

FOOD SECURITY AND POVERTY IN MONGOLIA

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Хураангуй

Энэхүү судалгааны ажлаар Монгол улсын хүнсний баталгаат байдал ба ядуурлын хоорондын хамаарлыг 2014 оны Өрхийн Нийгэм-Эдийн засгийн судалгааны мэдээллийн баазыг ашиглан шинжилсэн. Хүнсний баталгаат байдлыг харуулах үндсэн үзүүлэлт нь хүнсний хүртээмж (хүнсний хэмжээ эсвэл шимт тэжээлийн хэмжээ) болон хүнсний ашиглалт (хүнсний шимт тэжээлийн зохистой байдлын харьцаа) юм. Тиймээс хүнсний хүртээмж, хүнсний ашиглалт гэсэн дээрх 2 үзүүлэлтээр Монгол улсын хүн амын хүнсний шимт тэжээлийн хэрэглээний төлвийг ядуурлын байдлын хувьд шинжиллээ. Хүнсний шимт тэжээл гэдэгт илчлэг (калори), өөх тос, уураг, нүүрс хүчил зэрэг макро шимт тэжээлийн бусад хэмжигдэхүүнийг авч үзсэн болно. Судалгаагаар ядуу болон ядуу бус хүн амын хүнсний шимт тэжээлийн хэрэглээ нь статистик ач холбогдол бүхий маш их ялгаатай байв. Хүнсний шимт тэжээлийн зохистой байдлын харьцаа нь ядуу өрхүүдийн хүнсний шимт тэжээлийн хэрэглээ өөх тосноос бусад бүх хэмжигдэхүүний хувьд зөвлөмж болон зохистой хэрэглээний босго хэмжээнээс доогуур гарчээ. Ядуу өрхүүд хүнсний шимт тэжээлийн дутагдалд орсон, харин нийт өрхүүд амьтны гаралтай өөх тосний илүүдэлтэй байна. Түүнчлэн ядуу өрхийн хүнсний нэр төрлийг олшруулах тал дээр анхаарал хандуулах шаардлагатайг судалгааны үр дүн харуулж байна. Эцэст нь дүгнэвэл, өрхийн орлогыг нэмэгдүүлэх болон зохистой, эрүүл хооллолтын талаарх мэдээллээр хүн амыг хангах бодлогуудыг хамтад нь хэрэгжүүлэх нь Монгол улсад бий болсон хүнсний баталгаат бус байдалтай холбоотой бэрхшээлийг даван туулах зөв арга зам байж болох юм.

Түлхүүр үгс: Хүнсний хүртээмж, Хүнсний ашиглалт, Хүнсний шимт тэжээлийн хэрэглээ, Илчлэг, Өөх тос, Уураг, Нүүрс хүчил, Зохистой байдлын харьцаа

Abstract

Using data from the Household Socio-Economic Survey 2014, this study investigates the relationship between food security and poverty in Mongolia. The core determinants of food security are food access and food utilization. Therefore indicators of food access and food utilization are examined to illustrate the pattern of nutrient consumption in Mongolia by poverty status. The nutrient consumption, I use here, is defined in terms of energy (calorie) and other macro nutrients such as fat, protein and carbohydrates. The results show that the difference between nutrient consumption between the poor and for the non-poor was quite large and statistically significant. The adequacy ratio, one of food security indicators, reveals that poor households are below the benchmark level of all nutrients except animal fat. And it can imply that deficiencies in nutrients are a problematic issue only for poor households while all the population is facing a problem with excess of appropriate intake for animal fat. The findings of the study also suggest that serious attention is needed to diversify the food diet of the poor. To conclude, one of the best ways to fight the food security problem in the country could be the combination of policies that increase household incomes and that provide information on how to obtain a balanced and healthy diet.

Key words: Food access, Food utilization, Nutrient consumption, Energy, Fat, Protein, Carbohydrates, Adequacy ratio

1. Introduction

Nutrient and calorie consumption can play a significant role in the definition of welfare concepts such as health and labor productivity.¹ Economic analysis of nutrient consumption might offer invaluable input in the design of better development policies. There is an intimate connection between poverty and malnutrition, especially in developing countries. It is difficult for individuals who are poor to acquire adequate levels of food and thus of nutrient consumption for themselves and their families (Debraj Ray, 1998).

The percentage of the population that is poor in Mongolia has been around 22-35 percent in the last decade and the analysis of the determinants of poverty and its relationship to food security and nutritional outcomes have become an important issue and area of research. Moreover, the relationship of nutrient consumption and poverty in Mongolia has not been investigated even though the Living Standard Measurement Surveys and National Nutrition Surveys have been separately conducted. In 2009, the government of Mongolia announced the National Food Security Program. The initial task of the program is to describe the pattern of food consumption and food security indicators in order to implement policies successfully.

To my knowledge the nature of phenomenon has been investigated only by a few numbers of studies. However, these studies have become outdated because the social and economic situation has changed dramatically in the country.

Keeping in mind these motivations, the principal aim of this study is to assess the current nutritional status of population (or the food security aspect) and its relationship with poverty in Mongolia. This paper will examine the food security indicators of the population by poverty status.

The first step will be the analysis of food security in Mongolia as well as nutrient consumption using well-accepted indicators of food security. Given that poverty and malnutrition may be ordinally related (Debraj Ray, 1998). We will

study the nutrient consumption by poverty status. Moreover, we will also estimate an indicator of the second goal of Sustainable Development Goals, which is the proportion of undernourished people.

2. Conceptual framework and Literature review

Nutrient consumption is one of measure of food security issues. A common acceptable definition of food security exists. Yet, the concept of food security is understood and used differently depending on the context, timeframe and geographical region in question. "Food security" is a flexible concept and is usually applied at three levels of aggregation: national, regional and household or individual. At the 1996 World Food Summit, food security was defined as follows: "Food security exists when all people, at all times, have physical, social and economic access to sufficient food which meets their dietary needs and food preferences for an active and healthy life" (FAO, 1996) This definition is well accepted and widely used.

The three core determinants of food security are:

- 1) food availability: Information on food availability usually comes from national, regional and subregional food balance sheets. However this indicator doesn't provide information on food security at the household level.
- 2) food access: Household food access is measured through food or nutrient intake at the household level. This is usually reported in "adult equivalent" units to facilitate comparison among individuals within a household as well as among households. The adult equivalent unit is a system of weighting household members according to the calorie requirements for different age and sex groups.
- 3) food utilization. Food intake data, following conversion to nutrient composition, are evaluated by comparing them with recommended.

In this study indicators of food access and food utilization are examined to illustrate the pattern of nutrient consumption in Mongolia.

¹ See Stiglitz (1976) for a detailed discussion of the efficiency wage hypothesis, which provides the theoretical framework for understanding the link between productivity and calorie intake.

The state of food insecurity in the World 2015. FAO concludes About 795 million people are undernourished² globally, down 167 million over the last decade, and 216 million less than in 1990–1992. The decline is more pronounced in developing regions, despite significant population growth. In recent years, progress has been hindered by slower and less inclusive economic growth as well as political instability in some developing regions, such as Central Africa and western Asia. For the developing regions as a whole, the share of undernourished people in the total population has decreased from 23.3 per cent in 1990–1992 to 12.9 per cent.

National children and woman nutrition survey of Mongolia (2004) reports that 19.6 per cent of all Mongolian children 6-59 months old suffered from chronic malnutrition³ or stunting and 6.7 per cent were underweight. In total, 4.2 per cent of mothers of 6-59 month old children are malnourished. Of note is the finding that almost 30 per cent are overweight. The survey on “Food security and livelihoods in the small urban centers of Mongolia (2008)” were conducted covering 4 aimag centers-prefecture centers of the country. The results of this assessment provide, for the first time, empirical evidence of food insecurity among aimag center residents in Mongolia even though not statistically representative of Mongolia as a whole. The most pressing issues relate to the access dimension of food security. Based on the Household Food Insecurity Access Scale, on third of households in the survey population were found to be food insecure. Data from the Household Dietary Diversity Score indicator, another measure of access, found that 11 per cent of households reported eating four or fewer of food in the past 24 hours. In addition, information collected on seasonal patterns of food security suggests that situation worsens considerably during the spring months when both food and employment are scarce. Forth National Nutrition Survey (2011) reports that 15.6 per cent of children under 5 years suffered from chronic malnutrition or stunting and 4.7 per cent were underweight.

3. Data, variable and sampling

The data used for this study is obtained from a comprehensive survey of households in

Mongolia, called as Household Socio-Economic Survey (HSES) in 2014. The HSES 2014 is a nationally representative survey, whose main objectives are to evaluate and monitor the income and expenditure of households and to define a poverty profile of the country. It contains following major modules: basic socio-economic information about the members of the household, education, health, reproductive health, migration, employment, wage jobs, job search, agriculture and herding, non-farm family businesses, other income, savings and loans, housing and energy, durable goods, non-food expenditures and food consumption.

Food consumption data that consumed by household members was collected at the household level with the Classification of individual consumption by purpose/COICOP/ and covering 122 items, organized in 13 categories: flour and flour products; meat and meat products; fish and seafood; milk, cheese and eggs; oils and fat; fruits; vegetables; sugar and jam; other food; tea and coffee; mineral water and soft drinks; alcoholic beverages; and tobacco and cigarettes. The method to collect these data and the reference period vary across urban and rural areas. In the capital and in prefecture centers, information is captured through a diary, which is compiled by an enumerator every ten days, three times during a month. In other words, the reference period is one month. In village centers and in the countryside, a recall period for the last week is employed. Moreover, all possible sources of food consumption are included. This means that the food information comprises not only consumption on purchases in the market or on meals eaten away from home but also food that was own produced or received as a gift.

Food consumption collects on the quantity consumed (including from own production and free meal) at the household level. Skoufias (2009) supports that since consumption of nutrients determined by what foods and how much of those foods are consumed, good estimates of the demand system parameters for food can be used, by applying food-to-nutrient conversion factors (as sited in Pitt, 1983; Strauss, 1984). We use a food composition table compiled by the Ministry of Health of Mongolia in 2008 that

² Undernourishment exists when calorie intake is below the minimum dietary energy requirement (MDER)

³ Body Mass Index approach were used.

contains information on the nutrient content per 100 grams of all the major food items in Mongolia to convert the quantity consumed of each of the hundred food items by each household into its equivalent content of calories, protein, fat and carbohydrates. Tobacco and residual categories are excluded from this calculation. It means household nutrient intake $HNUT$ is computed through the formula:

$$HNUT_i = \sum_{j=1}^n F_{ij} N_j$$

Where:

F_{ij} is the weight in 100 grams of the average daily intake of food item j by household i .

N_j is the standard measure of nutrient found in each type of food item F_j .

A total number of food items is $n=100$.

Then per capita nutrient consumption is estimated converting household nutrient consumption to per capita using equivalent adult ratio.

$$NUT_i = \frac{NUT_i}{ADE_i}$$

Finally, calorie of meals eaten outside the household is added to this calculation in order to estimate total calorie income at household level. For that I use average price of calorie at household level and average expenditure of meals eaten outside.

The sampling frame of the HSES was developed by the NSO based on population figures for 2013 from local registration offices. The design of the survey recognizes three explicit strata: Ulaanbaatar-capital, aimag-prefecture centers, and rural areas and small towns/villages. The selection strategy was different in each stratum: a two-stage process in urban areas and a three-stage process in rural areas. All 1800 primary sampling units or clusters were selected with probability proportional to size and were randomly allocated into the 12 months of survey fieldwork. Thus the survey visited a random sub-

sample of 150 clusters each month. The 8 or 10 households were selected randomly from the cluster and total sample of 16200 households was also allocated into the 12 months.

In order to obtain representative statistics for each stratum and for the whole country with using this sampling procedure⁴, it is necessary to use sampling weights. These weights are applied to each household and correspond to the inverse of the probability of selection, calculated taking into account the sampling strategy. And the weights are used to describe the consumption pattern of the country in this study. The actual sample used for this study is slightly lower.⁵ The difference corresponds to 26 households that were excluded because of non completed information and outliers.

4. Empirical analysis and results

As we mentioned early there are no statistics that can explain about the food security and its relationship to poverty in Mongolia. In order to shed some light on that issue we made a descriptive analysis of the food security indicators such as nutrient intake and adequacy ratio by certain group of the population.

Table 4.1 reports mean intake for energy/calorie and some macronutrients and it can provide general pattern about a household's ability to spend on food. Since my main purpose is to study whether nutrient consumption changes between poorer and richer households I present the statistic for poor and non poor households. To determinate poor population I use the methodology was employed in the poverty analysis of the country in 2009 with the same data.⁶ One remarkable finding is the difference between consumption for the poor and for the non poor that was statistically significant. The non poor households displays a calorie consumption that is 48.3 per cent bigger than the poor, a total energy that is 58.7 per cent bigger, an animal protein 81.4 per cent bigger, a vegetable protein that is 26.8 per cent bigger, an animal fat that is 77.4 per cent bigger, a vegetable fat that is 56.2 per cent bigger and a

⁴ The use of this sampling procedure means that households living in different areas of the country have been selected with different probabilities.

⁵ A sample by stratum and month is in Table A.1 in the Appendix

⁶ For details on the methodology see, Poverty profile, NSO of Mongolia (2009).

carbohydrates that is 32.6 per cent bigger than the poor households. The nutrient intake by an area and a calendar quarter of the year is also

estimated and presented in Table A.2 in the Appendix.

Table 4.1: Per capita daily nutrient consumption, by poverty status

	National	Non poor	Poor
Energy (kcal)	2763	2972	2004
Total energy (kcal)	2970	3227	2038
Animal protein (g)	78	87	48
Vegetable protein (g)	42	44	35
Animal fat (g)	75	83	47
Vegetable fat (g)	27	29	19
Carbohydrates (g)	340	359	271

Source: Author's estimation, HSES 2014

Another food security indicator, food utility, is that a comparison nutrient intake with recommended intake. Table 4.2 shows that adequacy ratio of mean intake (as in Table 4.1) to recommended and appropriate daily intake which is approved by Ministry of Health of Mongolia in 2009. For the national average, nutrient deficiencies are recorded only vegetable fat and carbohydrates. However adequacy ratios are remarkably different by poverty status. The poor households

are below the benchmark level of all nutrients except animal fat. Overall figures in Table 4.2 suggest that nutrient intake is a problematic issue only for poor households while all population is facing a problem with excess of appropriate intake for animal fat.

The adequacy ratio by the groups is also estimated and presented in Table A.3 in the Appendix.

Table 4.2: Adequacy ratio, by poverty status

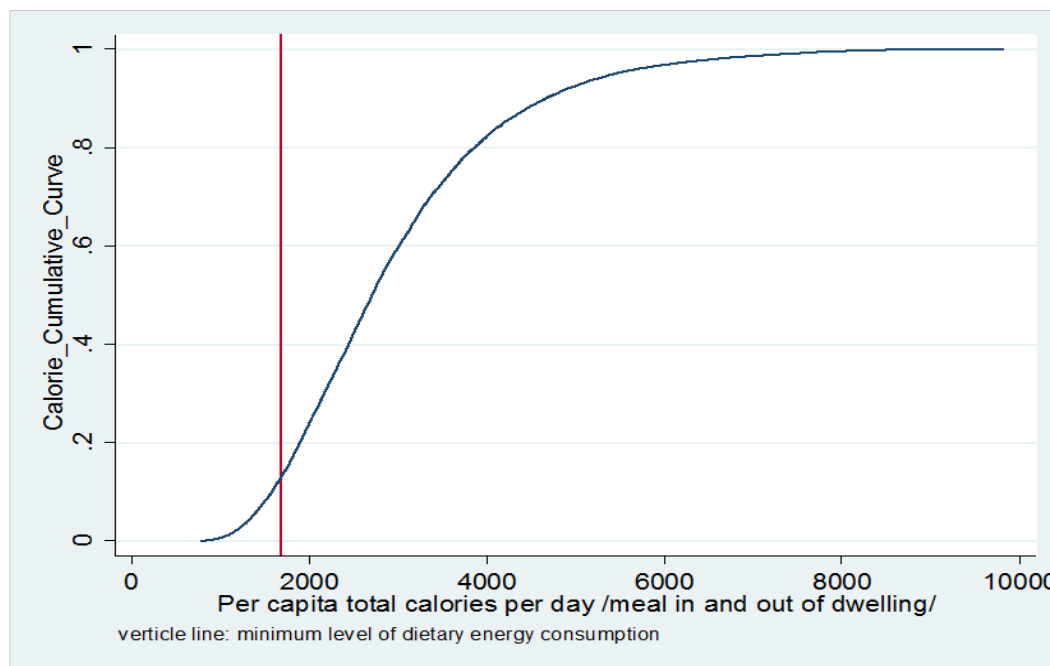
	National	Non poor	Poor
Energy (kcal)	111	119	80
Total energy (kcal)	119	129	82
Animal protein (g)	140	155	85
Vegetable protein (g)	110	116	91
Animal fat (g)	269	297	167
Vegetable fat (g)	66	72	46
Carbohydrates (g)	91	96	72

Source: Author's estimation, HSES 2014

Another interest of my study is to estimate an indicator of the goal 2 of the SDG that has been not estimated in Mongolia yet. For a given calorie consumption level on the horizontal axis, the curve indicates on the vertical axis

the percentage of the population with an equal or lesser level of calorie consumption (Figure 4.1). If one thinks of the chosen consumption level as the threshold, the curve will show the associated calorie intake headcount.

Figure 4.1: Cumulative distribution of per capita calorie



Source: Author’s estimation, HSES 2014

Hence, at a minimum level of calorie 1680⁷ per person per day, Figure 4.1 reports that around 13 per cent of the population is undernourished. Nonetheless, given that the slope of the distribution is relatively steep around that level, it is likely that small changes in the minimum level threshold will have large impacts on the proportion of undernourished people.

Table 4.3 presents the indicator which is proportion of population below the minimum level of dietary energy consumption by national and disaggregated level. The proportion of population below minimum level of dietary energy consumption in Mongolia is 12.76 per cent, which means that around 382.3 thousand individuals are considered undernourished.⁸

Table 4.3 Proportion of population below minimum level of dietary energy consumption

Population group		Proportion of population
National		12.76
Poverty status	Non poor	7.33
	Poor	32.49
Urban/rural	Rural	17.99
	Urban	9.78
Region	West	17.17
	Highlands	14.81
	Central	13.71
	East	20.52
	Capital	8.61

Source: Author’s estimation, HSES 2014

⁷ Minimum daily per person energy requirement suggested by FAO, 2008

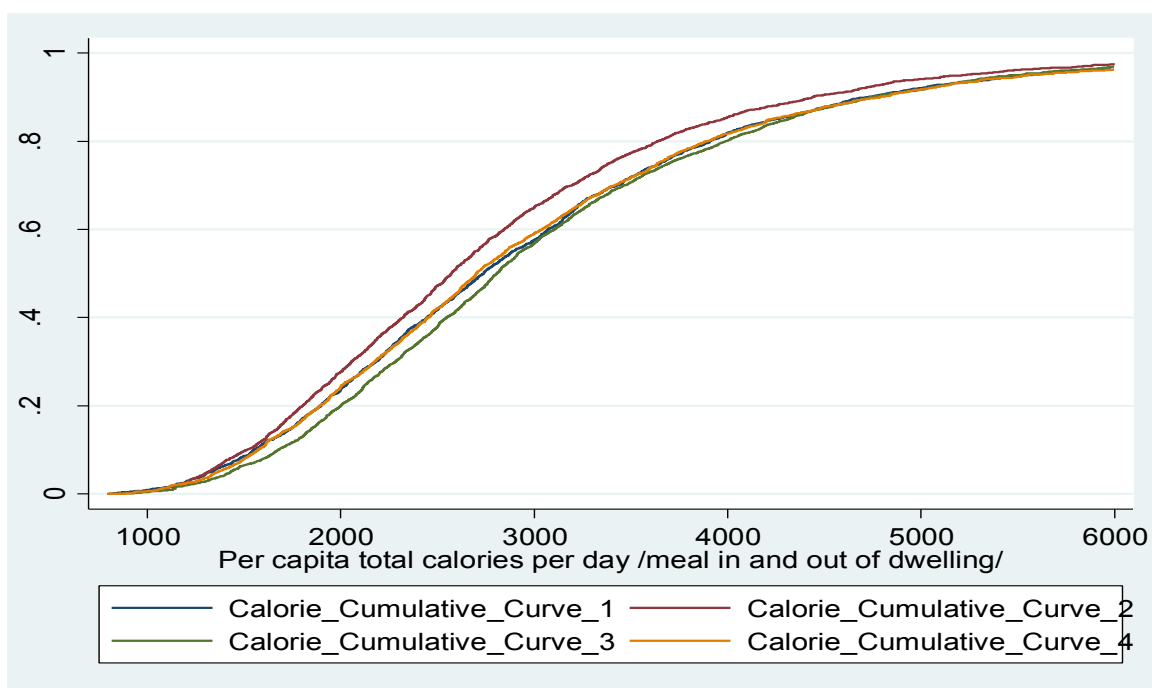
⁸ The estimated population at the end of 2014 was 2995.9 thousand according to administrative data.

From Table 4.3, we can see how does the proportion vary across poverty status and the country? The capital is the region with less undernourished and the Central region ranks second, three out of ten inhabitants are undernourished in the East and Highlands. Interestingly, this result is very consistent with the incidence of poverty in Mongolia.⁹

What is the sensitivity of these findings to season¹⁰? A relevant feature of poverty and consumption in Mongolia is its seasonality. Livestock and agricultural activities may determine substantial fluctuations in consumption along the year. The composition

of food consumption may change drastically, with more intake of dairy products in the summer, more vegetables in the autumn, more meat products in the winter and somehow a lean period during the spring. The autumn is considered a season of relative abundance because it benefits from the remaining higher dairy production from the summer and the early availability of meat for the winter. We try to reveal that pattern using stochastic dominance analysis. It relies on graphical tools and focuses on the entire distribution of calorie consumption.¹¹ From Figure 4.2, we can see that spring and winter display the lowest levels of calorie consumption in the year.

Figure 4.2: Cumulative distribution of per capita calorie, by season



Source: Author's estimation, HSES 2014

We also studied group of foods households use to get their calorie and macro nutrients from. Figure 4.3 represents the percentage of nutrients from different groups at national level. Flour, rice are main source for calorie, protein

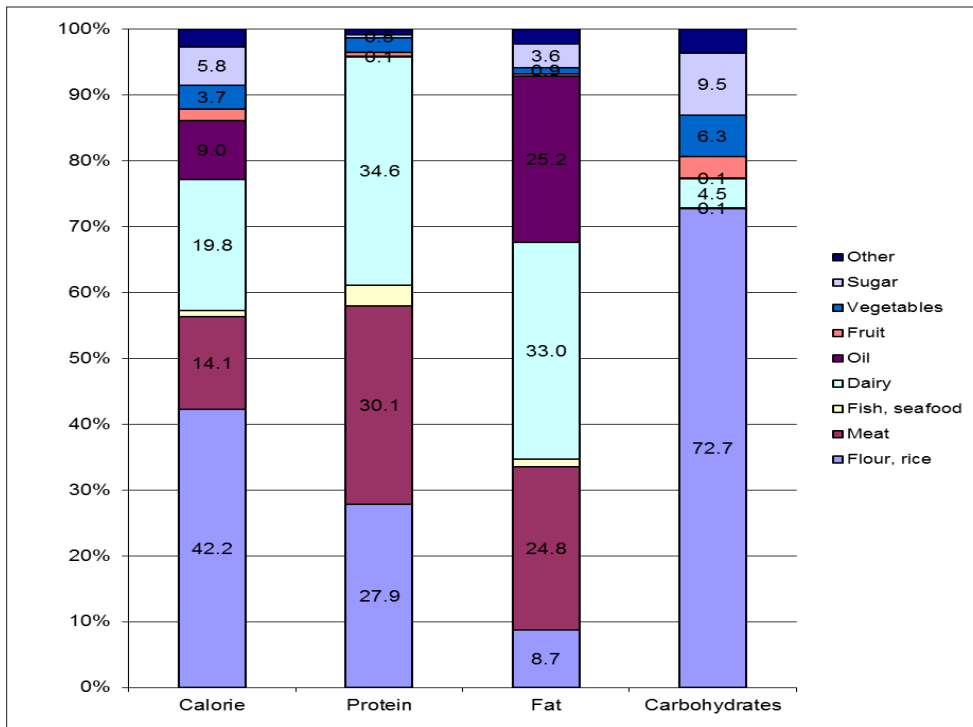
and carbohydrates and oil, dairy products are seemed be main source for fat. The proportion of nutrients from food groups by poverty is displayed in the Table A.4 in the Appendix.

⁹ See, Poverty profile. NSO of Mongolia (2014)

¹⁰ Summer could be assumed to last from June to August; autumn, September to November; winter, December to February; and spring, March to May.

¹¹ By plotting two or more cumulative density functions of per capita calorie consumption in the same graph, it is possible to infer first-order stochastic dominance. Distribution A first-order stochastically dominates distribution B if for any given level of per capita calorie consumption, the share of the population with a lesser or equal level of consumption will always be lower in distribution B.

Figure 4.3: Proportion of nutrients from food groups at national level

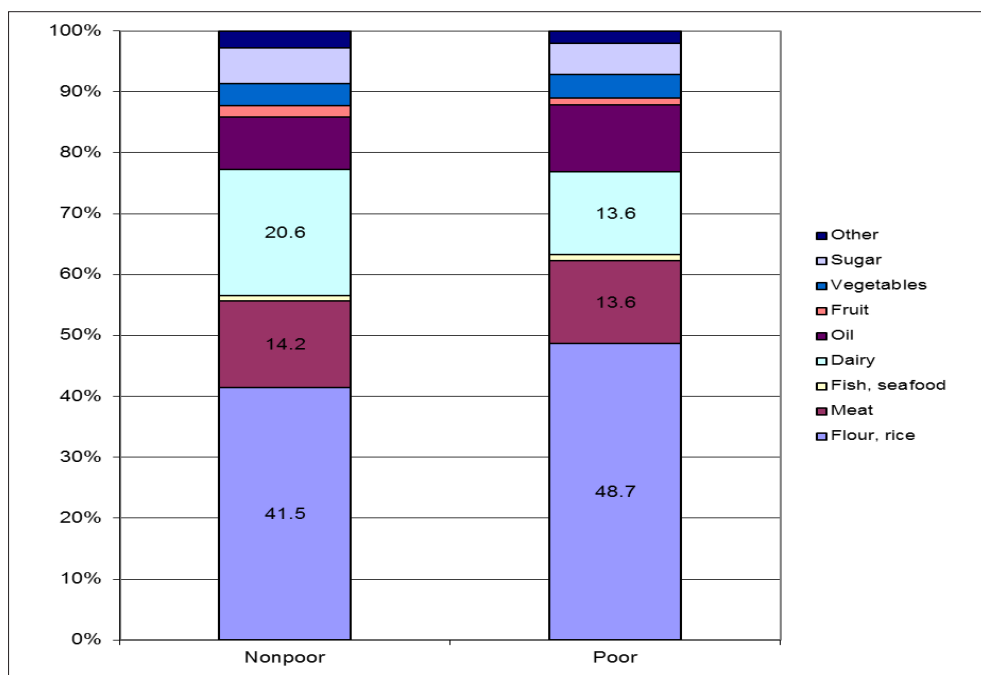


Source: Author's estimation, HSES 2014

We then analyzed how calories taken from each food changed by poverty status (Figure 4.4). We plot the percentage of calories coming from different food groups at each poor and non poor level. For the national flour, rice, dairy, meat and oil products are main sources for calorie.

Two clear findings arise: non poor households tend to substitute flour and rice with dairy, sugar and other foods; there is no any remarkable difference in consumption on those fruit and vegetables which can provide more essential nutrient across the groups.

Figure 4.4 Proportion of calories from food groups by poverty status



Source: Author's estimation, HSES 2014

5. Conclusion

The analysis of food security, poverty and nutrition provides essential insights for creating appropriate and effective policies and programs to address these issues. Using the HSES 2014 data, this paper has analyzed the relationship between food security indicators (nutrient consumption) and poverty in Mongolia. Poverty plays an important role in the household nutrient consumption, according to quantitative results of this study.

The food security indicators such as nutrient intake and adequacy ratio are examined by poverty status. The mean intake for nutrients can provide general pattern about a household's ability to spend on food. The findings show that the difference between nutrient consumption between the poor and for the non-poor was quite large and statistically significant. The adequacy ratio, another food security indicator, reveals that poor households are below the benchmark level of all nutrients except animal fat. And it can imply that deficiencies in nutrients are a problematic issue only for poor households while all the population is facing a problem with excess of appropriate intake for animal fat.

One contribution of this study is to estimate an indicator of the goal 2 of the SDG that has been not estimated in Mongolia yet. The proportion of population below minimum level of dietary energy consumption in Mongolia is 27 per cent, which means that around 814.9 thousand individuals are considered undernourished.

Although the food security indicators which are used in this study are easy to understand, it does not provide information on the response of nutrient consumption to changes in household welfare. This could be a limitation when evaluating or making alternative policy options, for example, the cash money program and food supply program.

In order to obtain a more complete description of the situation, impact of household welfare on nutrient consumption should be explored. My next study will focus on that and will provide estimates of the extent to which nutrient consumption at household level increases in

response to changes in household income and consumption.

The findings of the study also suggest that serious attention is needed to diversify the food diet of the poor. A poor person consumes around 25 items of food, while a non-poor consumes 33 items. Moreover, fat consumption intake, which is stated as the main reason to malignant neoplasm and death in Mongolia, is very high¹² among the population.

To conclude, the best way to fight the food security problem in the country could be the combination of policies that increase household incomes and that provide information on how to obtain a balanced and healthy diet.

REFERENCES

- Amartuvshin.Ts., (2011). "Nutrient consumption and poverty in Mongolia", *Mongolian Population Journal*, No.20, Ulaanbaatar
- Abdulai, A., and D. Aubert. (2004). Nonparametric and parametric analysis of calorie consumption in Tanzania. *Food Policy*, 29(2)
- Aromolaran, A.B. (2010). Does increase in women's income relative to men's income increase food calorie intake in poor households? Evidence from Nigeria. *Agricultural economics*, 41
- Deaton, A. and S. Zaidi, (2002). Guidelines for Constructing Consumption Aggregates for Welfare Analysis. LSMS Working Paper 135, World Bank, Washington, DC.
- Debraj Ray, (1998). *Development Economics*. The Princeton University press
- Food and Agriculture Organization. (2009). *State of Food Insecurity in the World*. Rome, Italy
- Food and Agriculture Organization, (2015). *The state of food insecurity in the World 2015*
- National Statistical Office of Mongolia, (2014). *Poverty profile of Mongolia*, Ulaanbaatar.

¹² Mongolia is the country with the highest incidence of malignant neoplasm and death in the World., *Malignant neoplasm's world map – Death*, WHO 2004

Skoufias, E., V.Di Maro, T.Gonzalez-Cossiom, and S.Rodriquez Ramirez. (2009) Nutrient consumption and household income in rural Mexico. *Agricultural Economics*, 40(6)

Public Health Institute, Nutrition Research Center of Mongolia (2011). "Nutrition status of Mongolian population" forth national nutrition survey report, Ulaanbaatar

APPENDIX**Table A.1: A sample by stratum and month of the year**

Month	Capital	Aimag center	Rural	National
1	300	450	599	1,349
2	300	450	600	1,350
3	300	450	600	1,350
4	298	450	600	1,348
5	297	450	598	1,345
6	298	450	600	1,348
7	298	450	600	1,348
8	300	450	600	1,350
9	300	450	596	1,346
10	298	450	600	1,348
11	300	450	600	1,350
12	292	450	600	1,342
Total	3,581	5,400	7,193	16,174

Source: HSES 2014

Table A.2: Per capita daily nutrient consumption, by groups

Nutrients	Urban/Rural		Strata				Quarter			
	Rural	Urban	Ulaanbaatar	Aimag center	Soum center	Country-side	1	2	3	4
Energy (kcal)	2603	2854	2857	2848	2594	2610	2706	2665	2854	2827
Total energy (kcal)	2622	3169	3272	2958	2620	2624	2910	2866	3043	3061
Animal protein (g)	77	79	80	77	71	83	75	75	83	80
Vegetable protein (g)	42	42	42	42	43	40	42	41	42	43
Animal fat (g)	67	80	81	78	63	70	72	71	80	78
Vegetable fat (g)	20	31	31	32	22	19	29	25	26	28
Carbohydrates (g)	336	342	341	346	343	330	333	333	349	345

Source: HSES 2014

Table A.3: Adequacy ratio, by groups

Nutrients	Urban/Rural		Strata				Quarter			
	Rural	Urban	Ulaanbaatar	Aimag center	Soum center	Countryside	1	2	3	4
Energy (kcal)	104.1	114.2	114.3	113.9	103.8	104.4	108.2	106.6	114.2	113.1
Total energy (kcal)	104.9	126.8	130.9	118.3	104.8	105.0	116.4	114.6	121.7	122.4
Animal protein (g)	138.2	141.1	142.6	138.1	126.3	148.9	134.3	134.6	148.6	142.9
Vegetable protein (g)	109.7	110.6	110.3	111.3	113.8	106.0	109.4	108.4	111.0	112.2
Animal fat (g)	237.6	286.3	290.2	278.2	225.0	249.0	256.8	254.0	285.0	278.6
Vegetable fat (g)	49.6	75.6	74.8	77.2	54.3	45.3	70.3	61.1	64.1	69.0
Carbohydrates (g)	89.6	91.3	90.8	92.2	91.4	88.0	88.8	88.9	93.2	92.0

Source: HSES 2014

Table A.4: Proportion of nutrients from food group, by poverty status

Food groups	National				Non poor				Poor			
	Calorie	Protein	Fat	Carbo -hydrates	Calorie	Protein	Fat	Carbo -hydrates	Calorie	Protein	Fat	Carbo -hydrates
Flour, rice	42.2	27.9	8.7	72.7	41.5	27.1	8.7	72.2	48.7	34.7	9.1	77.3
Meat	14.1	30.1	24.8	0.1	14.2	29.8	24.8	0.1	13.6	32.7	25.8	0.1
Fish, seafood	1.0	3.2	1.1	0.0	1.0	3.2	1.1	0.0	0.9	3.3	1.1	0.0
Dairy	19.8	34.6	33.0	4.5	20.6	35.7	33.9	4.6	13.6	25.1	24.6	3.4
Oil	9.0	0.1	25.2	0.1	8.7	0.1	24.1	0.1	11.0	0.1	34.4	0.1
Fruit	1.7	0.5	0.4	3.2	1.8	0.6	0.4	3.3	1.2	0.3	0.1	2.1
Vegetables	3.7	2.2	0.9	6.3	3.7	2.2	0.9	6.3	3.9	2.4	0.6	6.3
Sugar	5.8	0.5	3.6	9.5	5.9	0.5	3.7	9.7	5.1	0.3	2.7	8.1
Other	2.7	0.9	2.2	3.7	2.7	0.8	2.3	3.8	2.0	1.0	1.6	2.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: HSES 2014