

أثر المستوى التعليمي ونظم ملكية الأرض في التنمية الزراعية

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المستخلص:

يناقش هذا البحث أثر التعليم ونظم ملكية الأرض في التنمية الزراعية. تهدف الدراسة للإسهام في حل المشكلات والمعوقات التي تواجه القطاع الزراعي بولاية غرب كردفان - محلية السلام. تم إتباع المنهج الوصفي والتحليلي ودراسة الحالة. تم جمع البيانات الأولية عن طريق أداة الاستبيان على عينة عشوائية بسيطة مكونة من المزارعين بمنطقة الدراسة قوامها 150 مزارعاً ومن ثم معالجتها إحصائياً. تحليل البيانات تم باستخدام برنامج الحزم الإحصائية لعلوم الاجتماعية (SPSS) لحصول على نتائج يمكن من خلالها التأكد من صحة فروض البحث.

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كشفت النتائج الرئيسية لدراسة عن وجود علاقة بين المستوى التعليمي ونوع ملكية الأرض المستخدمة في مهنة الزراعة بالنسبة لذكور عند مستوى معنوية 5%، بينما لا توجد علاقة بين المستوى التعليمي ونوع ملكية الأرض المستخدمة في مهنة الزراعة بالنسبة للإناث عند مستوى معنوية 5%.

Impact of Educational Level and Land Ownership Systems on Agricultural Development: Case Study West Kordofan State

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Abstract

This paper tackles the impact of education and land ownership on agricultural development. It seeks to contribute in solving the problems and constraints facing agricultural sector in West Kordofan, taking from Elsalam Locality as case study. The study has adopted the analytical descriptive and case study approach. The primary data were collected through questionnaire tool by using simple random sampling of 150 farmers. Data was analyzed by using Statistical Package for Social Sciences (SPSS).

The key results of the study have shown that there is a strong relationship between educational level and land ownership system for males at the level of statistical significance of 5%, and no relationship between educational level and type of occupation for female at the level of statistical significance of 5%.

Keywords: Land Tenure, Land Use, Land Ownership, West Kordofan State, Household

Introduction:

The use of the land and natural resources is as old as man himself, since the man appeared on earth under used land and draw their available resources in a manner or another, in order to provide the necessities of life like clothing, food, and then it never stopped the effort to develop and improve land use, In

order to improve living standards, achieving their multiple needs and renewing energy.

Despite of the historical development of different land use patterns, the study of land-use menu, delete methods and different technical methods, used to identify the different characteristics of the region to use in the methods of scientific planning, economic development, and figured in the relationship of man to land as well as to meet its needs.

Recently, it was found that there was global interest in developing methods of use of land, as confirmed by the committee of the International Geographical Union, held in Clark University in 1951. Also, there was comprehensive survey of patterns of land use in all parts of the world, followed by number of conferences and seminars aimed to develop and promote the use of land, such as the Geographical Congress at heist Twenty, held in New Delhi in 1968 for developing countries in the world. The Environment Conference held in Acetkhom in 1972, a seminar on Population and Development which held in Cairo in 1973, and finally the Earth Summit held in Rio de Janeiro 1972. (Abdel Maksoud, 1974).

Research objectives: The research aims at achieving the followings :

- To evaluate the relationship between educational level and land use in agriculture.
- To develop the policies and plans that could help in maintaining land degradation.

The importance of research: the importance of research stems from the followings:

1. There are no previous studies on this subject.
2. The importance of land as the basic pillar for the provision of food in addition to the adoption of land by the majority of the population of the region in economic activity.

3. Growing global attention to the importance of the environment to instill environmental ethics related to land use.

4. The results of this study, may be useful for the concerned authorities to develop their policies, plans and strategies that help in the development of the agricultural sector.

Research problem:

Limited to the extent of awareness and knowledge of the direction of the category of farmers maintain their previous levels of different age area of study, the wall of the land for generations to preserve them from deterioration.

Research hypothesis:

1- There is no statistically significant relation between educational level and type of land ownership for male.

2- There is statistically significant relation between educational level and types of land ownership for female.

Research Methodology:

The study has adopted the analytical descriptive method. This kind of research method could enable the authors to see if there is a relationship between two variables or more, and then find out the degree of this relationship. (Assaf, 1409).

Theoretical framework and literature review:

Definition and concept of land use:

Known Ajamieh and others (1968) reported that land is intended to mean a narrow limited soil. The layer located above the rocks of origin and supplying the plant with its needs of food. However, the economists expanded it to include soil properties and characteristics of the place such as location and the degree of fertility and livestock. This definition seems to be considered as insufficient by some other economists, who expanded again to include all the land of the natural environment.

Akil (1972) report indicates that land is a specific area of the Earth's surface with a strong natural processes or natural

factors. However, Hassan and others(1973), cited that the earth is the Roman upper class Almjoah of the solid crust of the Earth.

According to 1925 land settlement and registration law, the word land includes all the benefits rising from land and buildings and things fixed permanently on the ground. It also includes share common ground and also any interest in the land require registration under this law or be subject to such registration other than the concession, it also includes the right to cultivate a part of the land to be a certain or determinable although the location may change from year to year.

The term land use is one of the modern terms that appeared in the field of scientific research and has many different definitions around Researchers. Tony(1960) reported that land use as a terminology is relatively new and has gained special significance in social, economic geographical aspects include land surveying and add to the models or types each of which, represents the interaction of natural factors, historical and social. He knew each of the Chorley & Kennd, quoting Abdul Rasool(1995) reported that the term of land use includes all the permanent or renewed in the intervening rights of exploitation on their needs in order to meet the physical or spiritual or both of the resources of natural or man-made resources.

El Sherei (2001) reported that the use of the land as a set of sequential activities, which aimed to organize communities through the study of the relationships patterns of human and store functions.

In this sense, the term land use has many meanings, but usually means the methods of land use in different areas; agricultural, pastoral and forest resource exploitation and construction, mining, industry and other activities that serve the goals and rights. At the present time is called the use of

land on the ground queries in rural areas, particularly on agriculture, both vegetation and animal.

The study of land use of the most important aspects in the agricultural geography which in turn is a branch of economic geography, in spite of the fact that agriculture has been and still account for most of the Land Escape exploited by man for thousands of years, the use of land as an area of study has emerged too late.

Banna(2003) pointed out that the term of land use is expressed in English Land Use or Land Utilization, Fox that in the fifties of the twentieth century looked at the difference in the first term is the concept of a formal relation to fundamentalist principles. While the second concept and the functional performance (practice). The distinction between the two terms is not universally accepted and used as a concept and remained one, however, in Britain and the United States preferred the second term.

Herbertson (1905) in his search of the regions and use of environment has adopted heavy data about the natural environment and vitality, nevertheless it lack the human use of economic and environment. The International Food and Agriculture Organization carry out planning, land uses, a systematic evaluation of structured land and uses as well as natural factors, social and economic manner that would assist land users to choose the patterns of sustainable use to increase production so as to meet the needs of population preserving the environment (Ghoneim, 2001) .

The human factor and its relationship to land:

Human dimension that determines the course of human control and capabilities at the heart of man who uses the land and face challenges and obstacles to slow the natural benefit. It is natural that this human dimension is different from person to another regarding capacity and efficiency in relation to land

use control, the consequences of this difference in methods of addressing diversity and potential superiority of the outcome of this use (Shami, 1971).

It is not strange that such diversity reflects the real interaction between the Earth and human characteristics, and abilities, repetition and also it is not surprised that the interaction determines the overall shape and craft to land use, grazing, animal husbandry, mining or mineral production, however, each type of use is a response of specific characteristics of the regions, and addresses some degree of checks and challenges. As the result the human setting world achieve the balance between the rights and possibilities of its capabilities and productions leeve and its kind, Is it sit traditional agriculture production mechanism and the production of high-end modern agriculture? Does the settings it the human critical and decisive control of the human? There is no doubt that the difference of non-economic use would be dependent upon man's ability to respond to the controls on the natural and optimal performance so as bear the responsibility for this difference (Freed man, 1968)

The ability of human subject to change, because what is best, or what is even worse with the change, use or production in the negative direction and vice the versa.

As emphasized by Robert Wilson and Ostonr(1971) the changes in the type and shape of the earth always occur when land use rights to meet his needs of life. Man always seeks for positive interaction between him and the earth, who will benefit first and for most its bid, the more than human control to rein in the natural controls and put them to his advantage- especially in dry areas- than in the human use of the land was used optimally (Shami,1971).

Literature Review:

Despite the abundance of research and studies on the state of North Kordofan in general and Bara locality in particular - in different areas –no scientific research adequately address the issue of land use in the region. All that exists is a study focused on the elements of the natural environment, including aspects of climate, soil, geological structure, vegetation, aiming to identify potential natural and water resources available in the region, and the most important studies and research that found by the researcher:

1-Study covering out by Elosary (1993)from the changes in land uses and their impacts on local Shikan- Northern Kordofan state, the study aimed to identify the features of rural economic activity and social conditions and changes that occurred in the study area. It also aimed to identify the magnitude of change in land use that stand on the rural aspects of the features of rural economic activity and social conditions prevailing in the region. Moreover it study the historical method, descriptive and statistical analysis. The study concluded that there is a range of natural and human factors contributed to varying degrees of overlapping in the land-use change in Shikan locality.

2- Rahamt Allah(1999) reported that land use in agriculture, both vegetation and livestock are the most important patterns of use. He added that there are some changes in land use at the end of the last century due to increase in population and use the machine in agricultural sector, which led to the horizontal expansion in the agricultural areas at the expense of natural vegetation that prevailed in the territory of the valley. The study also showed that the change in land use and poor agricultural certain transactions led to the deterioration of soil fertility and leading to low productivity year after year. The study identified different aspects to understand the problems facing the use of the land used optimally, and made some

suggestions that re-planning of land use area is the most important, along with building and maintaining soil productivity characteristics as well as environment suitably.

3-Abdul Aziz (2002)for vulnerability and poverty in rural communities-in Bara, revealed that there is adifficult overlapping factors including the separation and identification, contributed in varying degrees is the natural factors, economic and social he revealed also that the fragility and vulnerability of different levels can be created in any society, while the summary presents the final extent of weakness and the deterioration of living conditions and shaken in the structure of natural and human systems prevailing among population.

The study pointed out that the degree of negative impact of the ecology, economic and social challenges in addition to the ability of residents to innovation mechanisms adaptation of the human can restore society to a formula before the crisis, according to the severity of the consequences and deterioration of unit.

4-Another work carried out by Mohamed (2001) on use of the land in the province of Elbotana. This study has concluded that lack of water was the main reason that led to traveling during the planting period, leading to overlap and clash between farmers and herders, however the narrow paths and the lack of irrigated agricultural projects lead to interference, in addition to lack of boundaries between agricultural areas.

Materials and research methods

Research community is made up of farmers in Elslam locality. The work designed to identify the subject understudy and distributed to samples of 150 farmers from four villages namely Momo, Keigiara, Elbija and Sigelgana using simple random manner.

Data was collected and analyzed using the Statistical Package for Social Sciences (SPSS) program. to obtain results

from which to make sure hypotheses research, used in the analysis of frequency tables as well as to test hypotheses of the study through the application of test(chi-square)and scale factor pairing to test the independence between the variables. Relational ties between the research variables were studied using the test(chi-square) to determine the presence of significant relation between them, one of the tools that are used to measure the concordance between the two mean actual measured values and the other theoretical. (Abu Aiash, 1984). Statisticalchi - squarecalculatedby the equation:

$$\chi^2 = \sum \left(\frac{O_i - E_i}{E_i} \right)^2$$

Where:

O_i =repetitions cenes, E_i = expected frequency.

We reject the null hypothesis that there is a relationship between two variables if the moral level of less than 0.05% was used for the independence of two variables statistical phi, which is known as the Cramer Coefficient C and tables that are used with the pairing(2* 2)is calculatedas follows:

$$C = \frac{\sqrt{\chi^2}}{N(L-1)}$$

Where:

N = sample size and L the smaller number of rows and columns in the table of compatibility, where the use of χ^2 statistic to test the independence degree of freedom (r-1) (c-1) which is equal to the measure of association.

Through the Table 1 we find that 75.5% of males possess the land which they exercise their activity agricultural property free and vary their level of education Illite, being alone, the foundation, elementary and secondary 38.02%, 8.5%, 40.9%, 8.5% and 4.2% respectively. While 24.5% of them are renting agricultural land, and their educational level of Illiterate, alone with 39.1%, based on 30.4%, 13.4% of elementary and

secondary 4.3%. Table 1 also revealed that the rate of 65.4% of women own land and engaged in their activity agricultural property free and varied levels of education among the illiterate 64.7%, mainly 20.6%, primary 11.8%, secondary 2.9%, respectively, while those engaged in agricultural activity by renting lands were about 32.7% and ranges between literacy education 47.1%, 5.9% alone, the basis of 35.3%, elementary and secondary education 5.9% 5.9%, whereas 2% engaged in agriculture for their work through participation of the agricultural land in the educational level of Illiterate.

Table 1 statistical relationship between educational level and type of land ownership

education * land ownership * gender Crosstabulation

Count		land ownership			Total
		per. ownership	rent	partnership	
male	education illit.	27	9		36
	khalva	6	3		9
	elem.	29	7		36
	prim.	6	3		9
	sec.	3	1		4
	Total	71	23		94
female	education illit.	22	8	1	31
	khalva	0	1	0	1
	elem.	7	6	0	13
	prim.	4	1	0	5
	sec.	1	1	0	2
	Total	34	17	1	52

Through the Table 1 has been tested the null hypothesis that

There is

no statistically significant relationship between educational level and type of land ownership for male, against the alternative hypothesis that there were a relationship between level of

education and ownership of agricultural land using statistical Chi-square with degrees of freedom (r-1) (c-1) where r represents the number of rows and c the number of columns and by the following formula:

$$\chi^2 = \sum \left(\frac{O_i - E_i}{E_i} \right)^2$$

Where O_i are petition scenes and E_i represents the expected frequency was the statistical value of 1.263 for males and that the value of the p-value = 0.888 > 0.05 and thus accept the alternative hypothesis of 5% significance level. There is no any relationship between level of education and land ownership for males. From the table, the standard pairing for males =

$$\sqrt{\frac{\chi^2}{n}} = \sqrt{1.263/94} = 0.116 \text{ phi}$$

The value p-value = 0.0116 Table 3 of the pairing male to moral significance level of 5%. Where χ^2 statistic to test the independence degree of freedom (r-1) (c-1).

The value of the statistical table for females 5 and the value of 4.965 pvalue = 0.761 > 0.05 and thus accept the alternative hypothesis significance level of 5% of any relationship exists between the level of education and land ownership for females. The measure of association for females =

$$\sqrt{\chi^2/n} = \sqrt{4.965/52} = 0.309 \text{ phi}$$

The value p-value = 0.309 Table 6 for females suggests pairing moral significance level of 5%. Where χ^2 statistic to test the independence degree of freedom (r-1) (c-1).

statistics (chi-square) of the relationship between educational level and type of land ownership

Chi-Square Tests

gender		Value	df	Asymp. Sig. (2-sided)
male	Pearson Chi-Square	1.263 ^a	4	.868
	Likelihood Ratio	1.237	4	.872
	Linear-by-Linear Association	.005	1	.946
	N of Valid Cases	94		
female	Pearson Chi-Square	4.965	8	.761
	Likelihood Ratio	5.456	8	.708
	Linear-by-Linear Association	.133	1	.716
	N of Valid Cases	52		

a. 4 cells (40.0%) have expected count less than 5. The minimum expected count is .98.

b. 12 cells (80.0%) have expected count less than 5. The minimum expected count is .02.

Table 3 statistics (phi) of the relationship between educational level and type of ownership

Symmetric Measures

gender			Value	Approx. Sig.
male	Nominal by Nominal	Phi	.116	.868
		Cramer's V	.116	.868
	N of Valid Cases		94	
female	Nominal by Nominal	Phi	.309	.761
		Cramer's V	.218	.761
	N of Valid Cases		52	

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

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