The Vietnam urban food consumption and expenditure study

Factsheet 11: What meat products do consumers purchase and does meat consumption change with increased income?

Meat accounts for the largest share of monthly food expenditures among urban Vietnamese households (Figure 1). Meat expenditures represent 37% to 44% of monthly food expenditures per adult male equivalent[1] in all cities. In this factsheet, we take a more in-depth look at meat expenditures exploring what types of meat products (species and cuts) that households/consumers purchase, how expenditures on different types of meats change as household incomes change, and what factors are important to consumers when making meat purchases. We also explore how meat consumption behaviour has changed over the past five years.

What type of meats do Vietnamese consumers spend money on?

Meat products considered in this factsheet include: fresh pork, beef, chicken, fish and seafood, processed meats and other meats (lamb, duck, veal, etc). In the survey, households were asked to indicate the income category that most closely represents their household's gross monthly income (income groups are defined in Table A6). We used this information and expenditure shares to understand whether income has an impact on the types of meat products that households purchase.

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[1] Household expenditure was weighted by the number of adult male equivalents in the household. This allowed us to standardise food expenditure across households with different ratios of adults to children. The weights were calculated using WHO/FAO energy requirements from the 2004 Human Energy Requirements, Food and Nutrition Technical Report Series.

Expenditure shares on pork and fish and seafood account for the largest share of expenditures on meat. Expenditure shares on fish and seafood are largest in Ho Chi Minh City.

Fresh pork meat accounts for an average of 32% to 40% of meat expenditures. However, pork expenditure shares decrease slightly as income increases in Ho Chi Minh City and Hanoi (Figure 1). In Ho Chi Minh City the decrease in expenditure shares for pork was matched with an increase in relative expenditures on fish and seafood (Figure 1). In Hanoi the relative decrease in pork expenditures occurred alongside an increase in expenditures on beef, chicken and fish and seafood (Figure 1).

Do meat expenditure shares differ across income quartiles?

We expected that households in higher income groups would allocate a relatively larger share of their monthly meat budget to more expensive meats. As detailed above, we observe this to some extent with a substitution from pork to fish and seafood in Ho Chi Minh City and beef, chicken and fish and seafood in Hanoi.

As well as more expensive types of meat we were also interested in choices of cuts, i.e. are wealthier consumers buying relatively more expensive cuts of meats compared to lower income consumers? Households that consumed beef and pork in the 30 days prior to completing the survey were asked to indicate which of five cuts of beef and seven cuts of pork they purchased.

The most commonly mentioned beef cuts for all cities were tenderloin and shank/shin, followed by striploin, rib, and brisket. For almost all types of beef cuts, the share of households that bought it increased with income in all cities (Figure 2). The exception was brisket in Hanoi, Ho Chi Minh City and Lao Cai City and tenderloin in Ho Chi Minh and Son La City, where the frequency of households in higher income groups that consumed it was lower than in low income groups.
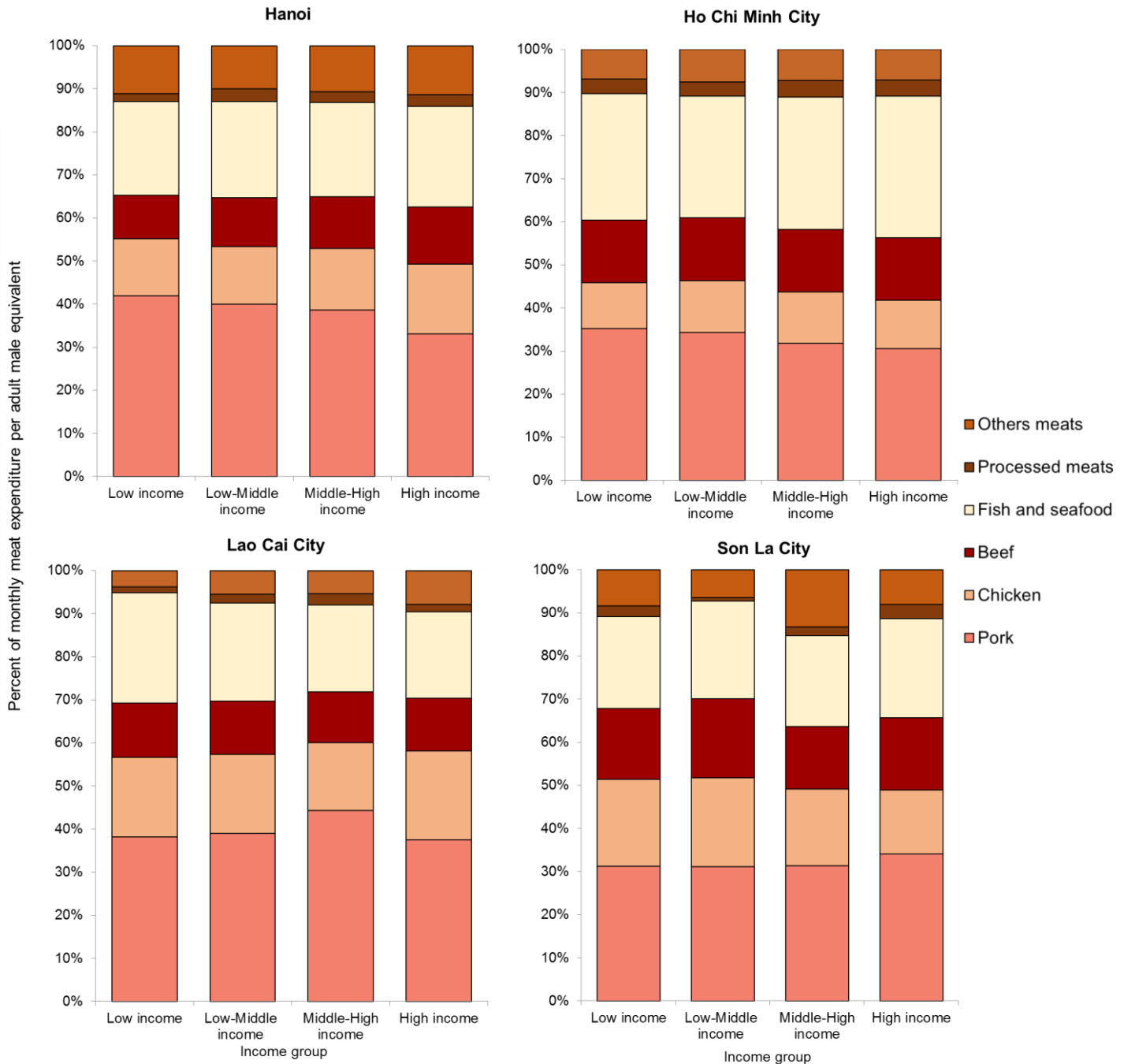
Figure 1. Share (%) of total monthly meat expenditure (per adult male equivalent) on different types of meat by income groups in Ho Chi Minh City (left) and Hanoi (right), Vietnam. See the Table A6 and A1 in the appendix for breakdown of income groups and percentages of expenditures graphed here.

Further, **more households in the higher income groups indicated that they bought** **the more expensive cuts of beef,** e.g. striploin in the 30 days prior to completing the

survey compared to households in the lower income groups in all cities (Figure 2).

The most commonly mentioned pork cuts were belly, followed by rib, shoulder, loin, rump, leg and fatback (Figure 3). With an increase in income, we see an increase in frequency (greater than 5% increase between low income group and high income group) of households that purchased expensive cuts of pork, such as rib in all cities, and loin and leg in Hanoi and Ho Chi Minh in the 30 days prior to completing the survey. This indicates that **more households in the higher income groups bought more expensive cuts of pork, as well as beef.**
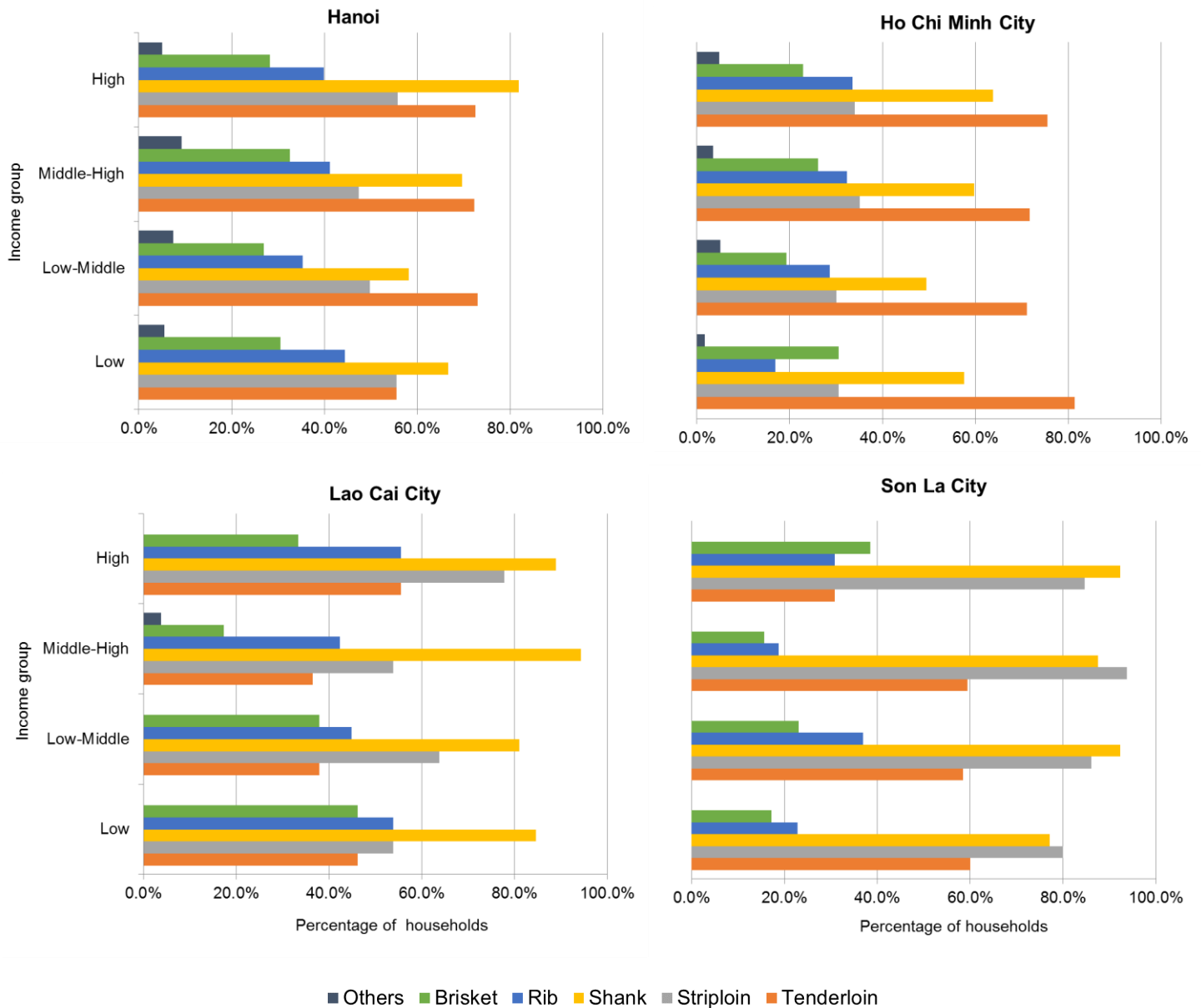
Figure 2. Share (%) of households that purchased each type of beef cut by income group in Hanoi (top left), Ho Chi Minh City (top right), Lao Cai City (bottom left) and Son La City (bottom right), Vietnam. See Table A6 and A2 in the appendix for breakdown of income groups and percentages of expenditure graphed here.
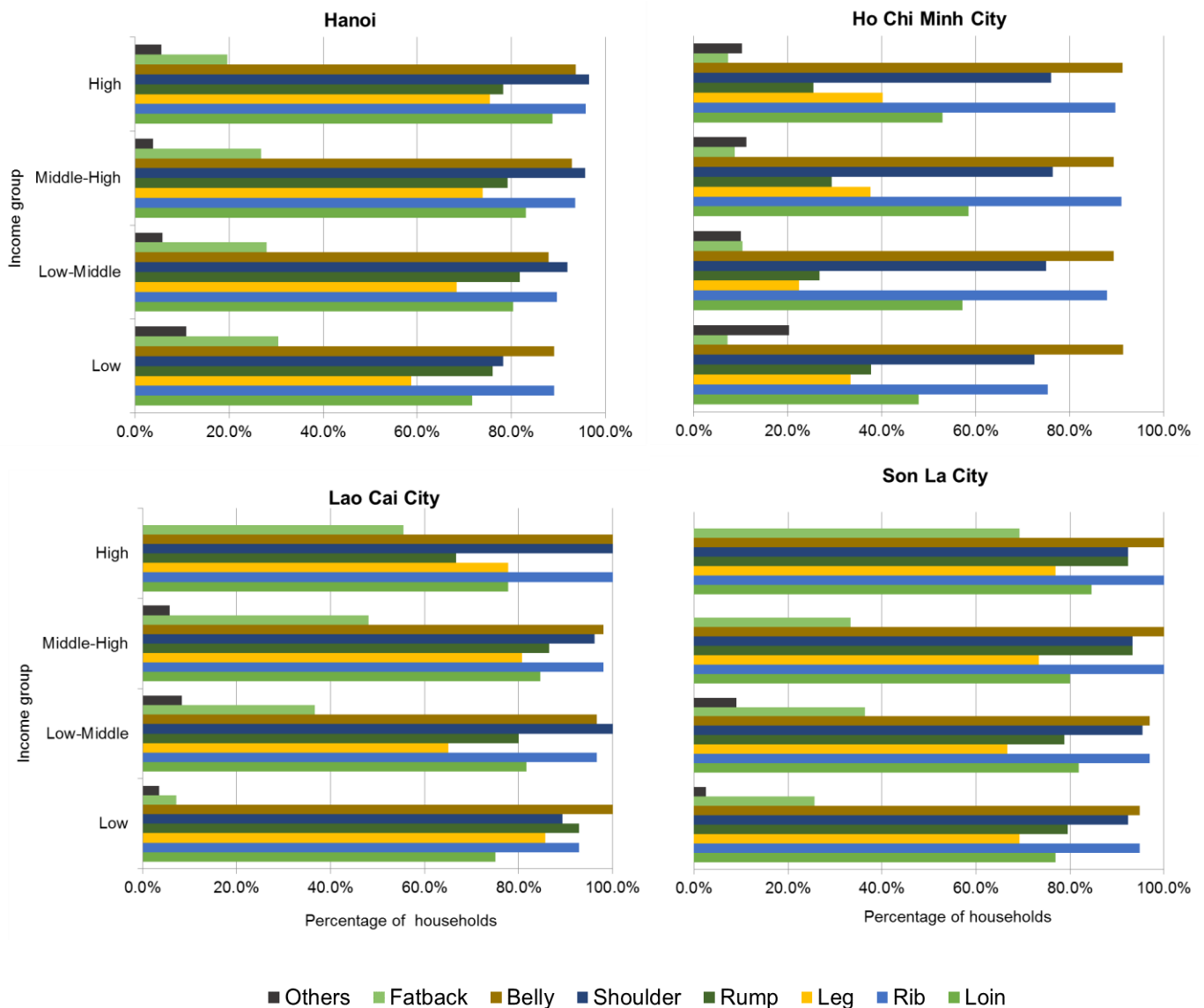
Figure 3. Share (%) of households that purchased each type of pork cut by income groups in Hanoi (top left), Ho Chi Minh City (top right), Lao Cai City (bottom left) and Son La City (bottom right), Vietnam. See Table A6 and A3 in the Appendix for breakdown of income groups and percentages of expenditure graphed here.

Food safety drives consumers' meat purchase decisions

In the survey, we asked households to nominate the most important factor (from 21 options) that influences their decision to buy beef, chicken, pork and shrimp. Figure 4 presents a comparison of relative frequencies of the seven most commonly chosen factors that influence meat purchase decisions.

In general, **food safety** was the most important factor influencing consumers' decisions to purchase different meats. However, **freshness** was mentioned more often than food safety for shrimp in Ho Chi Minh City and Son La City.

Nutritional content was also important in households' meat purchase decisions.

Changes to meat consumption behaviour compared to five years ago

For the households who consumed meat in the past 30 days we were also interested to know whether they were buying relatively more, a similar amount or less of each type of meat compared to five years ago. Changes in consumption in the last five years could reflect changes in: income; access to certain meats;

changes in the relative price of certain meats; and/or changes in tastes in preferences.

Largely, there were more households buying relatively more meat in 2016 compared to 2011 than there were households buying relatively less meat. For example, more than 25% of households in each city indicated buying more pork and less than 8% of households stated they were buying less pork compared to five years ago (Table 1).

Table 1. Share (%) of households (who have bought [meat]) who stated that they are buying relatively 'less', 'a similar amount' or 'more' of each meats compared to five years prior to the survey (i.e. compared to 2011) in Ho Chi Minh City, Hanoi, Lao Cai City and Son La City, Vietnam.

	Buy and consume less	Buy and consume a similar amount	Buy and consume more
Pork			
Ho Chi Minh City	3.59	64.78	31.62
Hanoi	3.15	70.92	25.93
Lao Cai City	3.36	67.79	28.86
Son La City	7.43	46.62	45.95
Beef			
Ho Chi Minh City	10.53	69.79	19.68
Hanoi	5.01	71.47	23.52
Lao Cai City	12.41	79.31	8.28
Son La City	8.28	70.34	21.38
Chicken			
Ho Chi Minh City	8.57	74.50	16.93
Hanoi	7.87	76.53	15.60
Lao Cai City	7.09	87.23	5.67
Son La City	4.38	70.07	25.55
Fish and seafood			
Ho Chi Minh City	13.69	61.96	24.35
Hanoi	14.30	65.53	20.16
Lao Cai City	12.18	69.04	18.78
Son La City	11.29	65.05	23.66
Processed meats			
Ho Chi Minh City	24.71	66.78	8.51
Hanoi	26.10	60.74	13.16
Lao Cai City	34.94	63.86	1.20
Son La City	18.18	80.00	1.82
Others meats			
Ho Chi Minh City	23.38	65.87	10.75
Hanoi	13.50	76.33	10.17
Lao Cai City	20.55	76.71	2.74
Son La City	18.09	76.60	5.32

Figure 4. Share (%) of households that nominated each of the listed factors as the most important influence on their decision to buy beef, chicken, pork and shrimp, in Hanoi (n=693), Ho Chi Minh City (n=996), Lao Cai City (n=152) and Son La City (n=152), Vietnam.

Factors influencing choice	Hanoi Beef	Hanoi Chicken	Hanoi Pork	Hanoi Shrimp	Ho Chi Minh Beef	Ho Chi Minh Chicken	Ho Chi Minh Pork	Ho Chi Minh Shrimp	Lao Cai City Beef	Lao Cai City Chicken	Lao Cai City Pork	Lao Cai City Shrimp	Son La City Beef	Son La City Chicken	Son La City Pork	Son La City Shrimp
Food safety	43.6%	42.7%	46.9%	39.5%	23.7%	36.6%	41.7%	22.3%	63.2%	48.7%	61.8%	48.7%	46.1%	54.9%	55.3%	39.5%
Freshness	13.4%	12.7%	17.5%	21.4%	26.3%	29.2%	29.1%	45.0%	28.9%	32.2%	30.3%	46.7%	36.8%	30.1%	34.9%	49.3%
Taste	5.8%	4.3%	2.0%	9.2%	0.5%	0.7%	0.7%	0.5%	0.0%	0.7%	1.3%	0.0%	0.0%	0.7%	0.0%	0.0%
Origin	7.1%	13.7%	8.5%	3.0%	10.1%	3.9%	3.7%	1.3%	0.0%	0.7%	0.0%	0.0%	0.7%	0.7%	0.7%	0.7%
Nutritional content	22.9%	15.9%	11.3%	18.6%	27.7%	15.7%	13.1%	22.7%	4.6%	3.9%	3.3%	2.0%	13.2%	7.2%	7.2%	7.9%
Price	1.2%	2.7%	4.5%	0.7%	8.9%	4.3%	4.5%	5.6%	2.6%	1.3%	0.7%	2.0%	2.6%	4.6%	0.7%	1.3%
Easy to prepare	5.3%	4.3%	8.1%	6.1%	1.4%	4.5%	5.7%	1.1%	0.7%	0.7%	2.6%	0.7%	0.7%	0.7%	1.3%	1.3%
Others	0.7%	3.6%	1.3%	1.4%	1.3%	5.3%	1.5%	1.9%	0.0%	11.8%	0.0%	0.0%	0.0%	1.3%	0.0%	0.0%
Never purchase this item	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Appendix to Factsheet 11

Percentages used to generate graphs

Table A1. Share (%) of monthly expenditure (per adult male equivalent) on different meats by income groups in Hanoi, Ho Chi Minh City, Lao Cai City and Son La City, Vietnam. Other meats include lamb, duck, veal, etc.

Meats	Low income	Low-Middle income	Middle-High income	High income
Hanoi				
Pork	41.91	40.03	38.63	33.04
Fish and seafood	21.80	22.33	21.86	23.32
Beef	10.03	11.40	11.95	13.25
Chicken	13.32	13.31	14.33	16.27
Processed meats	1.83	2.97	2.49	2.77
Others meats	11.11	9.97	10.73	11.36
Ho Chi Minh City				
Pork	35.20	34.26	31.87	30.60
Fish and seafood	29.44	28.17	30.71	32.86
Beef	14.42	14.57	14.50	14.47
Chicken	10.71	12.12	11.84	11.20
Processed meats	3.40	3.32	3.86	3.82
Others meats	6.83	7.57	7.22	7.05
Lao Cai City				
Pork	38.15	39.00	44.29	37.54
Fish and seafood	25.59	22.80	20.18	20.10
Beef	12.60	12.29	11.81	12.21
Chicken	18.49	18.35	15.74	20.62
Processed meats	1.40	2.08	2.62	1.66
Others meats	3.77	5.48	5.35	7.88
Son La City				
Pork	31.24	31.14	31.35	34.08
Fish and seafood	21.25	22.63	20.98	23.02
Beef	16.40	18.43	14.48	16.74
Chicken	20.21	20.54	17.82	14.84
Processed meats	2.49	0.78	2.04	3.20
Others meats	8.41	6.48	13.33	8.13

Note: Income groups are defined in Table A6.

Table A2. Share (%) of households that purchased each cut of beef in the 30 days before the survey, by income groups in Hanoi, Ho Chi Minh City, Lao Cai City and Son La City, Vietnam.

Income Group	Tenderloin	Striploin	Shank	Rib	Brisket	Others	n
Hanoi							
Low	55.6	55.6	66.7	44.4	30.6	5.6	36
Low-Middle	73.0	49.8	58.1	35.3	27.0	7.4	215
Middle-High	72.2	47.4	69.6	41.1	32.6	9.3	270
High	72.5	55.8	81.9	39.9	28.3	5.1	138
Ho Chi Minh City							
Low	81.4	30.5	57.6	16.9	30.5	1.7	59
Low-Middle	71.0	30.1	49.4	28.6	19.3	5.0	259
Middle-High	71.7	35.1	59.8	32.3	26.1	3.5	368
High	75.5	34.0	63.8	33.5	22.9	4.8	188
Lao Cai City							
Low	46.2	53.8	84.6	53.8	46.2	0.0	26
Low-Middle	37.9	63.8	81.0	44.8	37.9	0.0	58
Middle-High	36.5	53.8	94.2	42.3	17.3	3.8	52
High	55.6	77.8	88.9	55.6	33.3	0.0	9
Son La City							
Low	60.0	80.0	77.1	22.9	17.1	0.0	35
Low-Middle	58.5	86.2	92.3	36.9	23.1	0.0	65
Middle-High	59.4	93.8	87.5	18.8	15.6	0.0	32
High	30.8	84.6	92.3	30.8	38.5	0.0	13

Note: Income groups are defined in Table A6. Percentages exceed 100% given it was possible to choose more than one type of cut.

Table A3. Share (%) of households that purchased each cut of pork in the 30 days before the survey, by income groups in Hanoi, Ho Chi Minh City, Lao Cai City and Son La City, Vietnam.

Income Group	Loin	Rib	Leg	Rump	Shoulder	Belly	Fatback	Others	n
Hanoi									
Low	71.7	89.1	58.7	76.1	78.3	89.1	30.4	10.9	47
Low-Middle	80.4	89.8	68.4	81.8	92.0	88.0	28.0	5.8	225
Middle-High	83.1	93.7	73.9	79.2	95.8	93.0	26.8	3.9	285
High	88.8	95.8	75.5	78.3	96.5	93.7	19.6	5.6	145
Ho Chi Minh City									
Low	47.8	75.4	33.3	37.7	72.5	91.3	7.2	20.3	71
Low-Middle	57.2	88.0	22.4	26.8	74.9	89.3	10.4	10.0	301
Middle-High	58.5	91.0	37.6	29.4	76.4	89.3	8.7	11.2	411
High	52.9	89.7	40.2	25.5	76.0	91.2	7.4	10.3	210
Lao Cai City									
Low	75.0	92.9	85.7	92.9	89.3	100.0	7.1	3.6	28
Low-Middle	81.7	96.7	65.0	80.0	100.0	96.7	36.7	8.3	60
Middle-High	84.6	98.1	80.8	86.5	96.2	98.1	48.1	5.8	52
High	77.8	100.0	77.8	66.7	100.0	100.0	55.6	0.0	9
Son La City									
Low	76.9	94.9	69.2	79.5	92.3	94.9	25.6	2.6	39
Low-Middle	81.8	97.0	66.7	78.8	95.5	97.0	36.4	9.1	66
Middle-High	80.0	100.0	73.3	93.3	93.3	100.0	33.3	0.0	32
High	84.6	100.0	76.9	92.3	92.3	100.0	69.2	0.0	13

Note: Income groups are defined in Table A6.

Table A4. Share (%) of households that chose each of the listed factors as the most important influence in their decision in to buy beef, chicken, pork and shrimp in Hanoi (n=693) and Ho Chi Minh City (n=996), Vietnam.

Factors influencing choice	Hanoi				Ho Chi Minh City			
	Beef	Chicken	Pork	Shrimp	Beef	Chicken	Pork	Shrimp
Food safety	43.58	42.71	46.90	39.54	23.69	36.65	41.67	22.29
Freshness	13.42	12.70	17.46	21.36	26.31	29.22	29.12	44.98
Taste	5.77	4.33	2.02	9.24	0.50	0.70	0.70	0.50
Origin	7.07	13.71	8.51	3.03	10.14	3.92	3.71	1.31
Nutritional content	22.94	15.87	11.26	18.61	27.71	15.66	13.05	22.69
Price	1.15	2.74	4.47	0.72	8.94	4.32	4.52	5.62
Brand	0.00	0.00	0.29	0.00	0.00	0.20	0.00	0.00
Diversity	0.43	0.43	0.29	0.43	0.40	0.60	0.50	0.40
Easy to prepare	5.34	4.33	8.08	6.06	1.41	4.52	5.72	1.10
Grade, Class	0.00	0.29	0.14	0.00	0.00	0.20	0.10	0.20
Appearance	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00
Colour	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00
Smell	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
Firmness/texture	0.00	0.14	0.00	0.00	0.20	0.40	0.10	0.00
Variety	0.29	2.60	0.14	0.00	0.20	0.20	0.10	0.10
Production method	0.00	0.14	0.43	0.85	0.20	3.11	0.50	0.20
Other labelling info	0.00	0.00	0.00	0.14	0.20	0.00	0.10	0.00
Expiry date	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Never purchase this item	0.00	0.00	0.00	0.00	0.00	0.30	0.00	0.40
Others	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table A5. Share (%) of households that chose each of the listed factors as the most important influence in their decision in to buy beef, chicken, pork and shrimp in Lao Cai City (n=152), Son La City (n=152), Vietnam.

Factors influencing choice	---------------- Lao Cai City----------------				---------------- Son La City ---------------			
	Beef	**Chicken**	**Pork**	**Shrimp**	**Beef**	**Chicken**	**Pork**	**Shrimp**
Food safety	63.16	48.68	61.84	48.68	46.05	54.90	55.26	39.47
Freshness	28.95	32.24	30.26	46.71	36.84	30.07	34.87	49.34
Taste	0.00	0.66	1.32	0.00	0.00	0.65	0.00	0.00
Origin	0.00	0.66	0.00	0.00	0.66	0.65	0.66	0.66
Nutritional content	4.61	3.95	3.29	1.97	13.16	7.19	7.24	7.89
Price	2.63	1.32	0.66	1.97	2.63	4.58	0.66	1.32
Brand	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Diversity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Easy to prepare	0.66	0.66	2.63	0.66	0.66	0.65	1.32	1.32
Grade, Class	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Appearance	0.00	0.66	0.00	0.00	0.00	0.00	0.00	0.00
Colour	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Smell	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Firmness/texture	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Variety	0.00	11.18	0.00	0.00	0.00	0.65	0.00	0.00
Production method	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other labelling info	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Expiry date	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Never purchase this item	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Others	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table A6. Percent of households in each gross monthly income group in Hanoi, Ho Chi Minh City, Lao Cai City and Son La City, Vietnam.

Income Group	Household gross monthly income (VND)	Household gross monthly income (USD)[+]	------------ Percent of households[#] ------------			
			Hanoi	**Ho Chi Minh City**	**Lao Cai City**	**Son La City**
Low income	1.5 to 4.5 million	67.29 to 201.88	6.7	7.2	18.8	26.0
Low-Middle income	4.5 to 7.5 million	201.89 to 336.46	32.1	30.3	40.3	44.0
Middle-High income	7.5 to 15 million	336.47 to 672.92	40.6	41.4	34.9	21.3
High income	≥ 15 million	≥ 672.93	20.7	21.1	6.0	8.7

[+]Based on exchange rate of 1 USD = 22,291 VND from 1 December 2016; [#]Sample includes only those households that answered all questions about expenditure, Hanoi n = 702 Ho Chi Minh City n = 993, Lao Cai City n = 149 and Son La City n = 150.