline in mustard oil consumption and an increase in soyabean oil. The main factor behind this change was the price differential between the two. Mustard seed oil had experienced sharp price rises, soya oil was cheaper and cooking could be done with smaller amounts of soya oil so it was more cost effective. In addition to price, the view that the mustard oil sold in the market was often adulterated was a common and a serious constraint to consumption. The use of mustard seed oil appears to have a restricted use as a body massage oil.

Production declines of mustard seed appear to have been a key factor in the substitution for the cheaper imported soya oil and palm oil (mainly for the restaurant sector). Mustard seed producers will often sell their produce and purchase soya oil.

For all but the non-poor, oil is purchased loose rather than the bottled or canned varieties. Most consumers purchase very small quantities at a time and the bottles are beyond their budget. There appears to be a greater tendency for loose oil to be adulterated while bottled oil has a prospect but not guaranteed to be pure. The traders are able to make greater profits on the loose oil (as with biscuits) even though they are selling very small individual amounts.

[4] Some pulses imported from India are actually "vech" of Australian origin. This is banned in Australia for human consumption and exported as animal feed at low price (Yusuf & Lambein, 1995).

5. Fish and Livestock Products

Consumers

Findings	JC	UKC	MKC	AC	MOC	BC	MIC1	MIC2
Fish consumption	⇓	⇔	⇔	⇔	⇔	⇑	⇑	⇑
Meat consumption	⇓	⇔	⇔	⇓	⇔	⇔	⇓	⇔
Egg Consumption	⇔	⇔	⇔	⇔	⇔	⇑	⇑	⇑
Milk Consumption	⇔	⇔	⇔	⇔	⇔	⇔	⇑	⇑

Traders

Findings	JT	UKT	MKT	AT	MOT	BT	MIT
Fish consumption	⇔	⇑	⇔	Na	⇓	⇓	Na
Meat consumption	⇓	⇔	⇔	Na	⇔	⇔	Na
Egg Consumption	⇔	⇔	⇑	Na	⇔	⇑	Na
Milk Consumption	⇔	⇔	⇔	Na	⇔	⇑	Na

The salient point to make in this section is that in the majority of the char, slum and low vibrancy villages the consumption of these products was negligible and no discernible changes were noted, as the overriding theme of the discussion was that “we do not consume these products, they are beyond our means”.

In the char area chicken and eggs are available, but consumption has declined, as outside demand has increased the price and they are sold to purchase more low cost food items.

In the slum area the consumption of these products again was restricted to products on the verge of going off or unwanted animal parts (lites, intestines etc).

Consumption in the villages was dependent on the levels of poultry and milk-cow rearing. The high vibrancy villages seem to have witnessed increased levels of egg and milk consumption. It was often reported that at this level people were able to take enough produce for home consumption and then sell the remainder.

In the high vibrancy villages there was also increased purchasing of eggs and milk, increased income was allowing this, but the trend was heightened by increased consumption of egg and milk as a substitute for fish and meat. The scarcity of fish and the increased price were a recurring theme in the discussions and fish from market sources seems to be the preserve of the rich.

Traders noted an increase in the availability of eggs, with roadside trading of eggs taking place commonly. Egg from poultry farms has significantly increased the supply, and although the majority of these are sold on to urban areas, local availability has also increased. The idea that consumers have an overwhelming preference for local traditionally raised birds and eggs appears to be diminishing, as customers are now getting accustomed to poultry and eggs from the farms.

Health education programmes, advertising and the work of NGOs was also cited as raising awareness of the health benefits of consuming egg and dairy products.

6. Spices

Consumers

Findings	JC	UKC	MKC	AC	MOC	BC	MIC1	MIC2
Spice consumption	⇔	⇔	⇔	⇔	⇔	⇔	⇔	⇔
Whole, loose or packaged	W	W	L	W	W	L	L	L

Traders

Findings	JT	UKT	MKT	AT	MOT	BT	MIT
Spice consumption	⇔	⇔	⇔	⇔	⇔	⇑	⇑
Whole, loose or packaged	L	L	L	L	L	L/P	L/P

In the char, slum, and low vibrancy villages the consumption of spices is very low as it is linked to meat and other animal product consumption. For char and low vibrancy villages spices come from home production. The poorest paste these at home, but the practice of home pasting appears to be disappearing. People either buy whole spice and take them to local grinders to powder them or they buy powdered spice from traders. Traders have an advantage here in that they have economies of scale in taking larger quantities to the grinders and selling the loose powder. The purchase of packet spice increases with levels of vibrancy and was most marked at the focus groups closest to the thana centre.

No overall trend was noted in the consumption pattern of spices, however traders noted preference for loose spice, as it was cheaper, the packet spice could not be inspected, and there were fears of adulteration with brick dust. The only exception appears to be the purchase of packet salt over loose salt. Apparently loose salt does not contain iodine and loose salt is fed to animals. Storage of loose salt must also be an issue but it was not recorded.

7. Fruits

Consumers

Findings	JC	UKC	MKC	AC	MOC	BC	MIC1	MIC2
Fruit consumption	⇔	na	na	⇔	na	na	na	na
Imported fruit	X	na	na	X	na	na	na	na

Traders

Findings	JT	UKT	MKT	AT	MOT	BT	MIT
Fruit consumption	na	⇔	⇔	⇓	⇑	na	na
Imported fruit	na	X	X	X	X	na	na

Information collected on the availability and consumption of fruits was even more limited. Consumption was primarily a factor of whether they were produced in the area and seasonality. The char dwellers reported that their area was not good for fruit trees and they could only afford poor quality fruit at times of seasonal glut.

Poor communications were reiterated as a reason behind the lack of availability in the area (in common with many other products). A similar story for vegetables emerged for fruit with the slum dwellers, they only purchased fruit in a poor decaying condition from larger markets and seasonal availability was the key. It was interesting to note that in all discussions that covered fruit, imported fruit was available but that consumers and traders alike noted that very few were able to purchase and consume it. It seems odd that availability was so high without apparent demand. Similar observations were made of fruit being available in Dhaka slums, especially bananas, yet little consumption was reported.

8. Soft Drinks

Consumers

Findings	JC	UKC	MKC	AC	MOC	BC	MIC1	MIC2
Soft Drink availability	⇑	⇑	na	⇑	⇔	⇔	⇑	na
Soft drink consumption	⇔	⇔	Na	⇑	⇔	⇔	⇑	na
Low costs substitutes	na	⇑	na	na	na	na	na	na

Traders

Findings	JT	UKT	MKT	AT	MOT	BT	MIT
Soft drink availability	⇑	⇑	⇑	⇑	⇑	⇑	⇑
Soft drink consumption	⇑	⇑	⇑	⇑	⇑	⇑	⇑
Low cost substitutes	na	⇑	⇑	na	na	na	na

Traders presented a unanimous opinion that the availability and the consumption of soft drinks had increased with greater varieties. Previously only Pepsi and Coca-cola products were available, now a range of competitors is available, especially cheaper brands. Access to electricity was an important determinant in this increase, shops requiring refrigeration to stock these items. In the char area where electricity was not available these items were still stocked but in very small quantities. In the char area they were not delivered whereas in every other location there was a network of agents distributing these products. Advertising, especially in TV, was widely quoted as a reason for the growth in this trade.

This increased consumption pattern did not appear so strongly in the discussion with consumers. In the char and slum areas these items were considered only for special occasions and were rarely consumed, although increased consumption was noted in summer. An interesting change in the habit of providing guests with soft drink and biscuits rather than curd was noted though.

The trader/ consumer discrepancy could be explained by traders stocking the product to increase the "modernity" of their shop, whilst consumers denying consumption due to the "frivolous" nature of the purchase.

The discussions highlighted the importance of young people in the changing consumption pattern. There appeared to be an element of "pester-power" in the purchase of these highly desirable items for young people, with the importance of advertising noted.

9.Snack Foods: Singara, Puri, Chanachur and Crisps

Consumers

Findings	JC	UKC	MKC	AC	MOC	BC	MIC1	MIC2
Consumption of snack food	⇑	⇑	⇑	⇑	na	⇑	⇑	⇑
Consumption outside the home	⇑	⇑	⇑	⇑	na	⇑	⇑	⇑

Traders

Findings	JT	UKT	MKT	AT	MOT	BT	MIT
Consumption of snack food	⇑	⇑	⇑	na	⇑	⇑	na
Consumption outside the home	⇑	⇑	⇑	na	⇑	⇑	na

Consumption of snack foods appears to have undergone a considerable increase. Many traders stated that *singara* and *puri* sold very well and that these are very popular at all income levels. In a discussion with slum dwellers *singara* was described as "the food of the poor". The increased consumption of these items is linked to a striking increase in the consumption of food outside the home.

It was noted that everybody who travels outside the home consumes singara and puri. They provide breakfast, daytime and evening snacks for labourers and factory workers (male workers were sometimes singled out for consumption of these items) . School going children also consume these cheap snacks in the course of their journey. Even the char dwellers reported increased consumption, linked to journeys to market., and as the nature of livelihoods changes they are increasingly moving out of the villages and working in towns.

The increase was attributed to growth in what was described as the "labouring classes", and the need for easy ready-made food. It was also associated with increased socialising and gossiping, usually accompanied with tea around the stalls (again this may be a male preserve).

The consumption of crisps was little discussed but appeared to follow a similar pattern to soft drinks, with availability, consumption, and variety increasing with the increases dominated by demand from the young.

B Market Structure

Consumers

Findings	JC	UKC	MKC	AC	MOC	BC	MIC1	MIC2
Retail outlets	⇑	⇑	na	na	na	⇑	na	⇑
Cooked food outlets	na	⇑	na	⇑	⇑	⇑	⇑	⇑
Local Processing	na	na	na	⇑	na	⇑	⇑	⇑
Packaged food items	na	⇑	⇑	⇑	⇑	⇑	⇑	⇑
Agents and Suppliers	na	na	na	na	na	na	na	na

Traders

Findings	JT	UKT	MKT	AT	MOT	BT	MIT
Retail outlets	na	⇑	⇑	⇑	na	⇑	⇑
Cooked food outlets	na	⇑	⇑	⇑	⇑	⇑	⇑
Local Processing	na	na	na	⇑	⇑	⇑	na
Packaged food availability	⇑	⇑	⇑	⇑	⇑	⇑	⇑
Agents and Suppliers	na	⇑	⇑	na	⇑	na	⇑

In this section the majority of the information was taken from the traders discussion groups, the nature of the questioning moved away from consumption and towards availability of items and the changing nature of the market and the supply systems.

Retail Sector

The discussions supported a large-scale increase in the number of shops by both traders and consumers. This was especially noted in the slum and high vibrancy areas but less so in the char and low vibrancy villages. The most common reason cited was as a response to population increases. Although, this will have been important, especially in the rapidly expanding slums, it can't explain the scale of the change. The minimum change noted was a doubling in the number of shops, whilst nine-fold increases were noted. The implication is that the market structure has undergone a change to more fixed retail outlets.

One discussion group commented that fishermen who had lost access to fishing areas had switched to alternative income resources, primarily shop-keeping. This is also consistent with discussion that in certain areas the new shop-keeping groups were primarily Hindus. Those without agricultural land were also turning to the trade sector for income sources, and this was often linked to trading from the home. An interesting point

made in the slum discussion was that the slum shopkeepers were not slum dwellers, they have sufficient income to live outside the slum.

The char area did not demonstrate these changes to the same extent, with bartering estimated to account for 40% of the trade in the area. Poor communications and lack of electrification were the explanations given.

An even stronger growth trend was noted for the cooked food outlets (restaurants but commonly referred to as hotels, though this term may be misleading). Again the increase was most dramatic in the slums and high vibrancy areas. As previously noted, in the section on outside the home consumption patterns, this was one of the most forceful messages to come from the discussion groups.

The competition between shops and cooked food outlets had resulted in traders being unable to overcharge for their items. This process was supported by the growth in packaged and branded items. Consumers knew more precisely what they were getting and could therefore engage in more price comparison.

Local Processing

Many areas reported an increase in the local processing of food items, the common examples given were of increases in bakeries, spice grinding, mobile rice husking, and smaller local milling establishments. Despite a doubling in the number of bakeries in the Mirzapur area the demand was still sufficient to allow expansion, according to traders.

The common reasons given for this growth were convenience and time saving (both in avoiding laborious home processing methods and travel time to more distant mills). The dheki method of rice milling and home pasting of spices had all but disappeared according to the discussions. The mobile rice husking mills were very popular, and there seemed to be potential for expansion of this sector. The mills were pulled by cycles and in the flood season were transported by boats. As well as the travel time advantages, there also appeared to be benefits in keeping the rice husk for animal feed, which was an important concern.

The very detailed discussions from Mirzapur estimated that around 10% of the employment in the area came from food processing sector and that 30 to 40 families had developed food-processing businesses.

Packaged Food Items

Virtually all traders and consumers acknowledged a rapid expansion in the availability of packaged items; although it was not as strong in the char area it certainly had penetrated that far. A number of reasons were noted which highlighted the benefits for consumers and traders of moving towards this more developed food system.

The quality issue was paramount, packaged and branded products had led to an increase in the perceived overall quality of food items. The Ashtogram traders estimated that the quality of food items had increased by 80%. Packaging and branding was seen as a definite benefit in avoiding adulteration of food items and difficulties in and disputes over weighing.

Storage was a critical issue, allowing traders to hold more stock and face reduced risk in loosing stock to deterioration. For consumers the increased life of food items was noted, but an important message was that buying these items, especially for consumption by guests, confirmed social status. Only certain categories could afford these items, salaried workers were often cited, and traders agreed that there was an element of window

dressing in stocking these expensive items to increase the status of the shop. An interesting comment from slum traders was that since the population of the slum was so high, even if only 5% of the dwellers buy these items, this still provides good sales.

Agents and Distributors

Trader discussions noted that they still sourced the majority of their stock by visiting the main town bazaars and warehouses. The Bharaib traders estimated that 20% of their stock was delivered and the rest were collected from markets. However, all the traders, apart from the char area, noticed an increase in the number of agents and van suppliers to their shops.

Distribution agents were primarily associated with the "modern" packaged and branded products including soft drinks, biscuits, bread products, packaged spices, and bottled or canned oil. Orders were given for these products and agents supplied them. It would be interesting to see how the credit was arranged on these supplies. The slum traders and the high vibrancy villages appeared to have the strongest growth in van distribution. Distribution to remote villages was still limited.

A trend in the growth of door-to-door traders was also noted with egg and milk traders in traveling around villages with rickshaw vans; in slum and town areas, vegetable and fish traders were witnessed hawking produce around dwellings.

Case Study Results from Processing Sector Interviews

A series of discussions were held with owners or managers of small-scale processing operations in the selected locations. The purpose was to gather evidence and develop findings relating to changes in the processing sector and implications for employment generated from the trader survey and the focus group discussions described above. The selection aimed to have good spatial as well as operational coverage.

The selected sites were:

Rice mill (Chatal) in Mirzapur (RMI)
Rice mill (Chatal) in Modhupur (RMO)
Bakery in Ostogram near Bharaib (BB)
Spice grinding mill in Mirzapur (SM)
Spice grinding mill in Chilmahal (SC)

Issues were discussed linking into certain sections of the retailer survey looking at growth in the sector, distribution and supply networks, and employment opportunities. Findings are presented in the table below. The key symbols are the same as before.

Findings	RMI	RMO	BB	SM	SC
Number of Competitors	⇓	⇑	na	na	⇑
Significant competition exists	√	√	√	na	√
Levels of sales	⇑	⇑	⇑	⇑	⇑
Employment levels in the sector	⇑	⇑	⇑	na	⇑
Seasonal employment	√	√	√	√	X
Involvement of traders and distributors	⇑	⇑	⇑	⇑	na
Interested in taking a loan	na	na	√	X	X

Growth in the Sector

It appeared clear from the responses that the processing sector was undergoing a dynamic growth with increased sale reported from each operation. An increase in the sales of packaged products was noted. Operators believed that this was due to reduced fears of adulteration, a tendency for the young to demand packaged and processed products especially bread and biscuits, and a change in food consumption habits whereby labourers are increasingly consuming processed bread products as a convenience food outside the home.

New entrants were noted in two discussions, although the rice mill in Mirzapur reported a reduction in the number of mills in the area. All respondents noted that competition was strong in the area, and this was due to the growth in demand and growth in the supply networks to service this demand.

Employment Opportunities

Increased employment, directly in the mills or bakery, was reported but these were not substantial changes. All operators noted that their employment patterns were highly seasonal, this would have implications for the operational efficiencies of these businesses. Demand seems to be highest in the harvest season when income is greater and people have higher demand for the processed products. Consequently increased employment opportunities in processing occur at this time. There were substantial employment opportunities in the large-scale growth in the network of traders and distributors.

Supply and Distribution Networks

The distance for the procurement of inputs into operations had increased, this was especially true for the rice millers with long distance procurement of paddy. The distribution networks of products had also expanded, most operators reported that they distributed products themselves with traders sourcing directly from the mills. A wide range of cycle-bepari, farias, van distributors and traders were involved in an extensive and expanding network.

The mills (rice and spice) unanimously reported that there had been a reduction in the number of individuals bringing small amounts of home production or bought whole spices for milling. Mobile huskers were milling small quantities of rice locally, and people were purchasing pre-ground spice (either loose or packaged) from local retailers, consequently time consuming trips to the mills were being reduced. The mills therefore were becoming engaged much more in commercial operations

There was little discussion on the nature of financing in the business, although operators expressed a desire to expand and modernise their enterprises. There was fear of getting involved in loans, which were considered to be unavailable at attractive rates of interest, thereby increasing the level of risk in the operation. Rice millers, especially, were interested in developing their businesses into larger scale commercial concerns. An important factor promoting this appears to be the very high demand and profits made from the sales of rice husk for poultry and fish feed.

Constraints

The operators highlighted constraints that they faced in operating their businesses efficiently. The seasonality was clearly important, and the need to develop better storage and processing techniques to allow for more sustained production throughout the year was not met. This would probably have increased their efficiency of business and reduced the number of operators.

Lack of reliability and regularity in electricity supply often resulted in the factories having to shut down for long periods during the day. The main issue for the operators appears to be that this often lengthened the workday to ensure that the quantities required were milled.

Problems occurred with quality control and regulation, with reputations being harmed by adulteration of products outside the factory. This was especially the case for the spice millers, with brick dust being added to loose spice. In this respect they noted that they were trying to promote increased sales of packaged products and develop a regular market for these branded products.

Regulations exist in the bakery sector, yet but the factory visited did not have government approval but was trading heavily. Interestingly, the interviewer described extremely unhygienic conditions and practices in the factory. The main market for this operator was cheap loose biscuit that have a market with poor consumers. It is

harsh to think that the hard earned extra income of these poor people was being spent on “luxury” items that may have detrimental impacts on health.

Summary Findings from the Case Studies Paper

In addition to the survey and focus group work, case studies, involving literature reviews, interviews, and elements of the survey findings, were also conducted, with a separate paper is available. Included here are the summary findings from these case studies.

The paper examined some of the major food sectors in Bangladesh, concentrating on production and consumption changes together with the nature of the marketing and processing chains.

Rice production has increased, reaching self-sufficiency levels in 1999, the net availability of rice has increased and it is greater than the nutritional requirement. The increase in rice production has helped to reduce poverty but has also made the diet even more imbalanced.

Rice is the major dietary component throughout Bangladesh, and the reliance upon rice appears to be increasing for the poor, especially the rural poor. The urban poor actually record decreasing consumption levels of rice and this may indicate that their diets may be declining in quantity as well as quality. Middle/rich income groups still consume three meals of rice per day and are increasingly able to supplement this with alternative energy and protein sources, and consequently rice is relatively less important in their diet. The survey indicated that rice consumption could be declining for the educated middle-income group as their consumption pattern diversifies. Consumption patterns show increasing inequality across the income profile, with the poor retreating to increasing rice consumption.

The poor are more market dependent than other groups and rely on a well functioning market for cheap sources of rice. Rice markets are in a period of transition and the chains are shortening, this may be beneficial for the poor in delivering cheaper rice, but the poor are heavily involved in this rice market as an employment source and the net effect could be detrimental if employment is being lost. Identifying trends in the employment of the poor given the changing nature of the marketing and processing chains is needed.

Liberalisation in the rice market appears to have had positive effects, especially in regard to price stabilisation, this is important for the poor both as consumers and producers. Increased production and liberalised markets would now allow Bangladesh to export rice in good production years, however, policy makers must consider whether greater agricultural diversification would be a better option in terms of nutrition, income and employment generation, than further growth in the rice sector.

Wheat production and consumption is very secondary to rice. Wheat production has increased, though initial consumption figures suggest that consumption has fallen recently. Consumption of wheat flour does appear to be decreasing, though it is still a relatively larger part of the poor's diet, mainly through the influence of the public distribution network. Decreasing consumption of wheat flour is counter-balanced by increasing consumption of wheat-based products, especially amongst the less poor and the urban dwellers. The survey showed that bread and biscuits are the food items that the highest percentage of households perceive to have increased over the last 5 years. A significant proportion of this increased consumption is in the packaged and branded sector. Although this market is still small, it does appear to be growing especially amongst the less poor and the urban dwellers.

Unlike rice, wheat and wheat-based product consumption is higher for specific household members, notably children and male earners.

The wheat sector market is witnessing increasing private sector involvement, as the public distribution network is diminishing in importance. The growth of the import sector has also encouraged this private sector involvement. The changing nature of the market, with processed products, replacing wheat flour purchases is affecting the small-scale millers and they are loosing out to the larger scale automated millers. This may have negative impacts for poor people involved in this sector, but the whole growth of a processing and packaging sector may offset these losses.

Production of fish is very high in Bangladesh and has increased overall in the last 10 years, this production growth has mainly come from the aquaculture sector, whilst open-access capture fisheries have declined. The latter is the normal source of fish for the rural poor. Figures tend to suggest that fish consumption is undergoing a slight increase or remaining static. However, there are worrying signs of declining consumption amongst the poor, especially the urban poor, who depend on the market.

Fish is mainly sourced from low level markets and the marketing and processing networks are very under-developed. This is a factor in pricing fish out of the shopping basket of the poor, together with the increasing demand from the growing urban surplus group.

The ownership of fishing resources is a key issue in the sector; the increasing value of fish has meant that traditional open access resources are being captured by landlords. When this is combined with the drainage of land for rice cultivation this has led to a decline in the availability of fish for poor consumers, especially the small fish consumed by the poor.

The shrimp and prawn sector is an important export sector but does not contribute greatly to the diet of the local poor. There are problems in the sector relating to ownership and hygiene /quality standards in processing plants, but the sector does provide evidence that diversification can result in increased incomes for poor people, with many gaining employment in the transport and processing stages.

The production of poultry meat and eggs has increased significantly and net availability has increased. Nevertheless, the level is still well below the requirement for a good nutritional balance. There is a shortage in supply and consumption patterns are polarising between the poor and less poor.

The poor are recording decreasing consumption of poultry products, and this is especially marked if the poor are market dependent for their source of eggs. The shortages have pushed prices beyond the range of poor consumers and producers have to market virtually all their produce to profit from their poultry rearing. The rich group in the survey tended to have access to eggs from their own production.

To compound this growing inequality in consumption, poor producers do not benefit from the supply shortages as the market is inefficient and intermediaries are capturing high margins. There are numerous marketing constraints, including transport, refrigeration, storage facilities and shortage of feedstuffs, which are preventing the development of the sector.

NGOs are heavily involved in small livestock programmes, developing integrated schemes to encourage production usually by poor women. However, there are now concerns regarding the profitability of these semi intensive systems and the entry of too many NGOs into the sector. The shortage and high prices of feed grains is the crucial element, these prices often mean that the traditional scavenging system is more profitable and less risky for poor producers.

Poultry products appear to be another example where higher value, higher protein products are declining in the diet of the poor, as the demand from the growing middle class in urban markets prices the poor out. The

declines are occurring from a very low level of consumption, already well below those required for a balanced diet.

The milk sector holds many similarities with the poultry and other high value, high protein products. Production has been increasing but not sufficiently to meet the large demand. Although consumption has increased, levels across the country are still very low. Worryingly milk is another product where consumption appears to be declining for the poor as middle/upper income urban markets capture the available milk supply.

The increase in collection networks both NGO and private have encouraged increased production but this has not increased consumption at the local level. In this case remoteness from markets can be an advantage nutritionally for poor producers, as they are likely to produce for home and neighbourhood consumption. Yet producers with good market access fail to fully benefit from the high urban demand, as the intermediaries capture the high margins. The most vulnerable to declining milk consumption are market dependent poor groups, the landless rural poor and slum dwellers.

The urban market for processed and packaged milk products, though still very small, is expanding rapidly. Collection and distribution networks, together with chilling centres and refrigerated transport infrastructure are developing under private sector and NGO control. These provide hygienic, high quality products, whilst also providing a range of employment opportunities throughout the sector. If development could proceed so that further employment was generated whilst expanding availability to a wider range of consumers this could be a positive development.

The percentage of cultivatable land under vegetable and fruit production is very low, yet Bangladesh has the potential to produce a wide range of high value horticultural produce. Despite attempts to diversify, production has not expanded greatly. The growth in HYV rice production has reduced cultivation of other crops, especially pulses. These are a cheaper traditional source of protein for the poor, and declines in production have negative impacts on dietary balance.

Marketing difficulties appear to be the major constraint preventing producers moving into commercial production of horticultural crops. Homestead gardens are the most important production unit, mainly for domestic and local consumption. Inadequacies in marketing chains mean that the market dependent urban poor are those who are the most vulnerable.

The rich, and in the case of vegetables, middle/breakeven consumers have perceived consumption increases, for the poor the picture is more static. The likely explanation is that although supply shortages and market inefficiencies are increasing the price for the poor, they are substituting increased vegetable consumption for increasingly inaccessible fish and livestock products.

Fruit consumption is especially low across the entire poverty profile, this is as a consequence of low production but also the seasonality and the inability to store produce resulting in significant wastage. Fruit exhibits the same pattern as other higher value products with growing inequality in consumption patterns, only the rich are able to access the market-sourced fruit, especially the imported fruits.

If the sector is to develop and make a contribution to improved nutrition, improved incomes, and increased employment opportunities it is crucial to develop the associated processing and packaging industries and the linkages to producers.

The over riding impression from the food group studies is one of a growing divide between the consumption patterns of the deficit group and the surplus group. The contrast is most marked between the rich and poor

living in urban areas and upazila centres. Those living in these areas are more market dependent and vulnerable to price fluctuations.

The diet of the poor seems to be contracting in diversity, with rice increasingly dominating consumption, though in urban areas there is some substitution with wheat based products for convenience and possibly as a cheaper food source, as no fuel expense is entailed. All the high protein items, especially animal products are beyond the means of the poor for consumption on a regular basis, as demand from the growing urban population draws produce into the market where the price is too high for the poor. For many, vegetables appear to be the only remaining high protein food item. The urban poor appear to be the most vulnerable without any access to home production.

For the surplus groups living close to centres and with good market access, dietary diversity and the quality of produce consumed appear to be improving. Consumption of high protein items is increasing as markets are facilitating greater availability in urban areas. Also consumption of processed, packaged and branded items is becoming a regular feature of this group, and there is evidence of a dispersion of this trend into more remote and less rich/surplus areas.

Annex 1 How frequently items are consumed by sample groups %

	Food Items	Low vibrant villages											High vibrant villages											Slum											Char											BRAC Staff										
		1	2	3	4	5	6	7	8	9	10	11	1	2	3	4	5	6	7	8	9	10	11	1	2	3	4	5	6	7	8	9	10	11	1	2	3	4	5	6	7	8	9	10	11	1	2	3	4	5	6	7	8	9	10	11
1	Rice	3	23	73								1	2	13	84			1							20	80									3	10	87									4	96									
2	Wheat flour	18	7		3	6	5	3	29	13		17	6	3		5	3	10	11	20	18	3	21	18				5	8	15	15	15	5	20	7	7		3	3	17	20	33	3		7	22	4		13	17	4	13	17			9
3	Bread	19		2	15	16	5	5	16	11		12	23	3	1	14	16	4	5	20	6		8	23			5	10	3	5	40	3		13	3			23	20	10	13	10			20	22	9		13	13	4	17	4			17
4	*Chira*/Puffed rice	25	1	2	11	7	7	6	33	8	1	1	28	3	3	11	14	3	3	18	10	1	6	15	3		5	8	10	8	28	23		3		3		3	3	13	23	33	7		13	48	4	17	9	13		4	4			
5	Leafy Vegetables	33	22	3	14	25	3					1	33	23	8	4	28	1		4				20	10	8	3	55		3	3				3	43	17	7	30						35	57			9						
6	Potato	23	36	10	9	21		1				1	22	38	18	2	18			2				18	40	20	5	13			5				10	17	37	10	17		7	3				17	44	30		9						
7	Vegetables	14	50	19	3	11			2	1			14	44	21		11	1	1	8				20	25	15		23	3		13			3	7	57	37									39	57		4						
8	Pulses	18	18	8	16	23	4	4	7	2		1	11	17	10	18	35	2	1	7			1	33	23	8	8	23	3		3			3	10	23	30	3	30	3					4	44	22		26						4
9	Fish	25	33	2	12	18	3	3	2	1		2	16	23	8	12	31	2	3	5			1	3	8	15	8	53	3	3	3			8	10	7	3	27	40	7	3	3				22	48	9		22						
10	Meat	5	3		8	3	14	17	25	14	9	2	3	3	3	13	3	13	28	13	8	9	3		3	3	5	3	18	25	15	20	8	3	3			3		10	43	17	13	7	3	13	17		22	9	30	4	4			
11	Milk and milk product	29	18	1	8	9	8	4	10	8	3	3	31	15	6	6	3	9	6	14	4	2	5	18	5	5	5	3	10	3	20	10	5	18	47	7	3	10	10	3	10	3	3		3	44	13	17	4	4		9	9			
12	Egg	16	7		20	16	13	6	20	3		1	18	8	1	22	14	8	3	19	5		3	18	3	5	10	20	8	8	23	3		5				23	13	23	23	13			3	30	9		22	26	9			4			
13	Onion/Garlic/Ginger	15	33	50		1			1			1	15	23	58					3			1	20	45	35										13	87									17	83								
14	Salt	3	31	67									1	26	73								1		33	68									10	90									4	96								
15	Other spices	14	18	53	1		1		6		1	8	19	13	53	3	1			7		2	3	15	40	43								3		3	67				10			20		13	78				9			
16	Banana	13	5	1	14	11	10	13	29	3	1	1	11	7	4	19	10	12	3	27	7		1	13	13		10	8	13	5	35	5			7	13		13	17	23	10	13	3			17	22	4	22	26	9					
17	Apple/orange/grapes/pomegranate	5			6	1	6	6	23	28	3	22	4	3	1	9	3	8	17	18	24	2	10	10				3	8	23	40		18						7	13	33	3	43	13	9		13	13	22	9	13	9			
18	Other fruits	4			12	5	11	5	39	21		3	5			8	13	8	10	36	18		3		3		3		3	5	53	23		13				23	3	3	7	33			30	4			30	13	22	13	13	4			
19	Edible oil/ *Ghee* (loose)	8	37	43	1				6	3		3	7	34	54					4			1	13	50	35					3					13	87									9	52					17	4		17
20	Edible oil/ *Ghee* (Packaged)		3	8	1		2	1	13	3	4	67	1	1	3	1	1		1	12	3	8	70			3					10			88						3			97		4	39				4	22		4	26
21	Biscuit (local bakery)	15	7		14	18	6	2	25	3		12	30	9	3	11	13	5	3	22	4	1		25	5		5	10			43	5		8	7	3		30	23	3	7	3			23	26	9	4	22	13	4	9	4			9
22	Biscuit (branded)	7	3		13	8	7	5	23	18		18	8	1		14	10	6	7	27	18	2	8	3			3				45	28		23				13	3	10	7	17	3		47	9			35	9	4	13	22	4		4
23	*Chanachur*, chick pea, nut	18			13	19	3	5	25	3		13	16	5	3	12	8	8	3	34	8	1	3	23			13	15			48	3			10	23	3	17	37			3			7	26			26	17	4	9	9			9
24	Chips	3	1		8	5	3	3	17	16		45	6	3	3	13	8	5	4	16	16		27	5			5	3	8		38	20		23				13	3	10	7	10	7		50	4	9		39	13	9	17	4			4
25	Soft drinks	2			4	2	3	3	20	17	9	41	3	2		5	4	6	6	19	13	10	33	5			8	3	5	10	20	23		28				3			3	3	3	17	70				30		9	26	22	4	9		
26	Juice	2			4	1	3	2	13	18	3	56	3		1	6	2	4	4	18	13		50	5		3		3			13	13		65								3	3		93	26			9	4	9	9	17			26
27	Tea/coffee	23	22	7	4	8			13	4		19	32	13	5	3	3		2	14	5		24	15	20			5			23	3		35	7	3		7	23		3	3			53	26	30	13		13	4	4	9			
28	Sweet meat/sugar/*Gur*	24	9	3	9	18	5		13	7	1	11	31	6	4	1	17	3	3	27	6	1	3	25	3	3	8	3	5	3	40	8		5	30				30	3		3			33	22	9	22	17	4	9	4	13			
29	Snacks (*Singara, Puri, Samucha*)	9	2		7	17	3	1	27	12		24	22	3		8	16	2	5	29	6		10	20	10			5			50	10		5				23	30			17			30	22		4	22	22		9	4	9		9
30	Eating outside	11			7	6	4	4	18	9		41	15	4	1	5	8	5	4	16	8		34	33	5			5			15	8		35	3	3		10	3			13	7		60	9	4	4	26	9			13	9		26
31	Ice cream/ chocolate	25	4	1	13	14	3	1	19	7		14	33	11	2	5	13	5	3	20	3		7	25	8		3	30			33			3	7			20	27	7		3			37	13	4		9	26		4	4	13		26
32	Noodles/*Samai*	2	1	1	2		8	9	22	13	33	10	2			7	1	12	12	11	11	38	8	5				5	3	20	5	60	3						10	20	17	43	10	4			30		13	17	26		9	
33	Betel leaf /cigarette/betel nut	6	12	56		1		2	2	3	1	18	5	19	40				1	4		1	30	3	8	35		5			20	3	3	25	3	3	67							27	9		39				9	4		39

1=once daily; 2= twice daily; 3=thrice daily; 4= once weekly; 5=twice/thrice weekly; 6= once fortnightly; 7= once in a month; 8= sometimes; 9= Hardly ever; 10=On special occasions; 11= Never

Annex 2. How frequently items are consumed by poverty groups (%)

	Poor											Middle class											Rich										
	1	2	3	4	5	6	7	8	9	10	11	1	2	3	4	5	6	7	8	9	10	11	1	2	3	4	5	6	7	8	9	10	11
Rice	3	23	73			1					1		12	88									3	6	91								
Wheat flour	12	3		5	6	6	12	24	15	2	15	14	3		3	3	13	5	24	14		20	13	10		3	7	7	7	21	9	1	19
Bread	16	2	2	17	14	6	6	19	6		13	24	1		11	17	5	7	21	5		7	22	3		12	16	1	6	16	7		15
Chira/Puffed rice	16	1	1	10	6	6	6	32	13	1	7	30	4	6	11	12	9	7	13	7		1	36	3	3	6	16	3	4	25	3		
Leafy Vegetables	24	23	7	11	30	1	1	3			1	37	24	5	6	26			1				30	31	6		30	3					
Potato	22	31	17	5	21		1	2			1	16	39	19	7	16		1	1				22	43	18	3	12			1			
Vegetables	17	41	18	2	12	1		8	1		1	10	49	27		11		1	3				7	49	33		9			1			
Pulses	12	16	9	17	30	5	2	6	1		2	13	24	13	15	27	1	2	5				30	25	16		25			3			
Fish	8	17	6	18	34	4	5	4	1		3	27	24	7	6	29	2		3			1	28	45	4	3	18		1				
Meat	2	1	1	2		9	28	20	21	13	4	4	6	2	17	4	21	20	18	2	4		9	9	1	22	7	21	16	10	1	1	
Milk and milk product	19	8	2	9	6	8	8	17	10	3	9	37	18	6	7	6	10	5	6	1	1	1	54	24	7		3	4		7			
Egg	11	5	1	17	10	15	10	22	5		3	17	6	2	22	18	10	3	18	2		1	28	9		22	28	1	1	7	1		
Onion/Garlic/Ginger	20	30	47		1			2			1	6	26	67					1				4	27	69								
Salt	2	34	64										19	80								1		13	87								
Other spices	19	18	44	2	1	1		7		1	9	11	14	63					7		1	4	6	18	72	1				1		1	
Banana	6	6	1	15	7	16	10	29	8		1	10	10	3	22	15	10	5	23	1	1		28	12	3	10	19	4	3	19			
Apple/orange /grapes/pomegranate	3	1		1		3	8	12	38	3	30	7	1		5	4	12	13	32	19	1	5	7	6	1	21	6	10	12	22	12		1
Other fruits	2			5	1	9	8	44	24		6	2			19	14	9	9	31	11		6	10	1		16	16	9	4	28	6		7
Edible oil/ *Ghee* (loose)	11	44	44					1			1	3	23	62	1				5	2		3	1	19	54					15	4		6
Edible oil/ *Ghee* (Packaged)	1		1			1	1	3	1	2	91		2	9		1		1	19	2	6	60		4	21	3		1	1	24	3	10	31
Biscuit (local bakery)	15	5		15	13	6	4	28	3	1	10	29	4	2	12	21	2	2	18	3		6	30	16	3	15	13	3		13	1		4
Biscuit (branded)	1			6	1	6	6	31	23	1	24	7	1		24	12	5	9	18	14		10	16	4		19	18	6		25	4		6
Chanachur, chick pea, nut	12	3	2	15	13	5	4	33	3		9	23	5		11	18	5	1	26	6	1	3	25	4		16	21	1	4	18	3		6
Chips	1	2	1	9	1	5	2	15	18		45	4	1		15	11	4	9	24	12		20	12	3	1	16	12	7	4	13	9		21
Soft drinks	1	1		3	1	2	6	8	17	5	56	4			4	1	5	7	26	14	19	19	4	1		18	9	10	4	34	4	6	7
Juice	2		1	1	1	1	1	7	16	1	70	5			4	1	5	5	18	12	1	48	7			12	4	4	4	25	7	1	33
Tea/coffee	20	11	3	3	8		2	15	5		34	22	22	7	4	6		1	15	1		20	36	27	7	1	9	1		6	4		7
Sweet meat/ sugar/*Gur*	18	4	2	6	16	5	1	26	10	1	12	29	7	9	6	19	4	2	17	1		5	48	10	4	4	12	4	1	10			4
Snacks (*Singara, Puri, Samucha*)	14	3		10	12	1	3	26	9		22	17	1		7	18	3	1	35	7		10	15	4	1	9	25	1	3	22	6		12
Eating outside	16	2		3	6	2	2	10	10		48	11	5	1	6	4	5	5	21	9		32	15	1	1	18	10	3	1	24	3		22
Ice cream/ chocolate	19	7	1	10	17	5	2	21	5		15	35	5	1	9	19	2	1	18	2		7	28	7	1	7	15	1	1	13	7		16
Noodles/*Samai*	1	1	1			4	6	10	16	51	11	2			9	1	12	14	23	5	30	4	6			13		16	15	28	4	13	3
Betel leaf / cigarette/betel nut	5	10	49		1		1	6	1	1	26	5	12	44		2			5	1	1	30	4	18	48				3	3	4	1	18

1=once daily; 2= twice daily; 3=thrice daily; 4= once weekly; 5=twice/thrice weekly; 6= once fortnightly; 7= once in a month; 8= sometimes; 9= Hardly ever; 10=On special occasions; 11= Never

Annex 3. Perceived changes in consumption over the last five years %

Item	Low vibrant village			High vibrant village			Slum			Char			BRAC Staff		
	Inc.	Dec.	No change	Inc.	Dec.	No change	Inc.	Dec.	No change	Inc.	Dec.	No change	Inc.	Dec.	No change
Rice	43	6.7	50	44	13	43	28	20	53	57		43	35	13	52
Wheat flour	17	44	39	9.5	49	41	16	44	41	3.6	89	7.1	19	62	19
Bread	58	14	28	63	15	23	51	31	17	67	21	13	37	37	26
Chira/Puffed rice	23	38	39	35	30	35	21	54	26	12	15	73	48	26	26
Leafy Vegetables	45	18	36	48	14	38	43	38	20	60	13	27	70	8.7	22
Potato	50	12	38	54	15	31	48	23	30	53	17	30	39	13	48
Vegetables	37	19	44	43	20	38	49	26	26	27	30	43	57	13	30
Pulses	26	28	46	43	29	29	56	18	26	67	6.7	27	55	4.5	41
Fish	31	47	23	25	52	23	16	57	27	10	67	23	26	35	39
Meat	21	40	39	23	43	34	15	72	13	3.4	66	31	22	52	26
Milk and milk product	39	36	25	32	42	25	27	49	24	48	35	17	52	35	13
Egg	27	33	40	38	32	30	32	47	21	24	41	35	35	30	35
Onion/Garlic/Ginger	21	13	66	22	18	61	28	23	50	3.3	10	87	4.3	4.3	91
Salt	22	3.3	75	15	4.2	81	18	13	70		3.3	97			100
Other spices	21	9.9	69	16	19	65	21	10	69		4.2	96	13	8.7	78
Banana	32	26	43	33	33	34	33	48	20	30	37	33	61	17	22
Apple/orange/grapes/pomegranate	32	27	41	38	32	30	27	55	18	29	65	5.9	30	39	30
Other fruits	15	23	63	21	27	52	23	49	29	9.5	33	57	17	26	57
Edible oil/ *Ghee* (loose)	28	23	49	31	25	44	33	28	40	6.7	17	77	26	16	58
Edible oil/ *Ghee* (Packaged)	70		30	67	8.3	25	80	20		100			47	24	29
Biscuit (local bakery)	62	11	26	55	22	23	51	35	14	65	17	17	48	24	29
Biscuit (branded)	65	11	24	54	21	25	30	40	30	69	6.3	25	50	36	14
Chanachur, chick pea, nut	68	8.7	23	60	21	19	53	23	25	82		18	50	30	20
Chips	77		23	70	11	18	55	29	16	93		7.1	68	27	4.5
Soft drinks	69	5.6	25	54	22	23	48	31	21	100			35	22	44
Juice	66	7.5	26	63	25	12	43		57	100			59	29	12
Tea/coffee	57	16	27	43	20	37	27	39	35	43	7.1	50	35	35	30
Sweet meat/sugar/*Gur*	47	15	38	47	21	32	24	53	24	65		35	39	39	22
Snacks (*Singara, Puri, Samucha*)	45	12	43	55	21	24	45	37	18	67	4.8	29	38	38	24
Eating outside	36	11	53	44	22	34	27	12	62	58	17	25	47	35	18
Ice cream/ chocolate	73	15	13	81	9	9.9	59	15	26	84	5.3	11	65	18	18
Noodles/*Samai*	28	17	55	28	22	50	13	28	59	26	26	48	35	35	30
Betel leaf /cigarette/betel nut	44	15	41	52	15	32	43	27	30	36	14	50	21	36	43
Total	40	20	41	41	24	35	34	34	32	38	23	39	39	26	35

Annex 4 Perceived changes in consumption over the last five years period (%)

Item	Poor			Middle class			Rich		
	Inc.	Dec.	No change	Inc.	Dec.	No change	Inc.	Dec.	No change
Rice	44	16	39	43	4.3	53	36	4.5	60
Wheat flour	10	58	32	13	51	36	20	37	43
Bread	53	25	22	71	9.2	20	51	16	33
Chira/Puffed rice	21	43	36	35	30	35	34	21	45
Leafy Vegetables	43	23	34	61	9.6	30	49	16	34
Potato	47	20	32	53	12	35	57	4.5	39
Vegetables	32	32	36	48	11	41	52	7.5	40
Pulses	40	29	31	41	22	36	45	10	45
Fish	17	61	22	22	48	30	49	28	22
Meat	12	62	25	21	41	37	36	21	43
Milk and milk product	26	45	28	47	39	14	48	27	25
Egg	25	41	34	35	32	32	43	24	33
Onion/Garlic/Ginger	15	24	61	21	6.4	72	29	3	68
Salt	15	8.1	77	14	1.1	85	19		81
Other spices	16	20	64	16	7.9	76	21	3	76
Banana	24	40	36	40	24	35	51	18	31
Apple/orange/grapes/pomegranate	17	50	33	44	31	25	50	15	35
Other fruits	7.5	40	52	23	19	58	37	9.7	53
Edible oil/ *Ghee* (loose)	22	31	47	30	16	54	41	11	48
Edible oil/ *Ghee* (Packaged)	47	27	27	66	5.3	29	72	4.3	24
Biscuit (local bakery)	44	29	27	73	13	15	70	6.3	23
Biscuit (branded)	37	29	34	68	16	15	76	6.3	17
Chanachur, chick pea, nut	54	23	23	71	8.8	20	74	6.5	19
Chips	58	20	23	81	5.3	13	81	5.7	13
Soft drinks	41	32	27	67	11	22	68	6.5	26
Juice	49	25	25	69	14	16	71	8.9	20
Tea/coffee	34	29	37	51	17	32	61	9.7	29
Sweet meat/sugar/*Gur*	33	31	36	54	17	29	59	11	30
Snacks (*Singara, Puri, Samucha*)	40	25	35	65	16	19	53	14	34
Eating outside	29	21	49	47	17	36	51	12	37
Ice cream/ chocolate	66	14	19	85	6.9	8	79	14	7.1
Noodles/*Samai*	15	30	56	35	18	47	43	11	46
Betel leaf /cigarette/betel nut	43	20	37	52	15	33	42	15	44
Total	31	32	37	46	18	35	50	12	38