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## **A Study on the Challenges of Electronic Voucher System in Supporting Farmers to Generate Household Income (A Case Study of Chipata District, Eastern Province)**

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### **ABSTRACT**

In order to improve the agricultural sector in Zambia, Government in 2002 introduced the Farmer Input Support Program whose main aim was to increase small scale farmer's access to agricultural inputs. However in 2015/2016 farming season, Government through the ministry of Agriculture moved away from the conventional FISP and introduced an electronic voucher system which widened the target inputs farmers were allowed to purchase. The main objective of this study was to find assess the challenges of the electronic voucher system in supporting household Income. Data was collected using questionnaires composed of closed questions. The study used questionnaires to gather information in line with the objectives of the study. This study used descriptive survey design. Descriptive survey designs are used when the objectives are systematic or descriptive of facts and characteristics of a given population or area is factual and accurate. A sample size of 50 smallholders was selected from Chipata district of the eastern province. The following were the findings of the study: Inconsistent supply of inputs and sometimes fertilizers arriving earlier than seed, delays in input supply, Network failures on the POS machines, Delay by government to credit the Agro-Dealers bank accounts, Lack of monitoring and evaluation of the e-voucher system., Inadequate supply of farm input.

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Keywords : Electronic voucher system, Farmers, Household income

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### **INTRODUCTION**

The Zambian agriculture sector comprises crops, livestock, and fisheries. There are three broad categories of farmers: small-scale, medium, and large-scale. Small-scale farmers represent the vast majority (approximately 90 percent) of Zambia's agricultural producers and are generally subsistence producers of staple foods with occasional marketable surplus. Domestic production is comprised of crops such as maize, sorghum, millet, and cassava while exports are driven by sugar, soybeans, coffee, groundnuts, rice, and cotton as well as horticultural produce. Zambia covers 75 million hectares (752,000 km<sup>2</sup>), out of which 58 percent (42 million hectares) is classified as medium-to high-potential for agriculture production. However, only 15 percent of this land is currently under cultivation. Zambia has ample water resources but has done little to exploit them via investments in irrigation systems, and the majority of farms remain dependent on rain-fed growing cycles.

Poverty continues to be the greatest challenge Zambia is facing today. The average national poverty level is estimated at 64%, while in rural areas it is at 80% (Living Conditions, monitoring and Surveys-LCMS). The highest levels of poverty are in rural areas and agriculture is the most important economic activity that provides livelihood and income for most rural communities. The support of the agricultural sector has been identified as a priority by the government and the rural communities to reduce poverty and enhance household security.

In order to improve the agricultural sector in Zambia, Government in 2002 introduced the Farmer Input Support Program whose main aim was to increase small scale farmer's access to agricultural inputs. However in 2015/2016 farming season, Government through the ministry of Agriculture moved away from the conventional FISP and introduced an electronic voucher system which widened the target inputs farmers were allowed to purchase.

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### **METHODOLOGY**

The purpose of undertaking this study was to find out the Key challenges of E-voucher system in supporting farmers to generate household Income. In order to fulfill this purpose, the study followed a strict scientific methodology concerning research design, research methods, sampling technique, method of analysis and the limitation to the study. These items are further elaborated case by case in this chapter.

### 1. Research Design

A survey research design was used in this study. A survey is a research method used for collecting data from a predefined group of respondents to gain information and insights into various topics of interest. This design served as a valuable tool for assessing the Farmers challenges of E-Voucher system. This design is low cost and one can easily access information.

### 2. Research Instruments

The researcher prepared a standard questionnaire and administered to smallholders who had been registered to use the FISP E - Voucher system in Chipata district.

### 3. Sampling Technique

A purposive and simple random sampling technique was used. Purposive sampling was used as the Farmers of E-Voucher System holders were of interest after which random sampling was used to randomly select which ones will be used in the research.

### 4. Sample Size

The number of items selected from the population constitutes the sample size. A sample size of 50 was taken.

### 5. Research population

The study focused on agri-business and targeted smallholder farmers in Chipata District, Eastern province. Therefore the population provided data and information relevant to the study.

### 6. Types and sources of data

In order to achieve the objectives of the research, two types of data were collected. These being primary and secondary data:

#### a. Primary data

Primary data was collected using a self-administered questionnaire. The questionnaire contained closed ended questions.

#### b. Secondary data

Secondary data was sourced from Ministry of Agriculture, Radio Breeze E-Voucher program, internet; literature from published records was also used to support the research.

### 7. Economic Activities

The economy of Chipata is agro- based with maize, cotton, tobacco and groundnuts being the main cash crops. Tobacco and Cotton are the two main cash crops which are exported to other countries.

### 8. Location and Size

Chipata city is located in the eastern part of Zambia and is the capital of eastern province. As of the 2010 Zambian census, the district had a population of 455,783 people. The 2019 projected population for Chipata stands at 554,230 people. Chipata city is located about 580KM from Lusaka, the capital city of Zambia, while it is 145KM from Lilongwe, the capital of Malawi.

## DATA ANALYSIS

The research yielded the following data:

**TABLE 1.0: AGE OF THE RESPONDENTS**

S.No.	Particulars	No of Respondents	Percentage (%)
1	Below 30 years	11	22
2	31-40 years	21	42
3	41-50 years	15	30
4	Above 50 years	3	6
	<b>Total</b>	<b>50</b>	<b>100</b>

The information displayed in the table above concluded that most of the respondents were between the age of 31 and 40 years old representing 42% with 6% of the respondents above 50 years old.

**TABLE No. 2.0: LEVEL OF EDUCATION ATTAINED**

S.No	Particulars	No of Respondents	Percentage (%)
1	Not been to school	9	18
2	Primary School	21	42
3	Secondary School	15	30
4	Tertiary Education	5	10
	<b>Total</b>	<b>50</b>	<b>100</b>

The majority of respondents had obtained Primary Education representing 42% while 10% are those with Tertiary Education.

**TABLE 3.0: MONTHLY INCOME OF RESPONDENTS**

S.No	Particulars	No of Respondents	Percentage (%)
1	Less than K5,000	31	62
2	K5,000-K10,000	19	38
3	Above K10,000	0	0
	<b>Total</b>	<b>50</b>	<b>100</b>

The above table shows that 62% of the respondents had Income Less than K5, 000 and 38% represents those with Income between K5, 000 and K10, 000.

**TABLE No: 4.0: FARMER CATEGORY OF RESPONDENTS**

S.No	Particulars	No of Respondents	Percent (%)
1	Small scale	41	82
2	Medium scale	9	18
3	Large scale	0	0
	<b>Total</b>	<b>50</b>	<b>100</b>

The above table shows that 82% of the respondents were small scale farmers while 18% are medium scale farmers.

**TABLE 5.0: SIZE OF FARM**

S.No	Particulars	No of Respondents	Percent (%)
1	Less than a hectare	10	20
2	1-2 hectares	24	48
3	3-5 hectares	13	26
4	Above 5 hectares	03	06
	<b>Total</b>	<b>50</b>	<b>100</b>

Table 5.0 shows that 48% of the respondents owned pieces of land of 1-2 hectares and 6% had pieces of land of 5 hectares and above.

**TABLE 6.0: DURATION OF TIME IN FARMING**

Sr.No	Particulars	No of Respondents	Percentage (%)
1	Less than 3 years	03	06
2	4-7 years	16	32
3	Above 8 years	31	62
	<b>Total</b>	<b>50</b>	<b>100</b>

The table shows that 62% of the respondents have been in farming for than 8 years while 32% have been farming for the period 4 to 7 years and just 6% were in farming for a period of less than 3 years.

**TABLE 7.0: CROPS CULTIVATED BY RESPONDENTS**

S.No	Particulars	No of Respondents	Percentage (%)
1	Maize	47	96
2	Groundnuts	03	06
3	Soya beans	00	00
4	Any other	00	00
	<b>Total</b>	<b>50</b>	<b>100</b>

The Table shows that 96% of the respondents cultivated maize while 6% cultivated groundnuts.

**TABLE 8.0: RESPONDENTS DEPENDENTS**

Sr.No	Particulars	No of Respondents	Percent (%)
1	Below 5 people	12	24
2	5- 10 people	37	74
3	Above 10 people	01	02
	<b>Total</b>	<b>50</b>	<b>100</b>

The information from Table 8.0 shows that 74% of the respondents had 5-10 dependents and 2% had 10 and above dependents.

**TABLE 9.0: PURCHASED INPUTS TIMELY**

S.No	Particulars	No of Respondents	Percent (%)
1	Yes	43	86
2	No	07	14
	<b>Total</b>	<b>50</b>	<b>100</b>

The information from Table 4.10 shows that 86% of the respondents purchased their inputs timely and 14% did not purchase the inputs timely.

**TABLE 10: LOW COST WITH E-VOUCHER**

Sr. No	Particulars	No of Respondents	Percent (%)
1	Yes	42	44
2	No	8	56
3	Not sure	0	0
	<b>Total</b>	<b>50</b>	<b>100</b>

The Table shows 56% were not in support of FISP E-Voucher system lowering cost of inputs while 44% were not in support of FISP E-Voucher system lowering the cost of input.

**TABLE 10: TYPE OF LABOUR USED**

Sr. No	Particulars	No of Respondents	Percent (%)
1	Family Labor	28	56
2	Hired Labor	05	10
3	Both Family & Hired Labor	17	34
	<b>Total</b>	<b>50</b>	<b>100</b>

Table 10 shows 56% of the respondents used family labor while 34% used both Family and Hired labor with 10% using Hired labor.

**TABLE No: 4.13: AMOUNT PAID ON HIRED LABOR**

Sr. No	Particulars	No of Respondents	Percent (%)
1	Less than K5,000	38	76
2	K5,000-K10,000	12	24
3	Above K10,000	00	00
	<b>Total</b>	<b>50</b>	<b>100</b>

The Table shows 76% paid less than K5, 000 on hired labor while 24% paid between K5, 000 and K10, 000.

**TABLE 11: MARKET AVAILABILITY**

Sr. No	Particulars	No of Respondents	Percent (%)
1	Yes	49	98
2	No	01	02
	<b>Total</b>	<b>50</b>	<b>100</b>

From the Table above we can deduce that 98% of the respondents had the market readily available for their farm produce while 2% had no market readily available.

**TABLE 12: DO YOU SELL YOUR FARM PRODUCE**

Sr. No	Particulars	No of Respondents	Percent (%)
1	Yes	27	54
2	No	23	46
	<b>Total</b>	<b>50</b>	<b>100</b>

Table 12 shows 54% of the respondents who sold their farm produce while 46% did not sell their farm produce.

**TABLE 13: BAGS OF MAIZE SOLD TO FRA**

Sr. No	Particulars	No of Respondents	Percent (%)
1	1-50 bags	39	54
2	50-100 bags	9	46
3	100-150 bags	2	0
4	Above 150 bags	0	0
	<b>Total</b>	<b>50</b>	<b>100</b>

Table 13 shows 54% of the respondents who sold between 1 to 50 bags of Maize to FRA and 46% sold between 50 and 100 bags.

**TABLE 14: MAIZE SOLD TO THE OPEN MARKET**

Sr. No	Particulars	No of Respondents	Percent (%)
1	Yes	9	54
2	No	41	46
	<b>Total</b>	<b>50</b>	<b>100</b>

From the Table above we can conclude that 54% of the respondents sold their Maize to the open market and 46% did not sell any maize to the open market.

**TABLE 15: CHALLENGES WITH E-VOUCHER SYSTEM**

Sr. No	Particulars	No of Respondents	Percentage (%)
1	Late delivery of inputs	22	44
2	Network failures with POS	16	32
3	Delay by GRZ to credit Agro-Dealers Bank A/c	12	24
	<b>Total</b>	<b>50</b>	<b>100</b>

The Table shows 44% of the respondents expressed late delivery of inputs as the challenge faced with FISP E-Voucher, with 32% pointing out network failures and 24% sitting delay by government to credit the agro dealer's bank account.

**TABLE 16: FISP E-VOUCHER SYSTEM RATINGS**

Sr. No	Particulars	No of Respondents	Percentage (%)
1	Very good	12	24
2	Good	31	62
3	Fair	7	14
4	Bad	0	0
	<b>Total</b>	<b>50</b>	<b>100</b>

The Table shows 62% of respondents rating FISP E-Voucher system as good, while 24% rated it as very good. 14% of the respondents felt the system was fair.

**TABLE 17: OTHER MEANS OF SECURING INPUTS**

Sr. No	Particulars	No of Respondents	Percentage (%)
1	Yes	0	0
2	No	50	100
	<b>Total</b>	<b>50</b>	<b>100</b>

From the Table above we can deduce 100% of the respondents did not have other means of securing inputs apart from FISP E-Voucher system.

## FINDINGS

From the data collected and analysed, it was found that there was:

- Inconsistent supply of inputs and sometimes fertilizers arriving earlier than seed.
- Delays in input supply.
- Network failures on the POS machines.
- Delay by government to credit the agro-dealers bank account.
- Lack of monitoring and evaluation of the e-voucher system.
- Inadequate supply of farm inputs

## SUGGESTIONS

It was there for suggested that:

- Government through the ministry of Agriculture must ensure that preparations of the farming season should start early.
- Proper equipment and software should be used to avoid network failures on the POS machines.
- Government through the ministry of Agriculture must ensure that the funds are readily available and Agro-Dealers Bank Account is credited timely.
- Government through the Ministry of Agriculture should continue to monitor the e-voucher system in all parts of Chipata district.
- Government must ensure that measures are put in place in order to have adequate and a wide range supply of farm inputs

## CONCLUSION

The study objective and research question were to investigate the key management challenges on e-voucher system in supporting farmers and to find out what the farmers' view was on e-voucher. The research has answered the research question, thereby fulfilling the study objective. To some extent the e-voucher system has not been managed properly going by the responses alluded to in the findings. The e-voucher system requires more time in mitigating the challenges that have been noted in the discussions.

The sample size was not large enough for the study to generalize the findings, the study has provided the insight of what is obtaining. A larger sample size covering the entire eastern province is definitely helpful to provide comprehensive suggestion to policy makers.

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