

FACTORS AFFECTING BENEFIT FROM AGRICULTURAL EXTENSION CENTERS AMONG RURAL RESIDENTS IN MINUFIYA GOVERNORATE

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ABSTRACT: *There is an urgent need to institutionalize the local agricultural extension units. Concern has shifted to give a clear organizational entity to the village level extension units. It is thought that establishment of agricultural extension canters in the mother village to deliver services to all rural residents in the mother village and satellite settlements is the plausible practical way to achieve this goal so far 223 local agricultural extension centers were established . Those centers are scattered in 28 governorates, of which 8 centers are located in Minutia Governorate: those centers have been in service for at least ten years. Those centers are considered as two-way communication channels between rural residents and the agricultural extension research center. Locations of Agricultural extension systems are carefully decided. To make them visible and accessible to the majority of rural residents. But there no guarantee that the services of agricultural extension centers will reach all residents effectively . This study tried to identify the degree to which rural residents benefit from the extension centers, and to identify the characteristics of associated with benefit from the agricultural extension centers. This study was done in Menofyia governorate. Three AEC's were purposively selected. Those centers are located in the three districts of El-Shohada, Qwesna , and Berket El-Sabaa. A systematic sample was taken from the visitors of each AEC during two weeks. An interviewer was allocated to stay at each center for two weeks and was instructed to interview every fourth visitor during his stay. Data were collected using a structured interview schedule. The interview schedule contained measures of the independent variables and dimensions of the dependent variable The total number of completed interview schedules was 220 schedules. Collected data were then coded and entered into the computer, The SPSS statistical package was employed in analyzing data , Frequencies , percentages, Pearson correlation and multiple linear regression were utilized. the majority of the research sample were in the age category (30-49 year), partially dependent on Farming, have moderate knowledge about agricultural resources ,live with one Km from AEC,have more than two feddan and have less than six farm animals .*

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The majority of respondent have low or moderate knowledge about AEC, visit them often ,find secured advice moderaty useful ,and implement secured advice only sometimes.

Relationship between the independent variables and benefit from the AEC center seem to depend on the dimension of benefit , Income and form size are related to knowledge of AEC, size of animal holding is related to frequency of AEC visits, farming dependency ,income and proximity to the center are related to perceived usefulness of secured advice , but none of independent variable explain 10.6%,5.7%,and 9.74% of the variance in knowledge about AEC, frequency of AEC visits, and perceived usefulness of secured advice; respectively.

Key words: *Benefit from Agric. Extension centers.*

INTRODUCTION

The Egyptian agricultural extension system has been gradually growing. There had been several changes aiming at expanding the boundaries of the agricultural extension system. By the year 1976, agricultural extension reached the village level securing a full coverage of Rural Egypt . However, extension workers at the village level are mainly a working group rather than an organized unit . Therefore , there is an urgent need to institutionalize the local agricultural extension units. Concern has shifted to give a clear organizational entity to the village level extension units. It is thought that establishment of agricultural extension canters in the mother village to deliver services to all rural residents in the mother village and satellite settlements is the plausible practical way to achieve this goal So far 223 local agricultural extension centers were established . Those centers are scattered in 28 governorates, of which 8 centers are located in Minofiya Governorate,Those centers have been in service for at least ten years. Those centers are considered as two-way communication channels between rural residents and the Agricultural Research Center . As such agricultural extension centers deliver agricultural innovation to rural residents, provide solution to their problems , reply to their requests , and report their problems to the Agricultural Research Center . Therefore, agricultural extension centers are supervised by the Agricultural Research Center in order to facilitate their operation as a two – way communication channels .

Research Problem

Locations of agricultural extension systems are carefully decided to make them visible and accessible to the majority of rural residents. But there no guarantee that the services of agricultural extension centers will reach all residents effectively .

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This study will try to identify the degree to which rural residents benefit from the extension centers, and to identify the characteristics associated with benefit from the agricultural extension centers.

Objectives :

The main objective of this study is to identify the degree to which the existence of agricultural extension centers encouraged office visits by extension clients as a means to secure needed services, and the degree to which those visits are appreciated as beneficial by visitors. This overall objective may be realized through the realization of the following specific objectives .

- 1) To identify the socioeconomic characters of agricultural extension center visitors .
- 2) To identify the perceived benefit of the extension office visits .
- 3) To assess the relationships between certain socioeconomic variables and perceived benefit of extension office visits.

Theoretical Framework :

Previous research dealing with agricultural extension center is scarce in the literature. The few studies available show that the majority of respondents has favorable perception of the agricultural extension centers, in terms of knowledge and attitudes, and that both knowledge about, and attitudes toward agricultural extension centers are positively related to participation in the educational activities of those centers (El- Sharkawy, 2005). However, agricultural extension agents employed by the centers has different perceptions of farmers expectations (Farid and Abdel Gawad 2004).

As a starting point , it is assumed that agricultural extension centers (hereafter AEC's) are delivering the extension service utilizing a variety of extension methods . Of particular significance of these methods is the so – called " office visits " The significance of these visits stem from several considerations .

First, visitors are thought to be clients with specific felt educational needs that provide them with sufficient motivation and readiness to learn. Second, office visits in the majority of Egyptian villages are practically impossible, simply because an office does not exist at th village level Third , the establishment of AEC's provided a separate , known , and visible office for the extension agent for the first time.

Those considerations combined mean that there has been a place for office visits where AEC's exist.

Agricultural extension visits may be conceptualized to go through four successive steps as follows :

- 1- **Information:** at this step, the rural resident receives or secures knowledge that an AEC exists and that it is there for his own benefit and that he may get access to the center any time during the working hours.
- 2- **Visit :** at this step the rural resident who becomes well informed about the AEC becomes motivated and take initiative to visit the AEC to seek and get advice.
- 3- **Appreciation :** at this step, the rural resident appreciates the value of the secured advice to him.
- 4- **Implementation :** at this step the rural resident implements the secured advice as an acceptable solution to his problem.

However, the assessment of the above steps requires examination of individual visits as recorded. This requirement can not be secured in practice. An alternative is to asses the visitors perception of his office visits in general, Accordingly, benefit from AEC is conceptualized to be a four dimensional variable. With the four dimension being knowledge about the AEC and its functions, frequency of visiting the AEC, perceived usefulness of advice received from the AEC ,and frequency of implementing advice received from AEC.

It is expected that benefit from AEC will be associated with age, farming dependency , knowledge of agricultural resources , income , proximity of the AEC, size of land holding, size of farm animal holding, and perceived promptness of extension agent's response

Hypotheses :

- 1- Age, farming dependency, knowledge of agricultural resources, income, proximity of the AEC, size of land holding, size of farm animal holding , and perceived promptness of extension agents response are bivartely and collectively related to knowledge about the AEC.
- 2- Age, farming dependency, knowledge of agricultural resources, income, proximity of the AEC, size of land holding, size of farm animal holding , and perceived promptness of extension agents response are bivartely and collectively Related to frequency of visits to AEC.
- 3- Age, farming dependency, knowledge of agricultural resources, income, proximity of the AEC, size of land holding, size of farm animal holding , and perceived promptness of extension agents response are bivartely and collectively Related to perceived usefulness of secured advice.
- 4- Age, farming dependency, knowledge of agricultural resources, income, proximity of the AEC, size of land holding, size of farm animal holding , and perceived promptness of extension agents response are bivartely and collectively Related to frequency of implementation of secured advice.

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Methodology :

This study was done in Menoufyia governorate. Three AEC's were purposively selected. Those centers are located in the three districts of El-Shohada, Qwesna , and Berket El-Sabaa. A systematic sample was taken from the visitors of each AEC during two weeks. An interviewer was allocated to stay at each center for two weeks and was instructed to interview every fourth visitor during his stay. Data were collected using a structured interview schedule. The interview schedule contained measures of the independent variables and dimensions of the dependent variable as follows:

- 1- Age in complete years
- 2- Farming dependency (Full time farmers =3, agribusiness =2, part-time =1)
- 3- Knowledge of agricultural resources (good = 3, moderate =2 low =1)
- 4- Income (number of Egyptian pounds earned monthly).
- 5- Proximity of the center (very close = 4 ; within 500 ms=3, within 1 km = 2; more than 1 km = 1)
- 6- Size of land holding in feddans
- 7- Size of farm animal holding (total number of cattle held)
- 8- Perceived promptness of extension agents response (always prompt = 4 ; sometimes prompt = 3 , seldom prompt =2, always late =1 ; sometimes no response = 0)
- 9- Knowledge of the AEC and its functions (very familiar = 3 , some what = 2 , very little = 1)
- 10- Frequency of AEC visits (Always = 4, very often =3,sometimes = 2, rarely =1)
- 11- Perceived usefulness of secured advice.
- 12- Frequency of implementation of secured advice (always =4, often =3 , sometimes = 2; rarely =1)

The total number of completed interview schedules was 220 schedules. Collected data were then coded and entered into the computer, The SPSS statistical package was employed in analyzing data ,Frequencies , percentages, Pearson correlation and multiple linear regression were utilized.

RESULTS AND DISCUSSION

Results of the study will be presented in three distinct parts. The distribution of the respondents according to the independent variables will be presented to assess the degree to which they represent the target extension client .Then the respondents responses concerning the dimensions of the dependent variable will be presented to assess the overall benefit from the AEC's. Then the correlation and regression outputs will be presented to test the study hypothesis.

1- Sample characteristics

Table (1) presents the frequencies and percentages of the distributions of respondents on the independent variables of this study. Figures in the table show that The majority of Respondents are relatively young (about 68% below 50% years old).About 40% of the respondents depend totally on farming (full time formers),while the majority of Respondents(about 60%)are less dependent on forming .Only 21.4% have good knowledge about agricultural resources; almost on third of the respondents(32.7%)have low knowledge about agricultural resources Almost three of every five respondents earn more than 3000Egyptian pound, while the other two respondents earn less. The vast majority of the respondents live within 1 Km of the AEC. Out of every four respondent, one holds less than one sedan, two hold between tow and four sedans. Nanty percent of the respondents have six farm animals or less. The majority of respondents (about 56.8) consider extension agents response to be prompt (always or sometimes). The characters of the respondents are not selective favoring the relatively better off clients.

Table (1): The descriptive analysis of independent variables included in the Analysis

variables	freq	%	variables	freq	%
X1(Age)			X4 (income)		
Under30 year	24	10.99	Under3000 LE	92	41.1
30-49 year	125	56.8	Over3000 LE	128	58.2
Over 50year	71	33.3		-----	-----
	-----	-----		220	100
220	100				
X2 Farming dependency)			X5 Proximity of the center		
Full time farm	19	8.63	Very close	27	12.27
agribusiness	46	20.9	Within 500 ms	93	47.3
part time	10	38.6	Within 1 KM	82	37.3
	-----	-----	M0re than1 KM	18	8.18
220	100			-----	-----
			220	100	
x3(knowledge of			X6 (Size of land holding)		
agricultural resources)			- Under1 fadan	54	24.5
low-	72	32.7	- 2-4fadan	113	51.4
-Moderate	101	45.9	- Over4fadan	54	24.5
-good	47	21.4		-----	-----
	-----	-----		220	100
200	100.				
X7 (Size of farm animals			X8 (perceived promptness of		
holding)			extension agents)		
Under 3animales	95	43.2	-Always prompt	37	18.6
4-6 animals	105	47.7	-Some times prompt	84	38.2
Over6 animals	20	9.1	-Seldom prompt	89	40.5
	-----	-----	-Always late	9	4.09
220	100		-Some time no response	1	0.45
				-----	-----
			220	100	

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Benefit from the agricultural extension centers.

Table(2) presents the distribution of responses about the four dimensions of benefit from AEC .Figures in the table show that respondents are rarely familiar with AEC and its' functions only8.2% claim that they are quite familiar with AEC .the majority of respondents don't have adequate knowledge about AEC. As for frequency of visiting AEC,47.7%of respondents visit .the center very often, 40.9%visit the center sometimes. the other respondents visit the center either always(7.3%)or rarely(4%).As for perceived usefulness of secured advice, about one third of respondents claim that secured advice is often useful. But the majority of respondents claim that secured advice is rarely or sometimes useful to them. The vast the majority of respondents implement secured advice at least sometimes, but only 8.2% do this always.

When asked about aspects of their contact with the AEC, center, respondents gave the responses presented in table (3). Figures in the table show that The majority of respondents for specific objectives. The most frequently mentioned objective is to answer to request(184 respondents), followed by to attend a meeting (133 respondents),to ask for knowledge, to request advice, and for training ; in that order .the fields farmer feel to benefit from the office visits seem to the diversified. Most respondents claim to have at least two fields to benefit. the majority of respondents rely to mass media for information , particularly television and radio .on the average every respondent uses two and half media sources.

Table (2): The descriptive analysis of dimensions of dependent variable.

Dependent variable	freq	%	Dependent variable	freq	%
Y1 (knowledge of centers functions)			Y2 frequency of AEC visits		
Very familiar	18	8.2	Always	16	7.3
Some what	119	47.3	Very often	105	47.7
Very little	83	44.5	Sometimes	90	40.9
----	----	----	rarely	9	4.1
220	100		220	100	
Y4(Frequency of implementation of secured advice)			Y3-(Perceived usefulness of secured advice)		
Always	18	8.2	Rarely useful	39	17.7
often	100	45.5	Sometimes useful	109	49.5
Sometimes	98	44.5	Often useful	70	31.8
rarely	4	1.8	Always useful	2	9.0
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220	100		220	100	

Table (3): The frequencies of respondents concerning aspects of their office visits.

variables	freq	%	variables	freq	%
X9(#Most of usefulness field)			X4-Source of information from Mass media:		
1-field crops or Horticulture crops or Business development (1)	65	29.5	1-Newspaper on Agriculture	13	5.9
2-Animal production+field crops (2)	88	40.0	2-Radio and Television of general	69	31.0
3-Poultry+ field crops+ Animal production) (3)	39	17.7	3-Newspaper and magazines of general	51	23.0
4-Poultry+ field crops+ Animal production+ Business development)	28	12.7	4-Radio focused on agriculture	22	10
	-----	-----	5-Television focused on agriculture	23	10.5
	220	100	6-Newspaper and magazines focused on agriculture	12	5
			7-Internet(Vercon and other)	10	4.6
				-----	100
	220	100		220	
X10(objective of visiting)					
For training	58	10.8			
For knowledge	93	17.3			
To ask answer to request	164	30.5			
To attend a meeting	133	24.7			
To request advice	62	11.5			
	-----	-----			
	537	100			

2- The relationship between the independent variables and knowledge of AECS:-

Results of correlation and regression analyses of knowledge of AEC'S as the dependent variable are presented in Table(4).

results show that ,Income is positively correlated of knowledge of AEC($r=.284$) whereas farm size is negatively correlated of knowledge of AEC($r=-.137$).the other independent variables are not correlated with knowledge of AEC.

Regression results show that the eight independent variables combined are correlated with knowledge of AEC with a multiple correlation coefficient of .326 which is statistically significant. Income is the only independent variable that makes a significant unique contribution ,the eight variables , combined explain 10.6%of the variances of which about 8 % are due to income done .

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Table (4): Result of regression analyses between knowledge of centers functions and independent variables

independent variables	R	B	Bata
1-Age(X1)	-0.059	-0.091	-0.084
2- Farming dependency (x2)	-0.046	0.061	0.035
3- Knowledge of agricultural resources(x3)	-0.040	-0.077	-0.079
4- Income(x5)	0.284**	0.445**	0.310**
5- Proximity of the center (x6)	0.030	0.012	0.013
6-Size of farm animals holding (x7)	0.000	0.058	0.053
7-(perceived promptness of extension agents(x8)	0.017	0.021	0.021
8-Size of land holding (x15)	-0.137*	0.079	0.079

**Significant at the 0.01level.

*Significant at the 0.05 level.

R=.326

R2=.106

F=3.134

3- The relationship between the independent variables and frequency of AEC visits variables:-

Results of correlation and regression analyses of *frequency of AEC visits* variables as the dependent variables presented in Table(5).

Figures in the table show that size of Animal holding is the only independent variables that is significant correlated with frequency of AEC visits ($r = -.154$), the other independent variables are not correlated with frequency of AEC visits ,the eight independent variables combined explain 5.7% of the variance in AEC visits with size of form animal holding being the only variable that makes a significant unique contribution.

Table (5): The relationship between the independent variables and frequency of AEC visits variables:-

independent variables	R	B	Bata
1-Age(X1)	-0.040	-0.051	-0.048
2- Farming dependency (x2)	0.022	0.124	0.074
3- Knowledge of agricultural esources(x3)	0.082	0.132	-0.140
4- Income(x5)	-0.098	-0.130	0.940
5- Proximity of the center (x6)	-0.016	0.024	0.026
6-Size of farm animals holding(x7)	-0.104*	-0.176*	-0.166*
7-(perceived promptness of extension agents(x8)	0.057	0.037	0.040
8- Size of land holding (x6)	-0.076	-0.058	0.060

**significant at the 0.01level .

* significant at the 0.05 level.

R=0.239

R2=0.057

F=1.592

5-The relationship between the independent variables and Perceived usefulness of secured advice:-

Results of correlation and regression analyses of Perceived usefulness of secured advice as the dependant variable are presented in , Table (6).

Figures in the table show that farming dependency and income are negatively correlated with perceived usefulness of secured advice .but proximity to the AEC is positively correlated of secured advice .the other independent variables are not correlated with Perceived usefulness of secured advice.

Regression results show that the eight independent variables combined explain 9.7%of the variance in Perceived usefulness of secured advice with three variables making a significant unique contributions. Those are farming dependency ,income ,and proximity to the AEC.

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Table (6): Result of regression analyses between Perceived usefulness of secured advice and independent variables

independent variables	R	B	Beta
1- Age(X1)	-.013	-0.012	-.012
2-Farming dependency (x2)	-.137*	-0.315**	-0.204**
3-Knowledge of agricultural resources(x3)	.041	0.113	.130
4- Income(x4)	-.100*	-0.257**	-.201**
5- Proximity of the center (x5)	.124*	0.137*	.162*
6-Size of farm animals holding (x7)	.007	0.044	.046
7-perceived promptness of extension agents (x8)	.034	0.040	.046
8- Size of land holding (x6)	-.083	0.059	.066

**significant at the 0.01level .

* significant at the 0.05 level.

R=.312 R2=.097 F=2.838

5 The relationship between the independent variables and Implementation of the rural people of advices:-

The table (7) presents the results of correlation and regression analyses of Implementation of the rural people of advices as the dependent variable.

Table (7): Result of regression analyses between Implementation of the rural people of advices and independent variables

independent variables	R	B	Beta
1- Age(X1)	.000	-.077	.070
2- Farming dependency (x2)	-.021	-.0135	-.077
3- Knowledge of agricultural resources(x3)	.100	0.143	.146
4- Income(x4)	-0.082	0.120	-.083
5- Proximity of the center (x5)	-.077	0.070	.073
6-Size of farm animals holding (x7)	.084	0.110	.100
7-perceived promptness of extension agents(x8)	.001	0.027	.027
8- Size of land holding (x6)	.073	0.68	.067

**significant at the 0.01level .

* significant at the 0.05 level.

R=0.215

R2=0.046

F=1.280

Figures in the table show that the independent variables are neither bivariately non multivariately related to implementation of advice.

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العوامل المؤثرة على الإستفادة من المراكز الإرشادية بين الريفيين المتريدين في محافظة المنوفية

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الملخص العربي

يحرص الجهاز الإرشادى الزراعى على توفير وتيسير حصول الريفيين على الخدمات الارشادية على مستوى القرى فحرص على اقامة المراكز الارشادية الزراعية فى القرى الأم لتقدم خدماتها للريفيين فى كافة القرى التابعة أيضا مما يتيح للريفيين سهولة الحصول على احتياجاتهم المختلفة من معلومات وتدريب وحل لمشاكلهم وللوقوف على مدى استفادة الريفيين من هذه المراكز حاولت هذه الدراسة قياس هذه الاستفادة من خلال مقياس يتكون من أربعة خطوات تمثلت فى (معرفة الريفيين بوظائف المركز - معدل زيارتهم له - أدراكهم لأهمية النصائح المقدمة لهم - تطبيقهم للتوصية). وقد تم جمع البيانات من ٢٢٠ مبحوثتم اختيارهم بطريقة عمدية من المتريدين على المراكز الارشادية وتم استخدام الاحصاء الوصفى (النسب لمئوية) ومعامل ارتباط بيرسون وتحليل الأندثار المتعدد باستخدام الاسلوب الأحصائى وقد أسفرت النتائج على وجود ارتباط معنى بين المعرفة بوظائف المركز الارشادى وبين دخل الريفيين المبحوثين وحيازتهم الزراعية وكذلك بين زيارتهم للمركز وبين حيازتهم الحيوانية وبين الاستفادة من نصائح المركز وكل من النشاط المزرعى والدخل ومكان المركز وحيازتهم الحيوانية بينما لا يوجد اى ارتباط بين تطبيقهم لنصائح المركز و أيا من المتغيرات المستلة المدروسة مما يعكس . الدور الايجابي لتلك المراكز لذا توصى الدراسة بضرورة الاهتمام بها وتوفير كافة الإمكانيات لها حتى تستطيع القيام بدورها على الوجه الأكمل مما يدفع بتحقيق التنمية الريفية المنشودة .