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ANALYTICAL STUDY OF BOUGHT BREAD CONSUMPTION TYPES IN THE EGYPTIAN URBAN AREAS

Considering the history of the Egyptian food policy, food consumption has been rising for various reasons. These reasons express the rapid population growth, urbanization, rising incomes, and the associated demand for livestock products, and/or the response to world market prices. At the same time the agricultural sector has faltered, as evidenced by a leveling off in crops productivities, and a lower production than was expected from reclaimed lands.

As a result of the above circumstances, the Egyptian government has relied on increasing food imports to hold down consumer prices to the level that consumers in various levels of income can tolerate. To do so, Egypt operates an extensive system of consumer subsidies on food (5,7).[1/]

This paper is concerned with the case of Egyptian wheat consumption. Egypt follows an explicit policy of subsidizing domestic consumption. Bread has been made available in apparently big quantities at the subsidized price. This is done by supplying mills with wheat at a low price. In order to maintain this policy, the Egyptian wheat imports have been increased. Egypt has become a major importer in the world wheat market, spending an important part of its foreign exchange earnings on wheat imports which resulted in a deficit in the country's balance of payments. This deficit is expected to be increased from year to year. The problem of public and foreign sector accounts would be eased by reducing the quantity of wheat imported. This may be achieved

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1/ Numbers in parenthesis refer to literature cited in the bibliography.

by increasing the domestic production and, perhaps more important, by reducing the domestic demand.

Wheat and wheat flour subsidies represent more than half of the total cost to the national budget of the food subsidies. Bread continues to be available at one Egyptian piastre for a loaf of local (balady) bread weighing 169 grams, made of 93 percent extraction rate flour, shammy bread weighing 148 grams, made of 72 percent extraction rate flour, and roll (Feno) bread weighing 125 grams, made of 72 percent extraction rate flour. Steps should be taken to reduce the number of families eligible for subsidized bread. These steps would have a demonstrable impact on the Egyptian foreign and public accounts (7).

Now, the important question is, "which families are eligible for subsidized bread?" Unfortunately, there are no accurate data available to answer this question. There is a lack of information about bread consumption types of Egyptian families. These types depend upon the families income levels, their localities, and some other factors.

This paper aims to study the bread consumption type in the Egyptian urban areas. This study includes some important consumption relations such as the relations between the disposable income and the per capita consumed bread quantities, consumed bread type, bread consumption rationality, and some attitudes about bread subsidies. Some other relations were studied such as the relationship between kind of occupation, consumed bread type, and bread consumption ratios.

Information obtained from this analysis may help the decision maker to determine the families eligible for subsidized bread. At the same time, data generated from this analysis may be of great importance to other bread consumption and family budget analyses which utilize the computer simulation as a significant problem-solving tool by attempting to recreate a problem situation under study by developing a computer model of the process. Also, data generated from this study may be used to formulate the tableau form which contains a group of simultaneous linear constraints in any linear program concerning bread consumption (1).

In order to obtain comprehensive information on this subject, surveys of bread consumption have been conducted. Because of the limitation of the available budget, a sampling technique for the Egyptian families in the urban areas was utilized. A random sample was drawn from centers (marakez) Nasr City, Shubra, and El-Sayeda Zenab in Cairo Governorate, Giza, Boulak El-Dakror, and El Haram in Giza Governorate, and Benha, Qalub, and Kafr Shekr in Qalubeya Governorate. To generate the data required for achieving the above objective, a bread consumption questionnaire was designed. This questionnaire included questions about bread consumption types and attitudes; see the questionnaire in the appendix (2,6).

Information from the collected sample was used to classify the responding bread consumers into a limited number of proxy families that could be used to represent various bread consuming household situations in the Egyptian urban areas. Fifteen proxy households

were characterized, comprising five groups of proxy households distinguished by disposable income levels. Within each of these groups, there were three subgroups, one for the government and public sector employees' households, the second subgroup for the professional (Herofeieen)[1/] employees' households, and the third subgroup for the occupational (Mehaneieen)[2/] The proxy household characteristics were the household size, kind and quantity of purchased loaves of bread, way of getting rid of bread surplus if any, attitudes about releasing bread subsidies and the expected change in consumed bread quantity in case of doubling the loaf price.

Proxy units have been used by economists to identify the characteristics of various groups in a particular population that they may be found in the real life with approximately the same characteristics. To develop these proxy households, a technique similar to the frequency distribution tables for the various items mentioned above should be used. By using the mode (the most common values), the values of the above items in the proxy households that represent the data could be obtained. The mode is considered to be the most accurate measure of central tendency measures for two important reasons: first, the mode is an actual number that is most found in the real life, but the other central tendency measures such as the mean (arithmetic, geometric, and harmonic) or median create a new value which is not necessarily found in the original data, and it may be misleading. Second, there are some questions about attitudes and

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1/ Who almost did not receive any degree of education and who work by their hands such as carpenter, blacksmith and tailor, etc.

2/ Who have received a particular degree of education and almost work a free mental job such as engineer, physician, or lawyer, etc.

opinions of households which deal with descriptive answers, such as the multiple choice questions that are given numbers as flags to distinguish among the various choices; hence any central tendency measure other than the mode will not have any meaning since it may result in some fractions (3,4,8,9).

The disposable income level of less than 50 L.E./month was chosen to be the income level of the first group of proxy households to represent the low income families which includes the recent graduates of the universities and schools and the other low income employees. The other income levels for the other groups of proxy households were assumed to be increased by 50 L.E. over and above the income level for each former proxy household respectively (10).

The occupational kinds were taken into consideration in characterizing the proxy households since there are reasons to believe that the kind of occupation may have some indications about the consumption behaviour for the employee and his family. At the same time, it is a good idea to classify the employees as such so the decision maker can take different decisions for different subgroups regarding the bread subsidies.

Bread consuming characteristics for the identified proxy households are shown in the following tables.

Table 1

Bread Consuming Characteristics for the Proxy Household

in the Egyptian Urban Areas, for Income Levels less than 50 L.E. per month

Characteristics	Occupation		
	Government & Public Sector Employees	Professional Employees	General laborers and Trades
Household Size	4	6	5
Kind and quantity of purchased loaves of bread:			
Local (balady	12	24	20
Shamy	-	-	-
Roll (Feno)	6	-	10
Pie (Feterah)	-	-	-
Distribution of Bread Surplus:			
Garbage	-	-	*1/
Give to poor neighbors	-	-	-
Feed to poultry	*	*	-
Sell to cattlemen	-	-	-
Attitudes about Cancelling Bread Subsidies:			
For	-		
Against	*		
In Case of Doubling the Loaf Price:			
Bread Quantity would be the same	-	-	*
Bread Quantity would be decreased	*	*	-

1/ * sign indicates affirmative

Source: Collected and calculated from the questionnaire in the appendix.

Table 2

Bread Consuming Characteristics for the Proxy Household

in the Egyptian Urban Areas, for Income Levels of 50 L.E. to 100 L.E.per month

Characteristics	Occupation: Government & Public Sector Employees	Professional Employees	General Laborers and Trades
Household Size	5	6	5
Kind and quantity of purchased loaves of Bread:			
Local (balady)	20	20	15
Shamy	-	-	-
Roll (Feno)	-	15	10
Pie (Feterah)	-	-	-
Distribution of Bread Surplus:			
Garbage	-	-	*1/
Give to poor neighbors	-	-	-
Feed to poultry	*	*	-
Sell to cattlemen	-	-	-
Attitudes about Cancelling Bread Subsidies:			
For	-		
Against	*		
In Case of Doubling the Loaf Price:			
Bread Quantity would be the same	-	-	*
Bread Quantity would be decreased	*	*	-

1/ * sign indicates affirmative

Source: Collected and calculated from the questionnaire in the appendix.

Table 3

Bread Consuming Characteristics for the Proxy Household

in the Egyptian Urban Areas, for Income Levels of 100 L.E. to 150 L.E.per month

Characteristics	Occupation: Government & Public Sector Employees	Professional Employees	General Laborers and Trades
Household Size	6	7	6
Kind and quantity of purchased loaves of Bread:			
Local (balady)	10	20	20
Shamy	5	-	-
Roll (Feno)	5	10	10
Pie (Feterah)	-	-	-
Distribution of Bread Surplus:			
Garbage	*[1/]	*	*
Give to poor neighbors	-	-	-
Feed to poultry	-	-	-
Sell to cattlemen	-	-	-
Attitudes about Cancelling Bread Subsidies:			
For	-		
Against	*		
In Case of Doubling the Loaf Price:			
Bread Quantity would be the same	-	-	*
Bread Quantity would be decreased	*	*	-

1/ * sign indicates affirmative

Source: Collected and calculated from the questionnaire in the appendix.

Table 4

Bread Consuming Characteristics for the Proxy Household

in the Egyptian Urban Areas, for Income Levels of 150 to 200 L.E. per month

Characteristics	Occupation: Government & Public Sector Employees	Professional Employees	General Laborers and Trades
Household Size	5	7	5
Kind and quantity of purchased loaves of Bread:			
Local (balady)	10	25	10
Shamy	-	-	-
Roll (Feno)	5	10	10
Pie (Feterah)	-	-	-
Distribution of Bread Surplus:			
Garbage	*[1]	*	*
Give to poor neighbors	-	-	-
Feed to poultry	-	-	-
Sell to cattlemen	-	-	-
Attitudes about Cancelling Bread Subsidies:			
For	*		
Against	-		
In Case of Doubling the Loaf Price:			
Bread Quantity would be the same	*	*	*
Bread Quantity would be decreased	-	-	-

1/ * sign indicates affirmative

Source: Collected and calculated from the questionnaire in the appendix.

Table 5

Bread Consuming Characteristics for the Proxy Household

in the Egyptian Urban Areas, for Income Levels of 200 L.E. per month or more

Characteristics	Occupation: Government & Public Sector Employees	Professional Employees	General Laborers and Trades
Household Size	4	5	5
Kind and quantity of purchased loaves of Bread:			
Local (balady)	5	15	10
Shamy	5	-	-
Roll (Feno)	5	7	5
Pie (Feterah)	-	-	-
Distribution of Bread Surplus:			
Garbage	*[1/]	*	*
Give to poor neighbors	-	-	-
Feed to poultry	-	-	-
Sell to cattlemen	-	-	-
Attitudes about Cancelling Bread Subsidies:			
For	*		
Against	-		
In Case of Doubling the Loaf Price:			
Bread Quantity would be the same	*	*	*
Bread Quantity would be decreased	-	-	-

1/ *sign indicates affirmative

Source: Collected and calculated from the questionnaire in the appendix.

From the previously identified proxy households, it can be concluded that:

1. The size of the professional household is the largest household size in all of the proxy households.
2. Regarding the kind and quantity of purchased bread, it is shown that:
   a. The local (balady) bread is the most commonly purchased bread.
   b. The roll (Feno) bread is the second most commonly purchased bread. The roll purchased bread increases as the income level increases because of the changing of bread consumption type.
   c. The shamy bread and pies (Feterah) are not commonly purchased yet.
   d. The professional employees households consume less bread because of the changing of their consumption type as a result of increasing their standard of living.
   e. The low income level of professional employees households do not consume roll bread since they do not use it in feeding their children who do not go to schools in general.
3. Regarding the distribution of bread surplus, it is shown that:
   a. The low income level (less than 100 L.E.) of government and professional employees households utilize the surplus of bread in feeding the poultry since they still keep their old traditions in raising poultry in their houses. On the other hand the general laborers and those employed in trades get rid of the surplus bread by putting it in the garbage since they do not raise poultry in their houses because they prefer to live in a modern way and according to their education level.

b. All high income level households (100 L.E. per month or more) get rid of the surplus of bread by putting it in the garbage because they consume less amounts of bread than the previous income levels of households, so their bread surplus is not enough to be utilized in raising poultry.

4. Regarding attitudes about releasing bread subsidies, it is shown that:

a. The low income levels of government employees households (less than 150 L.E.) do not agree about releasing the bread subsidies and being compensated by increasing their salary by the average of the difference, because they consume more bread with their food, and they expect that the price of the other commodities will be increased as a result of releasing the bread subsidies.

b. The high income level government employee households (more than 150 L.E.) agree about releasing the bread subsidies because their consumption type is different from the low income households type. So they consume a little amount of bread in addition to rice and macaroni.

5. Regarding the expected results in case of doubling the loaf price, it is shown that:

a. All income levels of occupational households stated that their consumed amount of bread will be the same if its price is doubled. This result means that these households rationalize their bread consumption. That perhaps due to the education level of these members.

b. The low income levels of professional and government and public sector employees households (less than 150 LE) stated that

their consumed amount of bread will be decreased if its price is doubled. This may be due to the bread consumption type of these households because of their low income levels. This result is consistent with the above result regarding the attitudes about releasing bread subsidies, because these income levels of government and public sector employee households did not agree with releasing the bread subsidies.

c. The high income level households (more than 150 L.E. per month) stated that their consumed amount of bread will be the same if its price is doubled. This result means that these households rationalize their bread consumption by consuming a little amount of bread in addition to rice and macaroni because of their high income level. This result is also consistent with the above result regarding the attitudes about releasing bread subsidies, because these income levels of government and public sector employees households agreed about releasing the bread subsidies.

APPENDIX

Al Azhar University
College of Agriculture
Agricultural Economics Department

Commodity Systems Analysis Subproject

A Questionnaire about the bread consumption of the Egyptian Urban Areas*

The Bought Bread Consuming Households

Governorate City Center

Section I Household Background

Occupation

Income: a) Salary per month L.E.
b) Fixed income per month L.E.
and / or c) Fixed income per year L.E.

Household Size: (Number of family members who eat from the same pot):
a) Infants (under 1 year old) Baby
b) Adults (over 1 year old) Person
c) Relatives Person
d) Servants Person

Section II Bread Consumption

1. What are the kinds of purchased bread for daily consumption, and how many loaves of bread do you purchase per day?
   - Local (balady) Loaf
   - Shamy Loaf
   - Roll (Feno) Loaf
   - Pie (Feterah) Piece
   - Others Units

2. How frequently do you buy the bread (buying rhythm)?
   Quotidian (everyday)_____ Every few days_____

3. From where do you buy the bread?
   Bakery_____ Bread seller_____
   Tent on platform (Koshk)_____
   Other sources_____

* The information given is confidential and will be utilized for scientific purposes only.

Appendix 2.

4. Does your household consume the quantity of purchased bread completely?

yes_____ no_____

In case of answering with "no", what would be the reasons?

- The purchased quantity is more than the household needs
- The household consumes other alternatives

Macaroni Rice_____

- The baking is not good, so some parts of the loaf are left.

_____

- The bread purchased in the morning does not remain fresh for the evening meal.

5. How do you dispose of the leftover bread?
- put it in the garbage can _____
- Give it to poor neighbors _____
- Feed it to the poultry _____
- Sell it to cattlemen _____
- Other ways _____

Section III Bread Consumption Rationale

1. Do you agree that bread subsidies should be revoked, and your salary compensated for the difference in price?

yes_____ no_____

2. Would you continue to purchase the same daily quantity of bread if the loaf price were doubled?

yes_____ no_____

Where the answer is no, state your reasons.

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