

The impact of sugar projects on the community of White Nile State - Sudan

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Abstract: The paper aimed to know the impact of sugar projects on the community of White Nile State – Sudan, and its role in achieving political, economic and social stability for urban and rural communities. The paper used several approaches, including the historical, descriptive, analytical and statistical approaches, to extrapolate reality. The paper also used a questionnaire to measure the impact of economic and social of sugar projects in the state. The paper reached a number of results, the most important of which is that the establishment of development projects in the mandate of (sugar projects) helped in the stability of the local communities surrounding these projects through the implementation of programs for social and service development. The paper concluded with several recommendations, the most important of which is the need to reconsider the privatization policies of agricultural development projects, because they did not achieve the desired results, and to rehabilitate these projects to play their previous role in developing the region and achieving economic and social stability for the citizens of the region.

Keyword: Economic Development, Social development, Rural development, planning developmental, Rural ,communities .Sudan

أثر مشاريع السكر على مجتمع ولاية النيل الأبيض – السودان

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المستخلص: هدفت الورقة إلى معرفة أثر مشاريع السكر على مجتمع ولاية النيل الأبيض – السودان، ودورها في تحقيق الاستقرار السياسي والاقتصادي والاجتماعي للمجتمعات الحضرية والريفية. واستخدمت الورقة عدة مناهج منها المنهج التاريخي والوصفي والتحليلي والإحصائي لاستقراء الواقع. كما استخدمت الورقة استبانة لقياس الأثر الاقتصادي والاجتماعي لمشاريع السكر في الولاية. وتوصلت الورقة إلى عدد من النتائج أهمها أن إقامة مشاريع التنمية بولاية (مشاريع السكر) ساعدت في استقرار المجتمعات المحلية المحيطة بهذه المشاريع من خلال تنفيذ برامج للتنمية الاجتماعية والخدمية. واختتمت الورقة بعدة توصيات أهمها ضرورة إعادة النظر في سياسات خصخصة مشاريع التنمية الزراعية، لأنها لم تحقق النتائج المرجوة، وإعادة تأهيل هذه المشاريع للقيام بدورها السابق في تنمية المنطقة وتحقيق الاستقرار الاقتصادي والاجتماعي لمواطني المنطقة.

الكلمات المفتاحية: التنمية الاقتصادية، التنمية الاجتماعية، التنمية الريفية، التخطيط التنموي، المجتمعات الريفية، السودان.

The introduction:

The issue of economic development has come to occupy a prominent place in the world after World War II, as the most important and difficult problem facing countries that suffer from the burden of economic backwardness. Therefore, these countries have been searching for the best ways to change their existing reality and move to a better standard of living and civilization. Therefore, many of these countries decided to plan the uses of their resources to achieve the goal of development, so they adopted the method of economic planning as a science and practice to direct their material and human resources to achieve the goals of economic and social development (Sayed Numeiri, p. 5, 1978).

Planning for economic development has become one of the indispensable necessities for improving the lives of societies in our present era. Through it, it is possible to address the problems of underdevelopment and achieve rapid rates of development in the shortest possible time, at the lowest possible cost, and with the least amount of waste of material and human resources.(Mahmoud Al-Bakri,p. 30,1980) .

The problem:

There has been a need to evaluate the impact of sugar projects on the community of White Nile State, and the extent to which they achieve the goals of economic and social development. Are these projects a reflection of the state's economic reality and capabilities? To what extent was it based on the foundations of development planning? What is the extent of its contribution to the economic and social development of the state's citizens?.

Objective of the paper:

This paper aims to evaluate and know the impact of sugar projects on the community of White Nile State through the following:

1. Knowledge of the impact of economic and social of sugar projects in the state.
2. Clarifying its role in achieving political, economic and social stability for urban and rural communities.

Hypotheses:

This paper is based on a number of hypotheses that the study tries to answer, namely:

1. Local communities surrounding development projects are less fortunate in economic and social development programmes.
2. The economic and social services provided by development projects meet the desires and aspirations of local communities in the region.
3. Social development programs and services provided by agricultural development projects lack follow-up and evaluation.

Methodology:

The paper used several approaches, including historical, descriptive, analytical, and statistical approaches, to extrapolate reality. The paper also used a questionnaire to measure the impact of economic and social development projects in the state, the method of interview and observation in collecting information.

Importance of the paper:

The importance of the paper lies in the need to evaluate development plans, programmes and projects in Sudan, especially sugar projects in the White Nile State, and to know the extent to which they achieve the goals of economic and social development, and their role in achieving economic and social stability for rural communities

Paper Structure:

The paper includes four axes as follows: The first axis: deals with the theoretical framework, Economic development planning and theories of economic development. The second axis: deals with development planning in Sudan. The third axis: deals with development planning in the White Nile State. The fourth axis: deals with applied study procedures and measuring the impact of economic and social development projects then the results and recommendations.

The first axis: Economic development planning:

Economic development planning is a type of comprehensive planning or national planning. Development efforts in this field (i.e., economic development planning) began after World War II. The Marshall Plan, which aimed to restore the economic and social life of Western European countries after World War II, is considered the first basic effort. In the field of economic development planning, after which the United Nations took over sponsorship of these development efforts in all countries of the world, the first decade of development was in the sixties and the second decade in the seventies of the last century. (Ismail Muhammad Hashem, P. 25.1970).

The experience of the previous two decades has shown that economic development planning did not bring developing countries to the goals they were seeking, because they focused on national product and per capita income in economic growth, and largely neglected the social and cultural growth of countries. Despite the increase in general growth, the social and economic situation for the majority of developing countries, it did not improve much, as unemployment problems worsened and rates increased, migration from the countryside to cities increased, and educational and health services deteriorated. Voices rose calling for a new model of development that would reduce the specter of unemployment, increase the redistribution of national income, and reduce the focus on material capital and greater dependence. On human capital as the basic factor in the field of production and capital accumulation and the goal and goal towards which economic, social and cultural efforts are directed. (Abdul Aziz Abdullah Mukhtar, P. 38,1995).

2-1 Economic Development Theories:

The twentieth century witnessed increasing interest from various countries of the world (developing and developed) with the aim of developing and developing their economies. This interest led to the emergence of modern theories that laid the foundations for achieving the economic development sought by those countries. The most prominent of these theories are the following:

1-2-1 The Theory of Balanced Growth (1943): Rosenstein Rowan:

Rosenstein Rowo was the first economist to talk about the theory of balanced growth in an article in 1943 about the industry that existed in eastern and southeastern Europe as a "huge facility" as a result of investments in the form of industrial groups. After him came the economist Nurkse, who was an enthusiast. According to the principle of strong momentum and the theory of balanced growth, he explained that balanced growth is achieved by creating waves of capital investments in a number of industrial and agricultural projects at once, by distributing the accumulated capital over a wide range of industries and various methods of transportation. (M.L.Jhinjan – P. 144. , 1995).

2-2-1 Unbalanced Growth Theory:

This theory goes back to the ideas of Rostow and Hirschman. According to this theory, investment in the economic sectors is what creates for us a process of balanced growth between the various sectors. Balance is required between investment in agriculture and industry, because agriculture and industry complement each other so industrial expansion it requires expansion of agriculture, expansion of industry increases the labor force which in turn increases the demand for goods and services and so on. (M.L.Jhinjan – Ibid – P. 144,, 1995)

The theory of unbalanced growth is based on the idea that growth is achieved as a result of imbalances arising from the presence of unbalanced imbalances between developing Industries.

This type of investment is called conservative investment, which leads to creating vitality in a competitive economy. It is clear that an imbalance in one direction leads to more investment to restore balance, then another imbalance appears that requires more investment and so on.

Thus, we find that the process of unbalanced growth includes small processes that depend on each other. Each investment process facilitates the other investment process, and each series of production processes leads to more demand for other goods and products, Thus the growth process proceeds based on the principle of integration. An example of this is industries, Petroleum, petroleum and chemical industries in Sudan, which began after the extraction of petroleum and its derivatives.

The second axis: planning for development in Sudan:

The first attempts to plan the Sudanese economy began in the year 1899 with the beginnings of the Anglo-Egyptian condominium of the country, which established a simple and effective administrative system based on a policy based on five directions prepared by Lord Cromer, namely: (Abdul Rahim Marghani, p. 8.2002).

- 1- Good management.
- 2- Population increase.
- 3- Improving communications.
- 4- Expanding water supplies and growing cotton.
- 5- Ensuring the availability of sufficient quantities of low-cost fuel.

Where these five directives were the first efforts in the field of development planning by the colonial government, and the focus was on good management in order to resolve disputes over land, and focus on increasing the population because their numbers were few as a result of wars and diseases, and therefore it was required to encourage agriculture in ways and methods that are limited to the use of Employment, and this led to industrial irrigation projects with pumps and canals on both sides of the White and Blue Niles to produce some cash crops for export (such as cotton).

Accordingly, these five-guided policies were adopted in 1909. by Mr. Wenjit Pasha, the Governor-General of Sudan, and he added to them a “sixth” point, which is the inauguration of a simple education system to achieve the direct requirements of the government in terms of workers, employees, and administrators.

These directives give an idea of directing most of the investments to the preferred projects of the colonial rule represented in the construction of railways, bridges, Bosnia, telegraphs and some public facilities, and a small part of the investments was directed to irrigation and crop cultivation.

Talk began about rebuilding and reconstruction after the end of the war, especially from the standpoint of compensating and implementing what had been postponed due to the war. In 1946, the Reconstruction Priorities Committee was formed, and the committee’s mission was to ensure the safety of post-war reconstruction and reconstruction projects and make recommendations about the priorities for their implementation. This committee was he was the first to draw up the main lines for the programs of the first five-year reconstruction plan (46-1951). The size of this program was 13.75 million pounds, and was approved for spending on (193) projects. Most of these projects were non-productive, as they were a program for spending on some government buildings, electricity, education, and health. And some aspects of productive drainage, such as expanding the Al-Jazeera project and raising the Sennar reservoir.(Othman Ibrahim Al-Sayyid- p. 359, 2002).

The first program for reconstruction was basically a service program directed to provide drinking water, electricity, education and roads services. Funds for investments were distributed, so that the construction and road building sector receives 49% of the total investment, the development of agriculture and rural water 21%, irrigation 19%, and education 11% of the total. Total credits.(Sayed Numeiri - p. 27,, 1978).

Upon the end of the first five-year plan, it was considered necessary to arrange for a mechanism to plan and prepare the second five-year plan (1956-1956), for which an amount of 24 million pounds was allocated. However, with the start of implementing the projects, it became clear that the cost of the program exceeded (24) million pounds, so the allocation was increased to (32) million pounds in the year 1953/53 , then to (34 million pounds in the year 1953/1954 , to be spent on (250) projects as follows:(Ali Ahmed Suleiman, , p. 85.1977).

Table No. (1) Distribution of investments among economic sectors in the second five-year reconstruction plan 1956-51.

Sector	The amount is in million pounds	The ratio
Transportation	9.3	%27
Productive projects	7.8	%23
Service projects (education, health)	6.9	%20
Public utility	5.1	%15
Administration	4.1	%12
Unallocated reserve	0.8	%03
Total	34.00	%100

Source: Ali Ahmed Suleiman, p. 85

Although the first and second development programs did not achieve the desired results in the field of improving living standards, they did lead to some expansion in the field of education, health and public services.

After that, the first national government began the first attempts to draw up a five-year plan covering the years (1962/57), but it did not come into existence, as the cost of projects submitted by ministries and government departments exceeded all available local and external resources, and therefore it was sufficient to draw up an annual development budget for the year (57/1958) and another for the year (1958/1959). Thus, annual plans and budgets continued to be drawn up, as it was not possible to draw up a five-year plan until the regime was changed in November 1958. A new government came through the military coup led by General Abboud and reinforced the importance of national planning and launched Ambitious programs for economic and social development, thus the birth of the Ten-Year Plan for Economic and Social Development (1971/61).

The comprehensive ten-year plan for economic and social development was the first real experience in national planning after independence, a period in which planning achieved a kind of planning maturity and in which many of the weaknesses and shortcomings that had accompanied previous planning attempts in the country were addressed.

Accordingly, by looking at previous planning attempts in Sudan in the period from 1946/1960, it is clearly evident to us that it is difficult to consider what was drawn up as plans, whether five-year or annual, due to their lack of the basic components of the plans, whether in terms of goals, correct scientific preparation, or the lack of a specialized central body. It is experienced in preparing plans and coordinating between various projects or in terms of involving the private sector in developing and implementing these plans. (Tajani Assum (2007), p. 81).

The third axis: planning for development in the White Nile state:

Planning for development in the White Nile State witnessed various attempts, starting with the beginnings of colonial rule of the country. These attempts led to economic growth in the state over different stages of time, whether in the field of agricultural, industrial, or service development.

1-3- Planning for agricultural development:

White Nile State is one of the leading and former states of Sudan in the field of local agricultural development through different historical stages. Since the era of British colonialism and as a result of Britain's need at that time for cotton, the policy of agricultural expansion in the state began in the form of agricultural investment projects (governmental and private) for the production of cotton.

Government agricultural projects:

The idea of establishing governmental projects in the state began in the second half of the thirties and forties of the last century after the completion of the construction of Jabal Awlia Reservoir, Major governmental agricultural projects were established in 1944, covering an area of (25,000) acres, and their aim was to provide the living necessities for farmers. Those who lost their agricultural lands as a result of the construction of Jabal Awlia Reservoir in 1936, as compensation for the damage that befell them The government established subsistence projects in the White Nile region, and cotton was its main crop. (Tim Teblok, p. 37, 1994).

These projects increased the total cultivated area of cotton in the state from (25,000) acres in the 1949/1950 season to (198,000) acres in the 1959/58 season. As a result of the increase in cultivated areas, the region developed through a gradual transition from producing agricultural crops and grazing to growing food grains and producing dairy and fruits. This was helped by the flow of production factors, including labor and capital, from other regions of Sudan to the White Nile region.

As for the development plans after independence, the ten-year plan (61/1971) and the five-year plan (72/1977), they worked to increase cotton production from these projects by introducing electricity to irrigation pumps and unifying and expanding agricultural projects in the region, in addition to rehabilitating agricultural equipment mechanical.

As for the Six-Year Plan (77/1983), it focused on regional development and emphasized the role of agricultural institutions in raising agricultural productivity in existing projects. It also worked to introduce rice cultivation in the region, horizontal and vertical expansion of agricultural production, and encouraging cooperative agriculture. Sugar projects were also established during that period. In Kenana and Assalaya, it led to the development of the region through the development of industries that produce for export.

At the beginning of the 1980s, an agricultural policy was developed by the state based on mixed agriculture, with the aim of optimally exploiting the state's agricultural potential. Work was done to group the state's agricultural projects, which numbered (161),

into (18) projects served by one or more main pumping stations under the name of the Nile Foundation White agricultural. (Samir Muhammad, p. 134, 1998).

In the early nineties, the economic rescue program recommended selling and privatizing or changing the ownership of the White Nile Agricultural Corporation to mixed ownership, in addition to shifting from cotton cultivation to wheat cultivation in the agricultural projects located north of the city of Kosti. During this period, a decision was issued to dissolve the management of the White Nile Projects and handed over For farmers, the policy of privatization of the White Nile agricultural projects began with the establishment of farmers' companies for the period from 1995-1998, then after that the Agriculture Support Fund was established in the state, which began to manage and finance projects for the seasons from 1998-2005, then the work of the fund was frozen within the framework of the announced liberalization policy, and after It was funded directly to farmers in the 2005-2006 season. (Mohamed Abdalla, p). . 145. (2010)

Accordingly, these policies taken by the state since 1990, led to the deterioration of the White Nile agricultural projects, and negatively affected the performance of those projects and the development of the region as a whole, as the policy of privatizing these projects and dissolving the White Nile Agricultural Corporation led to a decline in production and productivity in these projects from year to year as a result. Due to the inability of farmers and their companies to finance agriculture, and the resulting reduction in the areas cultivated by these projects and the exit of some farmers from the production cycle and their professionalization in other professions, which ultimately led them to displacement and migration to major cities and work in marginal professions.

Looking at the planning of agricultural development in the state, we find an imbalance in development within the state, as development focused throughout this period on the West Bank of the White Nile, where cotton production in the irrigated sector is the main reason for this imbalance. At the end of the seventies, there was greater interest in the importance of industrialization in achieving development. The economic, was the establishment of sugar projects in each of Kinana and Asalaya, so those projects were the first beginnings of planning for industrial development in the state.

2-3-Planning for industrial development:

Planning for industrial development in the state has been linked since the fifties to the agricultural development policy, which is based on the production of cotton and exporting it abroad. The first stages of industrial development began with the establishment of cotton gins, textiles, and oil presses, Then came the most important stages of industrial development at the end of the seventies, which was the establishment of sugar industry projects, which were distinguished by this stage developed the industries that produce for export, which led to the growth and prosperity of the .region. (Mohamed Abdalla, .op.Cit,p 145. ((2010

1-2-3 - Sugar industry:

The idea of establishing sugar factories in the White Nile state came at the end of the seventies within the framework of the regional development plans in Sudan, with the aim of improving the people of the region and providing them with some necessary services, and in order to achieve economic and social development and the development of the region.

(A) Kenana Sugar Factory:

The factory is located in the White Nile State, near the city of Rabak, 350 km south of Khartoum, and about 1,200 km from Port Sudan. The design capacity of the factory is (330) thousand tons of sugar per year. It was also decided that the daily productivity when the factory reaches its maximum capacity will be about two tons of sugar. The factory's design capacity increased from (300) thousand tons in 2003 to about (420) thousand tons in 2004.

(B) Asalaya Sugar Factory:

The factory is located in the White Nile State, 280 km south of Khartoum, and about 10 km north of the city of Rabak. The factory began operating in 1980. Its design capacity is (110) thousand tons of sugar annually. The program prepared for the factory is to produce (30) thousand tons of sugar in the first stage, (60) thousand tons of sugar in the second stage, and (110) thousand tons of sugar, in the third stage, which is the design capacity of the factory.

(C) White Nile Sugar:

The idea of establishing the White Nile Sugar Project came to contribute to filling the market deficit of the sugar commodity, alongside the Kenana Sugar Company Limited and other sugar companies in the country. The project is considered one of the giant projects that are now being prepared for in Sudan.

The project is an Arab investment to produce (340) thousand tons of sugar annually, with the factory's daily capacity being (18) thousand tons of sugar. This is in addition to developing the project area economically and socially, providing many job opportunities, and supporting the state's trade balance.

Based on the above, the planning of industrial development in the state and the accompanying establishment of some industrial projects led to the development and development of the state. However, the heterogeneity in the growth of some industries in the state compared to the sugar industry suggests that some parts of this state are growing faster than others.

Based on the above, planning for development in the White Nile State, whether in the agricultural, industrial or service fields, witnessed various attempts, which began with the beginnings of colonial rule in the country. These attempts led to economic growth in the state that began with the development of industries that produce for the purpose of export, which contributed to the development of State through the development of the sugar industry.

Fourth Axis: Field Study Procedures:

It means the steps followed by the researcher in carrying out the field study according to the approach he chose. These procedures include determining the study population, how to choose samples, the size of the sample, and the tools used in collecting data, in addition to the methods of analyzing and presenting the data, and the details of that are as follows

1- Study population:

By using Judgment Sampling, or what is called (Purposive Selection), we limited the study population to the category of citizens who live in sugar projects in both Kenana and Asalaya, and the reason for this is due to the fact that the study mainly targets citizens who live in these projects, by virtue of their benefit from the social and economic services provided by the sugar projects, and therefore they represent the appropriate community that the study prefers to target.

2- Study sample:

A multi-stage stratified random selection method was used to arrive at the spatial sample items for the study for the following reasons:

(A) The residential complexes belonging to the sugar projects in the state are distributed over large areas around these projects and differ from each other in terms of population density, area, education levels, and the size of the distribution of service facilities.

(b) These residential complexes are differentiated in that they are divided into complexes for senior employees and complexes for workers.

3- Sample size:

Sample size means the number of units that the researcher must choose and collect data about. The spatial study sample consists of (8) spatial samples, with (4) spatial samples for each project representing the study population in both projects in Kenana and Assalaya.

Accordingly, the calculation of the sample size in each project is as follows:

$$3.1. \text{ size of sampling} = N = Z^2 \frac{\delta^2}{E^2}$$

whereas:

N = The size of the sample to be selected

Z^2 = standard value corresponding to a certain degree of confidence

δ^2 = the variance of the study population

E^2 = permissible margin of error.

And because the variance of the population under study is unknown, and as there are no previous studies, it is estimated by the binomial distribution as follows :(Ahmed Odeh bin Abdul Hamid and Mansour bin Abdul Rahman Al-Qasi, P. 488, 2002).

3.2. Variation of the study population $\delta^2 = n * pq =$

In order to obtain the largest sample size in each project, the value of (p) in the above equation was chosen to be 0.5, and therefore the value of (n) is equal to 0.5, and the value of (q) for the spatial sample is equal to 4

3.3. $\delta^2 = 4 * 0.5 * 0.5 = 1$

Therefore, the value of (z) from the standard normal distribution table, corresponding to a 95% confidence degree, is equal to 1.96, and the value of the marginal error (E) was chosen to be equal to 0.05.

3.4.
$$N = \frac{(1.96)^2 (1)}{(0.05)^2} = \frac{3.84}{0.05} = 76.8 \approx 77$$

Thus, the size of the sample to be selected in both projects in Kinana and Asalaya is about (154) families, with a rate of (77) families in each project.

4- Test the validity and reliability of the questionnaire:

Validity is the extent of success of the questionnaire paragraphs in measuring what it was intended to measure, so that the differences between the respondents' answers are real differences.

The stability of the questionnaire: it means obtaining the same results if applied more than once in similar circumstances, and to verify the stability of the questionnaire, the Alpha-Cronbach test coefficient was calculated to see the extent of compatibility and consistency in the (45) items of the questionnaire on a sample the stability of (145) families, where it was found that the questionnaire has relatively good stability coefficients, so the test result was (0.93), and therefore there is confidence in the respondents' answers, and as a general rule, the closer the test coefficient is to the correct one, the better the degree of stability.

Data analysis method:

To test the frequencies of the respondents' answers, whether they are in the negative direction or the positive direction, I use a chi-square test to test the goodness of fit. This means testing the extent to which a statistical sample matches a supposed statistical distribution. This test is based on comparing the observed (actual) frequencies of a random sample from the study population, with the expected frequencies, which we get from the assumed (theoretical) distribution.

We define the null hypothesis (Ho) as follows:

The sample under study follows a specific distribution: Ho

The alternative hypothesis (H1) is:

The sample under study does not follow this distribution: H1

In order to be able to conduct the test, we place the data of the sample under study in the form of a frequency distribution and compare the observed (actual) frequencies with the expected frequencies that we obtain from the hypothetical (theoretical) distribution. If the observed and expected frequencies are close, we accept the null hypothesis Ho, but if they are far apart, we reject the null hypothesis Ho, and thus we accept the alternative hypothesis H1.

Chi-square test = (X^2)

5-
$$X^2_V = \left(\frac{Q_i}{E_i} - E_i \right)^2 \sum_{i=1}^n \approx X^2$$

whereas:

Q_i = Frequencies seen (actual frequency of each answer

E_i = expected frequencies (expected frequency of each answer

n = The number of observed and expected repetitions

V = degrees of freedom.

We also get the degree of freedom = (number of answers in the question-1)

The probability value is what determines whether there are statistically significant differences between the expected and observed frequencies, by comparing the probability value to a significance level (0.05). If the probability value is less than (0.05), this means that there are differences between the observed frequencies and the expected frequencies, and in this case, we compare the arithmetic mean of the statement with the hypothetical mean. If it is greater than the hypothetical mean, this is sufficient evidence that the respondents agree with the statement. However, if it is less than the hypothetical mean, this is evidence that the respondents do not agree with the statement.

Testing hypotheses and interpreting results:

Using the chi-square test to test the study hypotheses, the probability value is what determines whether there are statistically significant differences between the expected and observed frequencies, by comparing the probability value to a significance level (0.05). If the probability value is less than (0.05), this means there are differences between the observed frequencies and the expected frequencies.

First hypothesis:

Local communities surrounding development projects are less fortunate in social development programmes.

1- Chi-square test:

Table No. (2) Results of the chi-square test for the second hypothesis.

Phrase	Value of chi square		Free dom	significance
	calculated	tabular		
Sugar projects implement social development programs that lead .to the stability and development of local communities	32.27	9.49	4	0.000
Sugar projects absorb a significant number of workers, which means they contribute to reducing the rate of migration of people .from the state to the center	58.82	9.49	4	0.000
Sugar projects are keen to provide activities in the areas of rural development and women's development in the region	38.82	9.49	4	0.000
Sugar projects in the state are concerned with improving the .environment in order to protect it and preserve its potential	18.13	9.49	4	0.001
There is satisfaction in society with the performance of development projects and the social and service programs they .provide	35.31	9.49	4	0.000

Source: Analysis of field study data using SPSS.

Note from the above table data:

The value of the chi-square like calculated in all statements related to the study hypothesis is less than the tabular value under the degree of freedom (4) and at a level of significance (0.05). This leads us to reject the null hypothesis and accept the study hypothesis that the local communities surrounding development projects are the least fortunate in social development programs. This hypothesis is supported by what some of the administrations of these projects indicated in an interview that these projects often focus their efforts in the field of providing social services to areas adjacent to the project within the administrative or local unit.

Second hypothesis:

The social services provided by development projects meet the desires and aspirations of local communities in the region.

1- Chi-square test:

Table No. (3) The Results of the chi-square test for the second hypothesis.

Phrase	Value of chisquare		Free dom	significance
	calculated	tabular		
Sugar projects take into account the needs of the surrounding community when developing social and service development .programs	24.35	9.49	4	0.000
There are social services that you would like to provide, but you see that the management of these projects has neglected or .failed to achieve them	63.79	9.49	4	0.000
The social services (education, health, water) provided by sugar .projects achieve the satisfaction of citizens in the region	33.31	9.49	4	0.000
Social services in the field of health care and health insurance for .citizens are available in the region	37.45	9.49	4	0.000
Sugar projects in the state are concerned with achieving profits (the economic aspect) without taking into account the social .aspects	68.41	9.49	4	0.000

Source: Analysis of field study data using SPSS.

We note from the above table data

The value of the chi-square like calculated in all statements related to the hypothesis of the study is less than the tabular value under the degree of freedom (4) and at a level of significance (0.05). This leads us to reject the hypothesis of the study and accept the null hypothesis that the social services provided by development projects (sugar projects) do not It meets the desires and aspirations of citizens in the region (health and therapeutic care services). Moreover, drinking water services in the areas of these projects have not been improved in the ways they are provided and their sources developed, as drinking water is still transported to citizens by animals and tractors.

The third hypothesis:

Social development programs and services provided by development projects in the state lack follow-up and evaluation.

1- Chi-square test:

Table No. (4) The results of the chi -square test for the third hypothesis.

Phrase	Value of chi square		Free dom	significance
	calculated	tabular		
There is oversight and follow-up from the Sugar Projects Administration to continue providing and improving social .services	50.69	9.49	4	0.000
There is a continuous evaluation of the performance of service facilities in the region from time to time for the purpose of .upgrading and developing them	35.45	9.49	4	0.000
There is interest in maintenance and cleaning operations to .improve the performance of service facilities in the region	49.79	9.49	4	0.000
Citizens' efforts in providing and upgrading services receive support and support from the authorities responsible for sugar .projects	60.07	9.49	4	0.000
The authorities responsible for sugar projects are keen to reverse the problems and difficulties that accompany the process of .providing social services to citizens in the region	51.03	9.49	4	0.000

Source: Analysis of field study data using SPSS.

We note from the data in the table above:

The value of the chi-square like calculated in all statements related to the study hypothesis is greater than the tabular value under the degree of freedom (4) and at a significance level (0.05). This leads us to reject the null hypothesis and accept the study hypothesis that social development programs and services provided by development projects (sugar projects) there is a lack of follow-up and evaluation process. This hypothesis is supported by what some of the departments of these projects indicated in an interview that most of the service projects that are implemented for the purpose of developing the region are finally handed over to the competent authorities in the state, such as the Water Supply Authority, the National Electricity Authority, and so on, depending on the type of project.

Analysis of the results:

The impact of economic and social of sugar projects in the state:

The impact of economic and social means the social development programs and services provided by sugar projects in the region to the villages and residential complexes surrounding the projects to advance the people of the region and improve the standard of living of the population, by providing educational opportunities, medical facilities, clean drinking water, and providing job opportunities.

In order for the researcher to be able to collect the primary information necessary to know the impact of economic and social development projects in the state, the researcher conducted a field study that included a number of villages in the two study areas (Kenana and Asalaiya), and used tools that the researcher believes are important to collect information.

First: Analysis of statements the economic situation of the individuals surveyed:

By presenting and analyzing the data of the questionnaire for the study sample of the sugar projects (Asalaya and Kinana), to know the impact of economic of these projects, we find that there is an improvement in the level of economic conditions for citizens in the region and that the implementation of these development projects in the state has created economic stability for the communities surrounding these projects, especially in the following areas:

- 1- Employment opportunities: We find large numbers of people from the state benefiting from job and employment opportunities in these projects, while others benefit from side jobs in these projects in the areas of (industry and agriculture) in order to increase the family's income, and thus reduce the rate of migration of the people of the state to the center.
- 2- Availability of public transportation services: which connects the area of these projects with the neighboring cities of the state, which helped the movement of citizens in the region and the recovery of commercial activity in the state's markets, due to the money these projects spend in the form of purchases for production and consumption.
- 3- Increase in income: We find that there is an increase in the level of family income as a result of providing job opportunities, and there is also an improvement in the standard of living of citizens through developing livelihood patterns in the areas adjacent to these projects compared to the situation prior to the establishment of these projects.
- 4- Education: There is an increase in educational opportunities for residents of the communities surrounding these projects, as we find, according to the study, that most school-age children in these areas go to school, as a result of the economic and social stability of these communities surrounding the development projects.
- 5- Women's work: We find that after the establishment of sugar projects, most women participate in their work outside the home, and this means that there is a change in the traditional role of women. They have become involved in the family's economy and supportive of it in many different aspects of life, and thus the establishment of these projects has brought about a qualitative shift in the life of women Rural, women in the region.

Second: Analysis of the social status statements of the individuals surveyed:

The data of the study showed that the social situation was not as it should be, as we find that the sugar projects in the state caused some environmental damage resulting from the wastes of the sugar industry that are drained into the White Nile, which is a major source of drinking water for many residents of the vicinity of the Nile, and these wastes have negatively affected On the quality and

quantity of fishing in the eastern bank of the Nile, and on the productivity of traditional agriculture (Al-jurouf) on the Nile shore, in addition to the environmental pollution in the project area resulting from the burning of sugar cane.

There are also some health damages and water-related diseases (schistosomiasis and malaria), and health care and treatment services in the region are not available and accessible to all citizens, as we find that most of the villages adjacent to these projects do not have health centers that provide health care and treatment services to citizens, but we find these projects. The provision of treatment services is limited to workers in these projects and their families only.

The Asalaya Sugar Project, for example, does not have a single hospital that provides therapeutic services to its workers and to the surrounding communities, and the majority of the residents of these villages adjacent to the project receive health care and therapeutic services in the cities near the project in Rabak, Al-Jazeera, Aba, and Kosti.

Moreover, the methods of providing drinking water services and developing their sources have not been improved, as drinking water is still transported in the areas of these projects by animals and tractors.

However, the study also showed that there was an improvement in the social and living standard of citizens after the establishment of sugar projects compared to the situation before the establishment of these projects. The establishment of these projects also helped stabilize the surrounding local communities through the implementation of programs for social development and services in the areas of education, especially women's education Eradicating illiteracy, increasing the number of educated women in the region and drinking water and lighting. However, some of these services, as we mentioned, are limited to those working in these projects only, with little of them returning to the rest of the residents of the neighboring region.

Results:

- 1- In the field of agricultural development, we find that the policy of privatization and the dissolution of the White Nile Agricultural Corporation has led to a decrease in production and productivity and a reduction in the areas cultivated in these projects from year to year as a result of the inability of farmers and their companies to finance agriculture, and the consequent departure of some farmers from the production cycle and their professionalism in other marginal professions.
- 2- The implementation of development projects (sugar projects) in the state helped stabilize the local communities surrounding these projects through the implementation of social and service development programs in the fields of education, public health, drinking water, and lighting. However, some of these services are limited to those working in these projects, with little return to the citizens Region.
- 3- The social services provided by sugar projects do not meet the desires and aspirations of citizens in the region, in the field of health care and therapeutic services, as in the field of drinking water services, the methods of providing them and developing their sources have not been improved, as drinking water is still transported in the areas of these projects with animals and tractors.
- 4- There is a deterioration in the social and service development programs provided by sugar projects as a result of their lack of follow-up and evaluation process by the administrations of these projects because most of the services that are implemented by these projects are finally delivered to the competent authorities in the state and are therefore not subject to the supervision and control of the administration of these projects.

Recommendations:

- 1- The privatization policies for White Nile agricultural projects must be reconsidered, because they did not achieve the desired results, and these projects must be rehabilitated so that they can carry out their previous role in developing the region and achieving economic and social stability for the citizens of the region.
- 2- The water aspect in the state is of great importance in addressing water problems in rural and remote areas of the Nile and in the areas of these projects and improving the way to provide clean drinking water to citizens in the region through establishing water treatment plants and delivering it to homes.
- 3- Considering the White Nile State, with its geography, natural resources, and current borders, as a developmental planning region specialized in the production and industry of sugar in Sudan, due to the availability of the basic components and elements for establishing this industry in the state.

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