

**SUDAN UNIVERSITY OF SCIENCE AND TECHNOLOGY  
COLLEGE OF GRADUATE STUDIES**

**ASSESSMNT OF THE EFFECTIVENESS OF COORDINATION OF  
AGRICULTURAL EXTENSION AND CREDIT SERVICES  
IN SUDAN:A CASE STUDY OF WHITE NILE  
AGRICULTURAL SERVICES PROJECT**

**A Thesis**

**Submitted in Fulfillment of the Requirements for the Ph.D. Degree  
in Agricultural Extension and Rural Development**

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# الآية

حَتَّىٰ إِذَا أَتَوْا عَلَىٰ وَادِ النَّمْلِ قَالَتْ نَمْلَةٌ يَا أَيُّهَا النَّمْلُ ادْخُلُوا مَسَاكِنَكُمْ لَا يَحْطِمَنَّكُمْ سُلَيْمَانُ وَجُنُودُهُ وَهُمْ لَا يَشْعُرُونَ (18) فَتَبَسَّمَ ضَاحِكًا مِّنْ قَوْلِهَا وَقَالَ رَبِّ أَوْزِعْنِي أَنْ أَشْكُرَ نِعْمَتَكَ الَّتِي أَنْعَمْتَ عَلَيَّ وَعَلَىٰ وَالِدَيَّ وَأَنْ أَعْمَلَ صَالِحًا تَرْضَاهُ وَأَدْخِلْنِي بِرَحْمَتِكَ فِي عِبَادِكَ الصَّالِحِينَ (19)

(سورة النمل)

## ***DEDICATION***

***This work is dedicated to the memory of my mother and father, and to my wife and my sons and daughters.***

## **ACKNOWLEDGEMENT**

I would like to express my sincere thanks and gratitude to Dr. Awadalla Mohamed Saeed, my intellectual supervisor, for his kindness, helpful guidance, constructive criticism and continuous encouragement which enabled me to complete this work.

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## **ABSTRACT**

This study was conducted to assess the effectiveness of the coordination of extension and credit services for agricultural development in the IFAD-supported White Nile Agricultural Services Project (WNASP). WNASP aims to improve agricultural services to small-scale farmers and rural women through the rehabilitation of selected agricultural schemes in White Nile state.

The study focused on the relationship between the Agricultural Bank of Sudan (ABS) and the Farmer's Commercial Bank (FCB) as agricultural credit institutions and agricultural extension agents in the project area in the delivery of their services to farmers participating in company, cooperative and private farm operations. The aims were (1) to investigate the impact of credit services on farmers' productivity, (2) to explore the nature of supervision and follow up of agricultural credit programmes, (3) to examine the role of agricultural extension within the credit supply programmes, and (4) to assess farmers' attitudes toward credit supply services.

The research employed primary data that were collected by means of structured interview schedules, field observations, and meetings with project personnel. Secondary data were collected from WNASP documents, books, research publications, theses, scientific journals and internet sources.

The data collected were processed and analyzed to generate frequency distribution tables, percentages and graphs for comparative analysis of access to extension and credit services by company, cooperative and private farmer groups. The analysis also involved use of t-tests for assessing the significance

of observed differences between company, cooperative and private farmers in terms of the study variables. Analysis results were used to evaluate the supervision and follow up roles of credit institutions and agricultural extension agents relating to use of credit funds by farmers in the project area.

The conceptual model employed in this study has three components, which are related to the role of agricultural credit institutions and agricultural extension in supervision and follow up of credit services for the different agricultural operations and to farmers' attitudes toward acquiring and using of inputs supplied by agricultural credit banks for different agricultural production operations.

The study concluded that farmers have only little of the knowledge and skills needed for efficient use of the received inputs, and most of the farmers were facing many agricultural uncertainties, which affect their ability to repay loans. Also the study revealed a real problem related to inadequacy of the amounts and timing of the input supply services provided by ABS and FCB, which affected agricultural production negatively. There was complete absence of medium and long-term loan services. The research revealed that agricultural credit banks supply farmers only with short-term loans. The majority of farmers were not able to benefit from agricultural credit services, as most of them have no assets to provide as guarantees for loans repayment.

It was revealed by the study that farmers spend considerable amounts of their borrowed money in meeting the expenses of family consumption needs and social occasions. That explains why most farmers prefer to acquire loans individually.



The study revealed that farmers have positive attitudes toward extension agents and negative attitudes toward bank agents concerning transfer of agricultural information and training related to different agricultural practices. They prefer to be supervised by extension agents rather than by bank agents. It was found that bank agents could transfer adequate amounts of credit information to farmers, while extension agents could not. This finding suggests a need for training of extension agents in agricultural finance and institutional loaning procedures.

It was also found that farmers find great difficulty in understanding the *salam* system of Islamic agricultural finance. The Barriers that face access to credit by farmers were found to be the complicated credit supply procedures. Most of farmers are also aware about the harsh measures that banks take against farmers who fail to repay loans, and because of that they tend to be apprehensive about applying for getting loans from agricultural finance institutions.

The study recommended that agricultural institutions should adopt policies that facilitate small farmers' access to production credit and to household consumption loan funds as well, and that loans should be made on individual bases and with close institutional supervision. Farmers should also be provided with opportunities to receive medium and long-term loans. The study also recommended that agricultural institutions should arrange to supply farmers sufficiently and timely with agricultural inputs, and to strengthen their credit supervision units. It is recommended that agricultural credit services be accompanied by educational efforts of general and technical nature to make farmers aware about credit risk problems, how to acquire credit funds and

how to use credit funds efficiently for agricultural production purposes. This requires involvement of extension agents in agricultural credit programmes

The research highlighted the importance of establishing effective coordination between agricultural credit and extension institutions in the Sudan.

## الخلاصة

أجري هذا البحث لدراسة فعالية التنسيق بين خدمات التمويل والإرشاد الزراعي لإغراض التنمية الزراعية بمشروع النيل الأبيض للخدمات الزراعية و هو أحد المشاريع الممولة بواسطة الصندوق الدولي للتنمية الزراعية التي تهدف إلي مساعدة صغار المزارعين وتنمية المرأة من خلال تأهيل مشاريع زراعية مختارة.

أستخدم في البحث أسلوب المقارنة لتقييم العلاقة بين البنك الزراعي السوداني وبنك المزارع التجاري والإرشاد الزراعي والمزارعين داخل و خارج مشروع النيل الأبيض للخدمات الزراعية المتمثلين في فئاتهم الثلاث (المزارعون بمشاريع الشركات و المزارعون بمشاريع التعاونيات الزراعية و المزارعون في المزارع الخاصة) بهدف استقصاء تأثير خدمات التمويل و الإرشاد الزراعي على إنتاجية المحاصيل . وأيضا اكتشاف مدي المتابعة والإشراف وتنفيذ برامج التسليف الزراعي، كما ان الدراسة هدفت إلي معرفة اتجاهات المزارعين نحو الخدمات التمويلية المقدمة من بنوك التسليف الزراعي .

استخدم البحث المصادر الاولية لجمع المعلومات والتي تمثلت في الاستبانة الميدانية ، الملاحظة الموضوعية ، المقابلات مع العاملين بالمشروع . بينما تم جمع المعلومات من المصادر الثانوية من الكتب والإصدارات البحثية ، والبحوث السابقة ، والمجلات العلمية وشبكة المعلومات لقد تم إجراء العمليات الإحصائية المتنوعة لتحليل المعلومات الاولية التي جمعت بواسطة البحث حيث تم استخدام الجداول التكرارية والنسب المئوية واختبار ت والرسم البياني وذلك لمعرفة تأثير المتغيرات المختلفة وأجراء المقارنات بين مجموعات المزارعين الثلاثة (شركات – تعاونيات – قطاع خاص) داخل وخارج مشروع النيل الأبيض للخدمات الزراعية لبيان دور مؤسسات التمويل والإرشاد الزراعي في الإشراف ومتابعة طلب واستخدام القروض الزراعية والعمليات الإنتاجية . النموذج النظري الذي تم استخدامه في هذه الدراسة ذو ثلاث مكونات مرتبطة بدور التمويل والإرشاد الزراعية في الإشراف ومتابعة خدمات التمويل في مختلف مراحل العمليات الزراعية بجانب معرفة اتجاهات المزارعين المرتبطة بطلب واستخدام القروض الزراعية .

خلص البحث إلى أن معظم المزارعين تنقصهم المعرفة و المهارات المطلوبة للتعامل مع خدمات التمويل و الإستخدام الأمثل للقروض المقدمة لهم، و يعانون من المخاطر الزراعية التي تعيق مقدراتهم لسداد القروض، وأيضاً وجد أن البنوك لا تقوم بتسليم المزارعين التسليف العيني في المواعيد المثلى وبالكمية المطلوبة مما كان له الاثر السلبي علي الإنتاج الزراعي، و هنالك غياب لخدمات التمويل متوسطة و طويلة المدى، و تنحصر خدمات التمويل في التسليف قصير المدى، و تبين أن معظم المزارعين غير قادرين علي الاستفادة من خدمات التمويل، حيث أنهم في معظمهم لا يمتلكون الضمانات المطلوبة للحصول على خدمات التمويل.

ولقد أوضحت الدراسة ان عدداً كبيراً من المزارعين يستخدم جزءاً معتبراً من أموال القروض الزراعية في توفير المستلزمات الأسرية و نفقات المناسبات الإجتماعية، و ربما يكون هذا هو السبب في تفضيلهم للحصول على القروض بصورة شخصية.

خلصت الدراسة أن معظم المزارعين لهم اتجاهات موجبة نحو قيام المرشدين بدور نقل المعلومات الزراعية وتدريب المزارعين و لهم إتجاهات سالبة نحو قيام وكلاء البنوك بنفس تلك المهام . و بينت الدراسة إن معظم المزارعين يفضلون قيام المرشدين بمهام متابعته إستخدام القروض الزراعية على مستوي الحقل. و هذا يشير لأهمية تدريب المرشدين في التمويل الزراعي و إجراءات التسليف المؤسسي.

و تبين أن المزارعين يجدون صعوبة كبيرة في فهم الصيغ الإسلامية للتسليف الزراعي خاصة السلم، و أن من أهم المعوقات التي تواجه المزارعين في عملية الحصول علي القروض هي الإجراءات الإدارية الطويلة المعقدة المرتبطة بالحصول علي القرض، و تبين أنه تتوفر الدراية لدى المزارعين بالاجراءات القانونية التي تتخذها البنوك ضد المعسرين مما سبب للمزارعين نوع من التخوف ولأحجام من التعامل مع بنوك التسليف الزراعي.

أوصت الدراسة ضرورة إن تتيح البنوك الفرصة للمزارعين للحصول علي سلفيات الإنتاج و والسلفيات الاستهلاكية بتبسيط الاجراءات والضمانات المطلوبة مع ضرورة توفير السلفيات متوسطة وطويلة الأجل لصالح المزارعين . كما أوصت الدراسة بضرورة مد المزارعين بالمخلات الزراعية بالكمية والتوقيت المناسبين . علي مؤسسات التمويل الزراعي إنشاء وحدات إشراف تمويلي للمساعدة في مراقبة ومتابعة القروض بالتضامن مع الإرشاد الزراعي . كما أوصت الدراسة أيضاً

بضرورة أن يلعب الإرشاد الزراعي الدور الفعال في المتابعة والإشراف علي القروض في مستوى  
الحقل بجانب نشر المعلومات عن التقانات الحديثة والمشاركة في تدريب المزارعين .  
أبرزت الدراسة أهمية تنسيق بين مؤسسات التمويل الزراعي والإرشاد الزراعي بالسودان

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## LIST OF ABBREVIATIONS

ABS	Agricultural Bank of Sudan
AWPB	Annual work plan and budget
AOAD	Arab Organization for Agricultural development
CARE	Cooperative for Assistance and Relief Everywhere
FCB	Farmer Commercial Bank
GO	Government organization
IFAD	International Fund for Agricultural Development of the United Nations
NGO	Non- governmental organization
SMS	Subject Matter specialist
T & V	Training and Visit System
USAID	United States Agency for International Development
VEA	Village Extension Agent
WNASP	White Nile Agricultural Services Project
WNAS	White Nile Schemes
PUMs	Project Management Units
AWPB	Annual Work Plan Budget
SPSS	Statistical Package for the Social Sciences
SMCRE	Source, Message, Channel, Receiver, Effect
FSR	Farming System Research
Rs	Risk, Return, Repayment

