المجلة المصرية للاقتصاد الزراعي

التحليل الاقتصادي للإنفاق الاستهلاكي على اللحوم والحبوب في ريف وحضر مصر

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المستخلص

استهدف البحث دراسة مدى تواجد اختلاف في أنماط استهلاك الغذاء في حضر وريف مصر من خلال بحث ميزانية الاسرة وذلك بحساب الاهمية النسبية للمجموعات السلعية من حيث متوسط الانفاق الفردي في حضر وريف مصر، و دراسة تطور الاستهلاك القومي والفردي من المجموعات السلعية في مصر، والتقدير الإحصائي للدوال الانفاقية للفرد للمجموعات السلعية في ريف وحضر مصر، وتقدير المرونات الانفاقية ومقارنة النتائج. واعتمد البحث على البيانات الثانوية المنشورة الصادرة من الجهاز المركزي للتعبئة العامة والاحصاء والخاصة ببحث ميزانية الأسرة "بحث الدخل والإنفاق والإستهلاك" للعامين 2015، 2018. وسلسلة زمنية لنشرات الميزان الغذائي الفترة الزمنية 2005 الى 2019 بالإضافة إلى الدراسات وثيقة الصلة بموضوع الدراسة، و تم استخدام التحليل الوصفي المتمثل في المتوسطات ومعامل الاختلاف ومعدل التغير والتحليل الكمي مثل استخدام الانحدار البسيط والانحدار المتعدد بإضافة المتغير الصوري في تقدير كل من معاملات الارتباط والتحديد ومعاملات المرونة الإتفاقية وفقا للنموذج اللوغاريتمي المزدوج .

وقد تبين من نتائج البحث زيادة الأهمية النسبية للأنفاق الفردي علي إجمالي الطعام والشراب عام 2018/2017 عنه في عام 2015/2014، أما بالنسبة لبنود الأنفاق الفردي علي مجموعة السلع الرئيسية فقد كان الأنفاق علي استهلاك اللحوم هو الأعلى دائماً خاصة عام 2015/2014 بنسبة 30.12% كما بالمثل في الريف، وبلغ استهلاك الحبوب 19.521 ألف طن عام 2005 وأرتفعت إلي 20.915 ألف طن عام 2019 عما كانت عليه عام 2005 بزيادة قدرها 7.1%، كما بلغ متوسط نصيب الفرد 135 كيلو جرام عام 2005 وأرتفعت إلي 211.5 عام 2019 عما كانت عليه عام 2005 بزيادة قدرها 56.7% . ويتضح من الدالة الأنفاقية عام 2015 عدم وجود تأثير لدرجة التحضر أي لا فرق بين الريف والحضر بالنسبة للأنفاق علي مجموعة الحبوب. كما يتضح من البحث أنه لا يوجد اختلاف في المرونة الأنفاقية للحوم في عامي 2015، 2018 للحضر والريف، مما يعني عدم وجود تغيرات بين أنماط استهلاك ريف وحضر مصر .

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Economic Analysis of Consumer Spending on Meat and Grains in Rural and Urban Egypt

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ABSTRACT

The research aimed to study the extent to which there is a difference in the patterns of food consumption in urban and rural Egypt by examining the family budget by calculating the relative importance of commodity groups in terms of average per capita expenditure in urban and rural Egypt, and studying the development of national and individual consumption of commodity groups in Egypt, and statistical estimation of functions Expenditures per capita for commodity groups in rural and urban Egypt, estimating spending flexibilities and comparing results. The research relied on the secondary data published by the Central Agency for Public Mobilization and Statistics related to the family budget research "Income, Expenditure and Consumption Research" for the years 2015 and 2018. A time series of food balance bulletins from 2005 to 2019 in addition to studies closely related to the subject of the study.

The results of the research showed an increase in the relative importance of individual expenditures on total food and beverages in 2017/2018 compared to 2014/2015. As for the items of individual expenditures on the group of major commodities, expenditures on meat consumption were always the highest, especially in 2014/2015, at a rate of 30.12 Likewise in the countryside, grain consumption amounted to 19,521 thousand tons in 2005 and rose to 20,915 thousand tons in 2019 than it was in 2005, an increase of 7.1%, and the average per capita share reached 135 kilograms in 2005 and rose to 211.5 in 2019 than it was in 2005, an increase of 56.7%. It is clear from the expenditure function in 2015 that there is no effect on the degree of urbanization, that is, there is no difference between rural and urban with respect to expenditures on the group of cereals. It is also clear from the research that there is no difference in the spending elasticity of meat in 2015 and 2018 for urban and rural areas, which means that there are no changes between the consumption patterns of rural and urban Egypt.

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Introduction:

A consumption diet is a combination of consumer goods that represents the structure of the final food consumption of a particular social group. Which is considered an indicator of what the society consumes of food commodities at a specific time and place with the aim of satisfying its food needs? It is also an indicator of the relative distribution of consumer spending on different commodities and food groups according to expenditure categories. Therefore, the importance of studying food consumption patterns emerges as one of the important economic studies on which each of the economic decision-makers in general, and agricultural and food policies in particular, depends, because it reflects the nutritional level of the population, as well as achieving the goals of economic and social development. Here the focus came on the food commodity groups, which are essential for all categories of citizens at all levels, namely meat and grains, regardless of their arrangement in relation to the rest of the commodity groups.

The research aimed to study the extent to which there is a difference in the patterns of consumption of meat and grains in urban and rural Egypt by study the family survey.

The important results of the study were as follows:

1-That there is no difference between the spending elasticity of cereals and bread in (2015) and (2018) for urban and rural areas, and therefore there is no difference in the nature of the commodity, which means that there are no structural changes between the patterns of consumption in rural and urban Egypt, and this is consistent with the economic logic, as cereals and bread are from Necessary commodities for the individual in rural and urban Egypt.

2-There is a difference in the estimates of the expenditure elasticities of meat in (2015) compared to (2018) for urban and rural areas in terms of the nature of the commodity, which means that there are structural changes between consumption patterns, but at the rural level, where it was 0.2 in 2015 and became 1.6 in 2018 and this is in contrast to urban Where the estimates of the spending elasticity of meat did not change from 2015 to 2018.

3-There are discrepancies from 2015 to 2018, and in the rural compared to in the urban areas, which is due to the fact that the statistics of meat, grains and other commodities by examining the family budget are found in a grouped form and not individually, which is reflected in the results extracted from them, their accuracy and the difficulty of generalization.

Research problem:

The recent years have witnessed great changes in the prices of food commodities and the income levels of members of the Egyptian society, as well as a great diversity of food commodities within its different group, between fresh, factory, dried and frozen, which was greatly reflected on the consumption patterns of individuals in rural and urban Egypt, which may be reflected on The taste of the Egyptian consumer, which necessarily requires a study if there are structural changes in the levels of spending on groups of food commodities, especially in the commodity groups that are the mainstay in the Egyptian consumer's diet, whether rural or urban, which are meat and grains.

Objectives:

The research aims to study the extent to which there is a difference in the patterns of consumption of meat and grains in urban and rural Egypt by studies the family survey through:

1- Estimating the relative importance of the different commodity groups in terms of average per capita expenditure in urban and rural Egypt.

2- Studying the development of national and individual consumption of the various commodity groups in Egypt.
3- Statistical estimation of per capita expenditures on meat and grains in rural and urban Egypt.
4- Estimating the spending elasticity's and comparing the results in both rural and urban in Egypt.

Data sources:

The research relied on published secondary data issued by the Central Agency for Public Mobilization and Statistics related to the family budget research "Income, Expenditure and Consumption Research" for the years 2015 and 2018. A time series of food balance bulletins from 2005 to 2019 in addition to studies closely related to the subject of the study.

Research method:

The research relied on the use of descriptive analysis tools represented by means, variation coefficient, rate of change and quantitative analysis such as using simple regression and multiple regression and dummy variables using various statistical programs.

Research results:

First: **The relative importance of individual expenditures for groups of food commodities in urban areas:**

The data of Table (1): The relative importance of individual spending on food commodities groups in urban areas indicates a rise in total spending on food and drink in 2018/2019 compared to 2014/2015, with an increase of 47.5%. The meat group ranked first in terms of average per capita spending, with an average of 4,640.5 pounds, or 28.98 percent of the total spending on food and drink. The dairy, cheese and eggs group ranked second in terms of average per capita spending with an average of 2384.15 pounds, or 14.88% of the total spending on food and drink. The vegetables group ranked third in terms of average individual spending with an average of 2,091.35 pounds, or 13.05 percent of the total spending on food and drink. The group of oils and fats, fish, fruits, sugar and non-alcoholic beverages ranked fifth, sixth, seventh, eighth and tenth, respectively, with averages of 1202.65 EGP, 1119.9 EGP, 960.1 EGP, 742.65 EGP, 544.9 EGP, and 466.85 EGP respectively from the total expenditure on food and drink. At rates of 7.51%, 6.99%, 5.99%, 4.63%, 3.40% and 2.93%, respectively, of the total expenditure on food and drink.

Table (1) The relative importance of the annual individual expenditure of the main food commodity groups in relation to the total expenditure on food and drink in urban Egypt during the period 2014-2018.

Collection	2014/2015	2017/2018	average	%
Meat[1]	3898,1	5382,9	4640.5	28.98
Dairy and cheese[1]	2011,3	2757	2384.15	14.88
vegetables[1]	1636,7	2546	2091.35	13.05
Cereals & Bread[1]	1384,6	2339,1	1861.85	11.63
Oils and Fats[1]	879	1526,3	1202.65	7.51
fish[1]	926,3	1313,5	1119.9	6.99
fruit[1]	839,5	1080,7	960.1	5.99
sugar[1]	573,7	911,6	742.65	4.63
other products[1]	256,8	833	544.9	3.4
Non-alcoholic drinks[1]	534,4	399,3	466.85	2.93
Total food and drink	**12940,4**	**19089,4**	**16014.9**	**100**

(1) Attributed to the total food and drink in pounds. The year 2016/2017 was not included because it is the year of sampling, and it was not included in the family budget study.
Source: Central Agency for Public Mobilization and Statistics, Income, Expenditure and Consumption Research, miscellaneous issues.

Second: The relative importance of the annual per capita expenditure of the most important main food commodities in the rural:

Data of Table (2): the relative importance of annual per capita expenditure of the most important main food commodities in relation to individual consumption expenditure in rural Egypt during the period 2014-2018 indicates that the relative importance of expenditure on total food and drink reached the highest in 2017/2018 with an average of 19,019.3 EGP. And it was below in 2014/2015 with an average of 12376.4 pounds. The meat group ranked first in terms of average per capita spending with an average of 4435.1 pounds, or 28.98 percent of the total spending on food and drink. The vegetables group came in second place in terms of average individual spending with an average of 2,347.2 pounds, or 14.95% of the total spending on food and drink. The dairy and cheese group ranked fourth in terms of average per capita expenditure with an average of 1777.25 pounds, or 11.32% of the total, expenditure on food and drink. The group of oils and fats, fish, fruit, and Sugar, non-alcoholic beverages, and other products ranked fifth, sixth, seventh, eighth, ninth and tenth, respectively, with averages as in table (2), respectively, of the total expenditure on food and drink.

Table (2): The relative importance of the annual individual expenditure of the most important food commodity groups in relation to the total expenditure on food and drink in pounds in rural Egypt during the period 2014-2018.

Collection Food commodities groups	2014/2015	2017/2018	average period	%
Meat[1]	3658,6	5211,6	4435.1	28.25
vegetables[1]	1853,7	2840,7	2347.2	14.95
Cereals & Bread[1]	1446,5	2582,1	2014.3	12.83
Dairy and cheese[1]	1496,2	2058,3	1777.25	11.32
Oils and Fats[1]	1087,4	1819,9	1453.65	9.26
fish[1]	767,9	1212,6	990.25	6.3
fruit[1]	776,9	1072,9	924.9	5.89
sugar[1]	619,0	1146,3	882.65	5.62
Non-alcoholic drinks[1]	418,8	680,3	549.55	3.5
other products[1]	251,4	394,6	323	2.06
Total food and drink	**12376,4**	**19019,3**	**15697.85**	**100**

(1) Attributed to the total amount of food and drink in pounds. The year 2016/2017 was not included because it is the year of sampling. It was not included in the family budget
Source: Central Agency for Public Mobilization and Statistics, Income, Expenditure and Consumption Research, miscellaneous issues.

Third: The relative importance of food commodity groups in terms of the average per capita consumption of them in Egypt:

Data of Table (3): Explain the relative importance of commodity groups in terms of the average per capita share of them in Egypt during the period (2015-2019) indicates that the cereal group ranks first in terms of the average per capita share of 217.22 kilograms, or 45.74%, and the vegetables group comes In the second place in terms of average per capita share with an average of 95.6.2 kg or 20%, and the fruit group comes in the third stage in terms of average per capita share with an average of 79.56 kg or 16.75%,

Table (3) The relative importance of commodity groups in terms of the average per capita share of them in Egypt During the period (2015-2019)
(quantity/kg)(value Egyptian pounds)

commodity group main in pounds	2015	2016	2017	2018	2019	average period 2015/2019	%
cereal	216.2	212.2	230	216.2	211.5	217.22	45.74
vegetables	108.8	94.4	92.8	90.2	91.8	95.6	20
the fruit	88.5	82.4	76.2	76.2	74.5	79.56	16.75
the dairy	71.9	70.5	60.2	59.1	58.1	63.96	13.47
meat	22	19.2	18.8	21.6	21.8	20.68	4.35
vegetable oils	7.6	18.3	17.6	19.6	13.3	15.28	3.22
fish	10.2	10.9	11.4	11.9	12.8	11.44	2.4
legumes	5.1	7.9	8.4	12.2	9.8	8.68	1.8
oil crops	6.6	7.6	8.6	9.7	8.6	8.22	1.7
sugar crops	5.8	5.5	5.9	6	5.7	5.78	1.2
eggs	3.9	3.5	3.5	3.4	5.2	3.9	0.82
Total groups	**483.3**	**479.2**	**468.6**	**475.1**	**468.5**	**474.94**	**100**

Source: Ministry of Agriculture and Land Reclamation, Economic Affairs Sector, **"Food Balance Bulletin"**, miscellaneous issues.

The dairy group ranked fourth in terms of average per capita share, with an average of 63.96 kg, or 13.47%, and the meat group ranked fifth in terms of average per capita share, with an average of 20.68 kg, or 4.35%, and came the group of vegetable oils, fish, and legumes. And oil crops, sugar crops, and eggs ranked sixth, seventh, eighth, ninth, tenth and eleventh, respectively, with averages of 15.28, 11.44, 8.68, 8.22, 5.78, 3.9 kg, respectively, with rates of 3.22%, 2.4%, 1.8%, 1.7%, 1.2% In a row, of the total average per capita consumption of the total food commodity groups in Egypt during the period (2015-2019).

Fourth: The evolution of national consumption and the average per capita share of the food commodity groups under study

Due to the discrepancy in the estimates of the demand of the food commodity groups in each of the estimates of the cross-sectional data and the time series, especially that the research of the family budget depends on the value spent on the commodity groups, while the food balance bulletins depend on the estimates of expenditure on the commodity groups quantitatively, and a large part of the consumer's income The Egyptian directed to spending on food commodities focuses mainly on meat and grains, which are the usual dietary pattern in the Egyptian society, which requires focusing the study on the two groups of meat and grains in studying consumer spending for them and measuring the extent of changes in spending on them between different time periods and comparing the results.

1-Meat group:

A- Evolution of the national consumption of the meat group: Data in Table (4) indicates that the average national consumption during the period (2005-2019) reached a minimum of about 1.34 million kg in 2008, and a maximum of about 2,142 million kg in 2019 with an average of 1.629 million kg, an increase of 2.7 %. By examining the directional relationship (Table 5), the results of the statistical estimation of the general trend function on the meat group showed that there is a general increasing trend estimated at 44 tons annually during the study period, and the model's estimations have been proven to be significant, and the value of the coefficient of determination which is 0.78 indicates that the time factor explains about 78% of the change in the national consumption of meat, while the rest 22% is due to factors not studied by function. While the value of (F) shows the statistical significance of the model as a whole at the 1% level of significance.

2-The development of the average per capita share of meat during the period (2005-2019), where it reached a minimum of about 18.2 kg in 2008, and a maximum unit of about 25.6 kg

in 2014 with an average of 20.22 kg, an increase of 0.34%. By studying the time trend of the development of the average per capita consumption of meat, it was found that the model was insignificant in the different mathematical forms.

Which reflects that the moral increase in the national consumption of meat is due primarily to the population factor?

2-Grain group:

A- Evolution of the national consumption of the group of grains: data in Table (4) indicates that the average consumption during the period (2005-2019) for the group of grains reached a minimum of about 19,202 million kg in (2007), and a maximum of about 21,862 million kg in (2017), with an increase It reached 0.39%. By studying the directional relationship of the national grain consumption, it was found that the national grain consumption is characterized by relative stability and revolves around the arithmetic average, which is estimated at 20.2 million kg during the study period. The value of the coefficient of determination, which is estimated at 0.20, indicates that 20% of the change in the national consumption of grain is due to the time factor, and that 80% of the remaining changes are due to other factors that must be searched for, which may necessarily be due to the population factor among these factors.

B- The development of the average per capita share of cereals during the period (2005-2019), where it reached a minimum of about 135 kg in 2005, and a maximum of about 279.4 kg in 2006 with an average of 232 kg, a decrease of 0.04% during the study period.

By studying the time trend of the development of the average per capita consumption of cereals, it was found that the model was insignificant in the different mathematical forms.

Table (4): Evolution of national consumption and average per capita share of grain and meat in the Egypt during the period (2005-2019)

years	meat		grain	
	Consumption (net	per capita	Consumption (net	per capita
2005	1.542	22.4	19.521	135
2006	1.349	20.5	20.116	279.4
2007	1.403	21.3	19.202	260.7
2008	1.34	18.2	20.459	272
2009	1.415	19	20.501	135.4
average (2009-2005)	1.4098	20.28	19.9598	216.5
2010	1.467	18.4	19.918	253
2011	1.511	18.3	19.667	244.6
2012	1.536	18.3	19.372	234.6
2013	1.65	20	20.902	247
2014	1.691	25.6	20.394	235
average (2010-2014)	1.571	20.12	20.0506	242.84
2015	1.735	22	19.241	216.2
2016	1.708	19.2	19.317	212.2
2017	1.745	18.8	21.862	230
2018	1.898	21.6	20.994	216.2
2019	2.142	21.8	20.915	211.5
average (2015-2019)	1.8456	20.68	20.4658	217.22
average	1.62921	20.2238	20.2013	227.81
coefficient of difference	13.7	10.3	3.9	18.2
rate of change %	2.7	0.34	0.39	-0.04

Source: Ministry of Agriculture and Land Reclamation, Economic Affairs Sector, "Food Balance Bulletin", miscellaneous issues.

Table (5) Results of the statistical estimation of the general time trend function on the two groups of meat, cereals and bread

equation name	The equation	R²	F
National consumption of meat	Y1 = -86.22 + 0.044 xi (21.86) ** (6.89)**	0.78	47.43**
Average per capita share of meat	There is no mathematical form that is statistically significant and appropriate to the nature of the data		
National consumption of grain	There is no mathematical form that is statistically significant and appropriate to the nature of the data		
Average per capita grains	There is no mathematical form that is statistically significant and appropriate to the nature of the data		

**significant at 0.01 * significant at 0.05
Source: collected and calculated from the data of Table No. (4)

Fifth: Statistical estimation of expenditure functions for the group of meat and grains in urban and rural Egypt for the years (2015), (2018)

By applying many mathematical models to the expenditure function, it became clear that the double logarithmic form gave better results than other mathematical forms in expressing the nature of the relationship, in order to study the relationship between the total annual expenditure per capita on food commodities and the per capita annual expenditure on cereals, bread, urban and rural areas.

1-The cereal and bread group

A- Cereals and Bread Expenditure Function for 2015

The results of Table (6) indicate the importance of the factors reflected in the total per capita annual expenditure in explaining the changes that occurred in the individual expenditure of cereals and bread in urban and rural areas and related to the study of the family budget in the year (2015), where the statistical significance of the factors explained by the total annual expenditure was proven, at the Significance level 0.01 for urban, as the coefficient of determination indicates that about 95% 25% of the change in individual spending on grain and bread is due to changes in total per capita annual expenditure in urban and rural areas, respectively, and the rest is due to other unstudied factors. The calculated F value was also proved to be significant at the 0.01 level. The expenditure elasticity estimates in urban and rural Egypt were about 0.84 and 0.13, respectively, as it turns out that this elasticity is close to some extent in urban and rural areas, and there are not many alternatives for rural and urban areas, as most of the family's needs are self-satisfied, and that grain and bread in the rural are more necessary than in the urban area Table (6).

Table No. (6): Results of the statistical estimation of expenditure functions on cereals and bread in urban and rural Egypt in the year (2015)

equation name	The equation	R²	F
Spending function in urban	LnY2 = 0.96 + 0.84ln xi (2.73) * (19.32)**	0.95	373.25**
spending function rural	LnY3= 4.77 + 0.13ln x (11.54) ** (2.45)*	0.25	6.00**
urbanization effect on the spending function	LnY4 = 3.65 + 0.27lnx -0.03D (4.2) ** (4.60)** (-0.70)	0.37	10.69**

Where: ($\hat{Y}4$ ..., $\hat{Y}1$, $\hat{Y}2$) the estimated value of the annual per capita expenditure in Egyptian pounds on grain and bread in urban, rural areas, x = total annual per capita expenditure in pounds on various food commodities, D: Dummy variable that expresses the degree of urbanization, where It takes the value (one) for the urban, and the value (zero) for the rural. The value in parentheses indicates the calculated T value, (R2) the coefficient of determination, (Ŕ2) the adjusted coefficient of determination, (**) denotes the significance of the regression coefficients at the level (0.01), (*) the significance of the regression coefficients at the level (0.05).
Source: collected and calculated from the data of the Central Agency for Public Mobilization and Statistics, spending and consumption research in 2015.

Statistical estimation of the effect of the degree of urbanization of expenditure functions on the consumption of cereals and bread:

As it is clear from the effect of the degree of urbanization on the spending function in Table (5) that the model for the effect of urbanization is not proven, that is, there is no difference between urban and rural with regard to spending on that commodity, as it is a necessary commodity in both rural and urban sectors.

B- The expenditure function of cereals and bread in urban and rural Egypt for the year (2018):

The results of Table (7) indicate the importance of the factors reflected in the total annual expenditure per capita in explaining the changes that occurred in the individual expenditure on cereals and bread for urban and rural areas, related to the study of the family budget in the sample for the year (2018), where the statistical significance of the factors explained by the total annual expenditure was proven, when Significance level 0.01 for all urban and rural areas. The coefficient of determination also indicates that about 98%, 64% of the change in individual spending on grain and bread is due to changes in the annual total expenditure per capita in urban and rural areas, respectively. The calculated F value was also proved to be significant at the 0.01 level.

Table No. (7): The results of the statistical estimation of expenditure functions on cereals and bread in urban and rural Egypt in the year (2018)

equation name	The equation	R^2	F
urban Spending function	$LnY2 = -1.61 + 0.940 \ln x_i$ (-5.41) ** (27.27)**	0.98	743.78**
rural spending function	$LnY3 = 2.22 + 0.494 \ln x$ (2.93) * (5.517)**	0.64	30.43**
urbanization effect on the spending function	$LnY4 = 0.687 + 838 \ln x -0.04D$ (-1.98) (17.32)** (-1.76)	0.90	153.90**

Source: collected and calculated from the data of the Central Agency for Public Mobilization and Statistics, spending and consumption research in 2018.

By estimating the spending elasticity of cereals and bread in urban and rural areas, it was found that it amounted to about 0.94 and 0.49, respectively, as it was found that this elasticity is close to some extent in urban and rural areas, and there are not many alternatives for rural areas, as most of the family's needs are self-satisfied, and that cereals and bread in The rural is more necessary than the urban ones, as shown in Table (7)

Statistical estimation of the effect of the degree of urbanization of expenditure functions on the consumption of cereals and bread:

It is clear from the effect of the degree of urbanization on the spending function in Table (7) that the model's significance for the effect of urbanization is insignificant, that is, there is no difference between urban and rural with regard to spending on that commodity.

C- Comparing the expenditure elasticities estimates for the cereals and bread group for both urban and rural Egypt for family budget research for 2015 with their counterparts for 2018:

It is clear from Table (8) that there is no difference between the spending elasticity of cereals and bread in (2015), (2018) for urban and rural areas, and therefore there is no difference in the nature of the commodity, which means that there are no structural changes between consumption patterns in rural and urban Egypt, and this is consistent with the logic Economic, as grain and bread are essential commodities for the individual in rural and urban Egypt alike. Although estimates of spending elasticities in rural areas increased from 0.1 in 2015 to approximately 0.5 in 2018, and in urban areas, it increased from 0.8 in 2015 to 0.9 in

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2018 in other words the elasticity for urban and rural are increased which is means that the degree of the elasticities are arrived 0.5 for rural and 1 for urban to wake the sensitivity of both to increase the price of each one.

Table No. (8): the expenditure elasticities for cereals and bread for urban and rural Egypt (2015, 2018)

years	urban spending Elasticity	rural spending Elasticity
2015	**0.84**	**0.13**
2018	**0.94**	**0.49**

Source: collected and calculated from the data of tables (6), (7)

2-Meat group

A- Meat expenditure function in urban and rural Egypt for the year (2015)

The results of Table (9) indicate the importance of the factors reflected in the total annual expenditure per capita in explaining the change that occurred in the individual expenditure on meat for urban and rural areas and related to the family budget study in the sample for the year (2015), where the statistical significance of the factors explained by the total annual expenditure was proven, at the level of Significance 0.01 for urban.

The coefficient of determination also indicates that about 96%, 29% of the change in individual expenditure on meat is due to changes in the total annual expenditure per capita in urban and rural areas, respectively; the calculated F value was also proved to be significant at the 0.01 level. By estimating the spending elasticity of meat in urban and rural areas, it was found that it amounted to about 1.34 and 0.29, respectively, as it was found from the elasticity estimates that there is a difference in spending in urban and rural areas, as meat is considered a commodity group that has alternatives to the urban, on the contrary, in the rural, which is necessary It has no alternatives, as shown in Table (9).

Statistical estimation of the effect of urbanization of expenditure functions on meat consumption value:

It is clear from the effect of the degree of urbanization on the spending function in Table (9) that the model for the effect of urbanization is insignificant, that is, there is no difference between urban and rural with regard to spending on that commodity, and this may differ from the results of elasticities, given that it is a commodity group and not a specific commodity.

Table No. (9): The results of the statistical estimation of expenditure functions on meat in urban and rural Egypt through the study of expenditure and consumption for the year (2015)

equation name	The equation	R^2	F
urban Spending function	$LnY1 = -3.96 + 1.34 \ln x_1$ $(-8.13)** \quad (22.08)**$	0.96	487.36**
rural spending function	$LnY3 = 4.70 + 0.26 \ln x$ $(6.18)** \quad (2.69)*$	0.29	7.21**
urbanization effect on the spending function	$LnY4 = 3.01 + 0.47 \ln x - 0.03D$ $(4.1)** \quad (4.99)** \quad (-0.42)$	0.41	12.80**

Source: collected and calculated from the data of the Central Agency for Public Mobilization and Statistics, spending and consumption research in 2015.

B- <u>The expenditure function of meat in urban and rural Egypt for the year (2018):</u>

The results of Table (10) indicate the importance of the factors reflected in the total annual expenditure per capita in explaining the change that occurred in the individual expenditure on meat for urban and rural areas, related to the study of the family budget in the sample for the year (2018), where the statistical significance of the factors explained by the total annual expenditure was significant, at the level of 0.01 for each of, urban and rural. The coefficient of determination also indicates that about 91%, 98% of the change in individual expenditure on meat is due to changes in the total annual expenditure per capita in urban and rural areas.

By estimating the spending elasticity of meat in urban and rural areas, it was found that it amounted to about 1.35 and 1.64, respectively, as it was found that this elasticity is close in urban and rural areas, where meat is considered a commodity that has alternatives in all parts of the Republic in its rural and urban areas Table (10).

Statistical estimation of the effect of the degree of urbanization of expenditure functions on meat:

It is clear from the effect of the degree of urbanization on the expenditure function in Table (10) that the average per capita expenditure on meat increases at a statistically significant rate of about 1.42% when the total per capita expenditure on food commodities increases by about 1%. With the average public expenditure at a statistically insignificant rate of about 0.09%, the adjusted coefficient of determination indicates that about 93% of the change in the average per capita expenditure on meat is due to changes in the total annual expenditure per capita and the sham variable that reflects the degree of urbanization, as proved the significance of F calculated at the level of 0.01 which means the appropriateness of the mathematical model used.

Table No. (10): Results of the statistical estimation of expenditure functions on meat in urban and rural Egypt in year (2018)

equation name	The equation	R^2	F
urban Spending function	$LnY1 = 4.32 + 1.35 \ln x_1$ (-4.97) ** (13.38)**	0.91	179.06**
rural spending function	$LnY3 = 6.69 + 1.64 \ln x$ (-13.34) ** (27.73)**	0.98	769.07**
urbanization effect on the spending function spending function	$LnY4 = -4.80 + 1.42 \ln x - 0.09D$ (-2.9) ** (20.83)** (-2.92)**	0.93	220.20**

Source: collected and calculated from the data of the Central Agency for Public Mobilization and Statistics, spending and consumption research in 2018/2019.

When re-estimating the expenditure function of meat after adding the transitional variable that expresses the degree of urbanization, the results were as in Table (7), and by compensating for the value of the dummy variable with the value (1) for urban, the value (zero) for the rural, it was found that:

(In the rural) $Lny_i = -4.80 + 1.42 \ln x_i$

(in the urban) $Lny_i = -4.89 + 1.42 \ln x$

It is clear that the expenditure function of meat reflects a difference that is not essential between urban and rural, where the average urban expenditure of meat did not differ from the average individual expenditure of meat by the effect of the total individual expenditure on food commodities, which means that meat consumption is affected by the difference in scope and place between rural and urban, but Not much, contrary to estimates for 2015.

C - Comparing the expenditure elasticities estimates for the meat group for both urban and rural Egypt for family budget research for 2015 with their counterparts for 2018:

It is clear from the data of Table (11) that there is a difference in the estimates of the expenditure elasticities of meat in (2015) compared to (2018) for urban and rural areas in terms of the nature of the commodity, which means that there are structural changes between consumption patterns, but at the rural level, where it was 0.2 in 2015, and it became 1.6 In 2018, this is in contrast to urban, where the estimates of the spending elasticity for meat did not change from 2015 to 2018.

Table No. (11): Comparison of the expenditure elasticities of meat for urban and rural Egypt through research on expenditure and consumption (2015, 2018)

years	Elasticity of spending for urban	Elasticity of spending for the rural
2015	1.34	0.26
2018	1.35	1.64

Source: collected and calculated from the data of tables (9), (10)

From the foregoing, an important result emerged, which is:

The grain group is still considered a necessary commodity group, but the different estimates of the elasticities from 2015 from 2018 may be due to the fact that the commodities are grouped and not individual, as the grains include (wheat, rice and corn with all their different classifications), which makes judgment on the result from The difficulty, as there are grain products that are very necessary for all levels of income groups in rural and urban Egypt, On the contrary, other grain products can be dispensed with, especially in rural Egypt, which is considered very typical in its consumption of grain.

There is also a discrepancy in the estimates from rural to urban, and from 2015 to 2018 for the meat group, and this may necessarily be due to the grouping of goods in one group, especially since the meat group includes white meat, which includes poultry of all kinds, fish, and red meat Which includes livestock, cows and sheep, all of this makes the estimates vary and may be inaccurate, which requires separating the statistics of commodities from each other within commodity groups, so that the results obtained can be relied upon.

Most important recommendations:

The research recommends the necessity of separating food commodities within commodity groups so that the researcher can derive accurate results that can be generalized, as it is illogical to study a spending function and estimate elasticities for a commodity group that includes more than five commodities, each of which has its nature, whether necessary, the first being alternatives for the Egyptian consumer.

الملخص:

تعتبر قضية الغذاء من أهم القضايا التي يواجهها العالم في الحاضر أو في المستقبل نتيجة لتزايد الطلب العالمي بالتزامن مع الزيادة السكانية، وأصبح التمتع بالصحة الجيدة من أهم الأسباب لزيادة العمل والإنتاج، كما أدت زيادة الوعى الصحي الى التغير في النمط الاستهلاكي نحو السلع الغذائية عالية القيمة الغذائية وبالتالي الى تقليل استهلاك المواد النشوية والسكريات والدهون وزيادة استهلاك الخضر والفاكهة واللحوم والأسماك مما يؤدى الى توزيع الموارد الاقتصادية الزراعية.

ولقد شهدت السنوات الاخيرة تغيرات كبيرة في أسعار السلع الغذائية ومستويات الدخول لأفراد المجتمع المصري، وأيضا تنوعا كبيرا في السلع الغذائية داخل مجموعتها المختلفة ما بين الطازج والمصنع والمجفف والمجمد الامر الذى انعكس بشكل كبير على الأنماط الاستهلاكية للأفراد في ريف وحضر مصر، الامر الذى انعكس بشكل ملحوظ على ذوق المستهلك المصري، والذى يتطلب بالضرورة دراسة تلك التغيرات في مستويات الانفاق على مجموعات السلع الغذائية، ومقارنة نتائجها خاصة في المجموعات السلعية التي تعتبر الركيزة الاساسية في غذاء المستهلك المصري لذلك تبرز أهمية دراسة الأنماط الاستهلاكية الغذائية باعتبارها من الدراسات الاقتصادية الهامة التي يعتمد عليها كل من واضعي ومتخذي القرار الاقتصادي بصفة عامة، والسياسات الزراعية والغذائية بصفة خاصة.

واستهدف البحث دراسة مدى تواجد اختلاف في أنماط استهلاك الغذاء في حضر وريف مصر من خلال بحث ميزانية الاسرة وذلك بحساب الاهمية النسبية للمجموعات السلعية من حيث متوسط الانفاق الفردي في حضر وريف مصر، و دراسة تطور الاستهلاك القومي والفردي من المجموعات السلعية في مصر، والتقدير الإحصائي للدوال الانفاقية للفرد للمجموعات السلعية في ريف وحضر مصر، وتقدير المرونات الانفاقية ومقارنة النتائج.

واعتمد البحث على البيانات الثانوية المنشورة الصادرة من الجهاز المركزي للتعبئة العامة والاحصاء وبحث ميزانية الأسرة "بحث الدخل والإنفاق والاستهلاك" للعامين 2015، 2018. وسلسلة زمنية لنشرات الميزان الغذائي الفترة الزمنية 2005 الى 2019 بالإضافة إلى الدراسات وثيقة الصلة بموضوع الدراسة، و تم استخدام التحليل الوصفي المتمثل في المتوسطات ومعامل الاختلاف ومعدل التغير والتحليل الكمي مثل استخدام الانحدار البسيط والانحدار المتعدد بإضافة المتغير الصوري في تقدير كل من معاملات الارتباط والتحديد ومعاملات المرونة الإنفاقية وفقا للنموذج اللوغاريتمي المزدوج.

وقد تبين من نتائج البحث زيادة الأهمية النسبية للأنفاق الفردي علي إجمالي الطعام والشراب عام 2018/2017 عنه في عام 2015/2014، أما بالنسبة لبنود الأنفاق الفردي علي مجموعة السلع الرئيسية فقد كان الأنفاق علي أستهلاك اللحوم هو الأعلى دائماً خاصة عام 2015/2014 بنسبة 30.12% كما بالمثل في الريف، وبلغ إستهلاك الحبوب 19.521 ألف طن عام 2005 وأرتفعت إلي 20.915 ألف طن عام 2019 عما كانت عليه عام 2005 بزيادة قدرها 7.1%، كما بلغ متوسط نصيب الفرد 135 كيلو جرام عام 2005 وأرتفعت إلي 211.5 عام 2019 عما كانت عليه عام 2005 بزيادة قدرها 56.7% . ويتضح من الدالة الأنفاقية عام 2015 عدم وجود تأثير لدرجة التحضر أي لا فرق بين الريف والحضر بالنسبة للأنفاق علي مجموعة الحبوب. كما يتضح من البحث أنه لا يوجد أختلاف في المرونة الأنفاقية للحوم في عامي 2015، 2018 للحضر والريف، مما يعني عدم وجود تغيرات بين أنماط أستهلاك ريف وحضر مصر.

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