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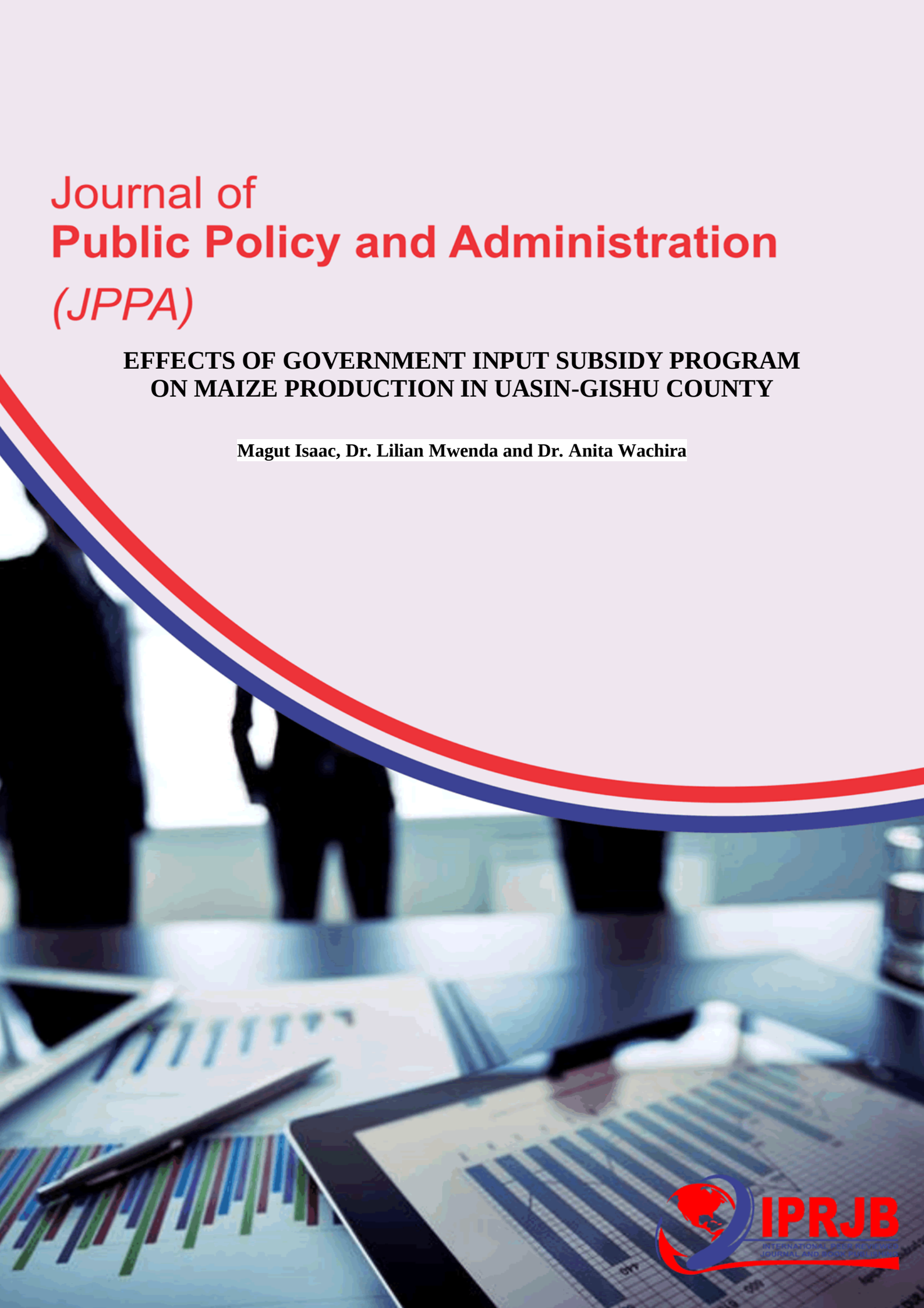

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EFFECTS OF GOVERNMENT INPUT SUBSIDY PROGRAM ON MAIZE PRODUCTION IN UASIN-GISHU COUNTY

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Abstract

Purpose: Food shortage witness in the Kenya has continued regardless of the government effort to reverse the situation through various interventions put in place, compelling the government to resort to importation as a means of plugging off the deficit. It is against this that the study focus on the effects of government input subsidy program as one of the government interventions on maize production and The study was based on social protection theory by United Nation Institute of Research and Social Development (UNIRSD).

Methodology: The study adopted descriptive research design and utilized a sample frame of 396 respondents who were purposively sampled from a population of 40000 active maize farmers within Uasin Gishu County comprising of both small and large scale farmers registered by county agricultural office. The sample size was further shared among the three Sub counties namely; Eldoret West, Wareng and Eldoret East based on their proportionate population of farmers. The data was collected by use of questionnaires. The researcher collected quantitative data by use of questionnaires and analyzed by use of descriptive statistics and the relationships between the independent variables and dependent variable was established by use of regression analysis both multi and linear regression statistic techniques. Statistical package for social science (SPSS) Version 24 software was used to analyze quantitative data and outcome presented inform of graphs, pie charts and tables.

Findings: The study established that there was significant positive relationship between government input subsidy program (R2=31.7%, F= 166.050% and P-Value= 0.000). The study concludes that government input subsidy program has a significant positive relationship effect on maize production as depicted by a significant p-value of 0.000.

Unique contribution to theory, practice and policy: The study recommends that the government should ensure farmers get farm inputs in time and at reasonable price in order to enable them produces more maize.

Key Words: *Government Input Subsidy Program, Maize Production*

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1.0 INTRODUCTION

Globally, maize production is approximately 875 million metric tons with United States of America (USA), China, and Brazil contributing 63% of the total production (FAO, 2012). This Makes maize a second cereal crop in terms of production worldwide after wheat as indicated in the figure 1:1 below and substantially a contributor of the world traded cereal grain, food, livestock feeds and industrial (Pingali, 2001; FAO,2009).

Maize is currently utilized in animal feeds production, human consumption as source of carbohydrates, alcohol and fuel production (Mueller, Gerber, Johnston, Ramankutty & Foley, 2012). However, 13.6% of the world population remains food insecure and majority of them lives in the developing countries, underscoring its importance in attainment of food sufficiency by these countries (FAO, 2010; Orhum, 2013). Consequently, in addressing sustainability on maize sufficiency among other agricultural products and rural development, strategies formulated by world economies do factor in the following; people, institutions, knowledge and environment (Food and Agricultural Organization (FAO), 2012).

In realizing high maize production, different countries globally are currently pursuing various interventionist strategies, for instant China introduced various interventions aimed at making the country 95% self-sufficient in major cereals. They included; formulation of policies that support grain production, development of marketing and logistics systems, grain reserve policy and support for development of grain processing industries (Information Office of State Council, 2008). China further encourages maize cultivation through incentives such as export subsidies and tax refunds in order to lower export prices and enable locally produced maize to effectively compete in the world market (USDA, 2014). In addition, it registered success in maize production through adoption of science, technology, and agricultural policy reform (Huang & Rozelle, 2006). The strategies employed by Chinese government were further supported by subsidization and grants to various agricultural programs undertaken to improve maize production (Gale, 2013, Gamett & Wilkes, 2014), and abolition of agricultural taxes and levies (Huang, Wang, Zhi, 2011; Huang**,** Wang & Rozelle, 2013).

In Kenya, yields have remained at an average of 2 tons per hectare below the possible 6 tons per hectare, due to poor absorption of modern production technologies such as high yielding maize varieties and fertilizers. The poor absorption observed is as a result of high costs of inputs, lack of access to credit and inadequate extension services to small-scale producers, besides poor rural infrastructure, insufficient budgetary allocations and limited private sectors role in maize subsector, as well as liberalized maize market (Republic of Kenya, 1997; 2004; 2008; Kangethe, 2004). The uncertainties surrounding the availability and quality of seeds, somehow forced some farmers to rely on seeds selected and prepared locally (Oduor, 2010).

Similarly, lack of access to timely and accurate market information, access to storage facilities, poor transport networks exposed farmers to poor prices and high post-harvest storage losses. Liberalization and privatization of trade in Kenya led to dismantling of market services that were once available to rural farmers (Republic of Kenya, 1997; 2004; 2008). The situation prompted the government of Kenya to initiate macroeconomic, legislative and institutional reforms, infrastructure development in 2003 aims at revitalizing the sector as part of the country's economic blue print on recovery, creation of wealth and employment, eradication of poverty and achieving food security. These reforms coincided with the conception of vision 2030, which encouraged commercialization of subsistence agriculture as a means of realizing vision's objectives under economic pillar (The Republic of Kenya,

2003b; 2004; 2008). The following were identified as key in attainment of maize sufficiency, price incentives, complementary interventions such as good infrastructure, household access to information, extension services, credit availability and improved technology. The use of purchased seeds among small-scale maize producers in Kenya is low due to high costs of hybrid seeds (Republic of Kenya, 2009c).

Statement of the Problem

Countries both in Africa and outside have been implementing various interventions in a bid to increase productivity in the maize subsector, which have resulted to drastic increase in maize production as witnessed in countries such as Malawi and Zambia. Like its peers Kenya has been implementing interventions to improve maize production as a medium of food security and to ensure that the country becomes food sufficient. However, despite the effort by the government, the country has continued to face with food shortage where approximately 1.3 million people as by 2017 are faced with hunger, forcing the government to rely on imports from international markets and neighboring countries to plug off the deficit which eventually sustain negative trade of balance between export and imports . Thus, threatening its pursuit for agenda 2030 as outlined in UN SDGS of eradicating hunger and poverty by year 2030 and achieving sustainability in food sufficiency as stated in the big four agenda. This has further led to deterioration of balance of trade as revealed by Kenyan Economic Survey of 2018 and World Bank group updates as witnessed in 2017 due to increase imports than export occasioned by high maize importation among others products. The sub-optimal maize production further indicated a failure by the country to realize its short and medium term goals as enshrined in the vision 2030 of commercializing subsistence farming in order to realize the overall vision's goals under economic pillar and food security through actualization of the big four agenda on food. Kenya also has been facing a decline in food security occasioned by high prices and decline food supplies in the market as outline by world food program in its recent famine early warning reports indicating a gap in country's intervention strategies to attain food sufficiency. Therefore, the study aimed at assessing the effects of government input subsidy programs on maize production in Uasin-Gishu County.

2.0 LITERATURE REVIEW

Theoretical Framework

This study focused on Social Protection theory by United Nation Research Institute and Social Development (UNRISD) that prescribed a broad range of public and private instruments necessary to tackle the challenges of poverty, vulnerability and social exclusion (European Union Directorate of International Cooperation and Development,2015). It serve as yardstick in mitigating vulnerability as they occur across the human life cycle, maintain dignity, promote the rights of individuals and contribute to pro-poor and inclusive economic growth through building human capital and enabling poor people to increase their participation in economic development agenda of the country. It is a specific target of the 2030 agenda under the sustainable development goal (SDG) poverty eradication and a key strategic tool for realizing other related goals such as ending hunger achieving food security and reducing overall inequalities and promotion of sustainable agriculture among others (FAO,2016).

The theory has four fundamental roles first being prevention instruments, which pre-empt adverse risk-coping strategies such as unemployment, while protective instruments relieve

from shocks such as economic and social deprivation arising from among others food insecurity. The promotion roles of the theory aim at improving well-being of the people and most world economies adopt this instrument to mitigate future eventualities such as hunger through various interventional programs such as, subsidization of farm inputs to improve production of staple food such as maize (Devereux & Sabates-Wheeler, 2004). It entails supporting enhance production and development of markets particularly increasing prioritization on support for small scale rural farmers resilience building on their economic and production capacity (FAO, 2017). Therefore, social protection is a fundamental in both poverty eradication and rural transformation. Consequently, the theory is integral in ensuring food security, agriculture, poverty eradication and rural development through stabilizing income by mitigating on seasonal stress, management of risks and insuring against shocks.

Conceptual Framework

Conceptual framework is a diagrammatic presentation of a theory and is presented as a model when research variables and the relationship between them translate into a visual picture to illustrate the interconnections between the independent, intervening and dependent variables. The conceptual framework is the scheme of concepts this study will use to achieve the set objectives. The researcher conceptualizes that the dependent variable of this study will be maize productions while the independent variable was government input subsidy programs

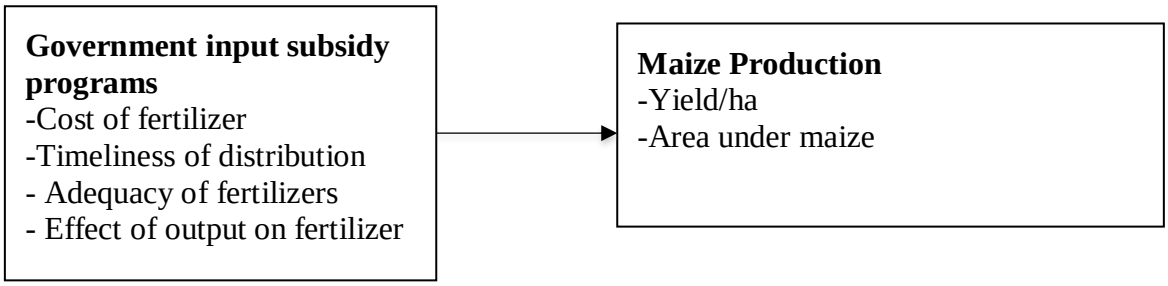

Figure 1: Conceptual Framework

Empirical Framework

Government input subsidy programs

Herath, Gunanardena and WickramaSinghe, (2013) carried out the study on the impact of "Kethata Aruna" fertilizer subsidy program on fertilizer use and paddy production in Sri Lanka. Secondary data from government institutions between 1981 and 2009 were used. One of the objectives of the study was to investigate factors affecting paddy production and the amount of fertilizer used, sown extent and technological improvements on the paddy production were analyzed. The data obtained were graphically and statistically analyzed to determine the trends and relationships of different parameters on the national paddy production. The results indicated that 88% of the variations of the national paddy production were explained by combined effect of total fertilizer, sown extent and the technological improvement. The relationship was significant at 5% probability level. The co-efficiencies of variation represent the elasticities, therefore 1% increases of the total fertilizer results to a 0.109% increase in total national paddy production. Similarly, increase in 1% of sown extent results to a 0.85% increase in national paddy production and 1% increase in technological improvement based on time trends result to 0.0031%on national paddy production.

Rwibasira, (2016) used correlation and regression statistic techniques in analyzing the data obtained from 97 respondents randomly selected from 24 co-operatives in assessing the effect of Crop Intensification Program (CIP) on maize production in Nyagatare District, Rwanda. Where among the objectives examined was the relationship between fertilizer usage and maize production and following parameters were tested in a bid to evaluate the variable; amount of financial credit secured, commodity prices, incomes, cost of fertilizers, training and existence of distribution channels. The results indicated that about 77 % (R-squared=0.767) of the variation in the dependent variable (production) were explained by the variations in the explanatory variables the P values>0.000 indicating that the independent variables had statistically significant relationship with the dependent variable. However, financial credit secured at 1% and commodity prices (at 1%) implying 1% increase in financial services access increases maize production by 0.277 indicating the fact that currently fertilizer trade is in the hands of private agro-dealers who need cash. It further reveals that maize prices at the end-markets influence fertilizer usage where an increase of 1% in maize prices at the end market increases maize production by 0.23%.

Umar, Oteikwu, Shuaibu and, Tambari, (2015) while using descriptive statistics; frequencies, percentages and multinomial regression analysis in analyzing the data obtained from 296 beneficiaries of Growth Enhancement Support Scheme (GESS) randomly sampled to assess factors influencing level of satisfaction with GESS among farming families in Kaduna state in Nigeria. The level of satisfaction of GESS by the beneficiaries in the study area was one of the objectives assessed, while following parameters were used in evaluating farmers' satisfaction level; farm income, source of credits, extension visits, farmers' association, age, household size, education, farm size, occupation, farming experience. The outcome indicated that the beneficiaries of the scheme were satisfied with the level of performance achieved by the scheme in its few years of implementation. The result revealed that 47.65 were satisfied,14.3% highly satisfied,28.6% were dissatisfied with the scheme,5.4% were not sure of their level of satisfaction, while 4.1% were highly dissatisfied. Nevertheless, research further pointed out following as major challenges of the scheme; timeliness of distribution, inadequate quantity of fertilizer accessed and inflation of price at the redemption centers.

Maize Production

Globally, maize is categorized into white and yellow varieties (Meyer, 2006). Based on 2008 production, North America has been leading in production with about 38.8% of the global output, followed by Asia (28.5%), South America (11.2%), Europe (11.1%), Africa (6.9%), Central America (3.4%) and Oceania (0.07%). Argentina, Brazil, and China account for over 60 % of the total maize output in the developing world, where China alone account for 45 % of the output (FAOSTAT, 2008). Maize demand is projected to increase by between 4% and 8% per annum amid stagnated or slow pace increase in production (Kaini, 2004 & Rosegrant et al., 2009).

Maize production in Africa stands at 70 million metric tons per year, South Africa being on leads with 11.8 Million metric tons followed by Nigeria, Egypt, and Ethiopia who registers above 6 million metric tons annually. However, maize yields (output per acre) have been falling in the last decade, despite improvements in agricultural technologies, raising a worrying situation for economic and social policy makers aiming at increasing food production and agricultural incomes (FAOSTAT, 2012). African farmers are characterized by among other things; poor soil fertility, low-yielding varieties, inadequate access to yield-enhancing inputs such as fertilizers and improved seeds. There are also heavy post-harvest

losses due to poor storage and processing facilities and technologies, leading to entire maize value chain suffering from constraints that could be mitigated through better technologies, policies and marketing innovations (FAOSTAT, 2007). In Tanzania 74% of the population rely on agriculture for their livelihood and maize play a major role as food and cash crop and accounts for 31% of the total food production and 75% of the cereal consumption in the country (RATES, 2003; URT, 2011b; Seth, Bedada, Mneney ,Oduor &Machuka, 2011).

Agriculture in Kenyan contributes about 26 % of the Gross Domestic Product (GDP) and 27% of GDP indirectly through linkages with other sectors and employs more than 40% of the total population and more than 70% of Kenya's rural population. It is majorly made up of small-scale farmers who account for 75% of the agricultural outputs (FAO Country Programming Framework for Kenya 2013-2017). The sector is key in attaining vision 2030 growth rate of 10% thus, the government resolution to empower small-scale farmers to enhance their productivity (Republic of Kenya Agriculture Sector Development Strategy, 2010). However, rapid growth in population and diminishing arable land in the developing countries has been compounding the situation. Consequently, the future growth in the subsector will be a function of intense use of production enhancing technologies, such as improved farming methods to increase production per area (Gitu, 2008; World Bank, 2007).

In Kenya, maize market has been dependent on the NCPB price decisions, which are key in price formulation by other buyers. However, the private buyers have been taking advantage of NCPB limited ability to mop up all the excess maize in the market to set up their own prices, which in most cases they are unfavorable to producers (Farm Management Handbook, 2007).

Uasin Gishu County has a total area of 3,327 km^2 and subdivided into six sub-counties; Turbo, Soy, Moiben, Ainabkoi, Kasses and Kapsaret and a population of close to 1 million. The Arable land covers 2,995 sq km, while the rest is covered by hills, rocks water mass and urban set-up. The County fall between 1500m – 2700m above the sea level and soils range from red brown loam to clay and has a rainfall range of between 900mm to 1200mm per annum and a peak in May to October. Agriculture is source of food and income for over 80% of the rural population, despite, the County's agricultural production full potential being sub-optimal. The county's farm size stands at between 2-10 acres with a wide range of crop and livestock and varies widely from predominantly small scale to highly, mechanized large-scale farming. Small-scale farmers owning less than 30 acres' accounts for 75% of the county total agricultural produce, though it has not been fully exploited. Most farmers rely on rain-fed agriculture and face by high costs of inputs especially fertilizers, Low levels of mechanization and high transport costs due to increase in global oil prices, poor and long marketing chains consisting of many players making them inefficient and unresponsive leading to low absorption of inputs by farmers. The county government has indicated public private as one of the area that has not been fully explored noting that its exploitation is key in improving local market infrastructure. The other challenges hindering productivity include; declining soil fertility coupled with overuse of fertilizers and chemicals resulting to low production in the County. Poor governance and corruption has contributed to inefficiencies or in some cases collapse of institutions responsible in aiding the farmers. The lack of proper storage facilities exposes farmers them to low prices due to rush to dispose their products (Uasin Gishu County Integrated Development Plan, 2013).

3.0 METHODOLOGY

This research problem was studied through the use descriptive research design and utilized quantitative research method. The research design enabled the researcher to cast light on the effects of the current government interventions on maize production through data collection. The study utilized quantitative method in data collection and analysis, where survey was used. The sampling of the respondents was done by use of purposive sampling technique. The target population was maize farmers within Uasin Gishu County who are about 40,000 registered with the county agricultural office and distributed among the three sub counties formally national government administrative districts namely; Eldoret (17520), Wareng (11679) and Eldoret East (10801).

The proposed sample size for this study was 396 respondents (maize farmers) drawn from 40,000 maize farmers within Uasin Gishu County. The County was placed under three clusters Eldoret West, Wareng and Eldoret East for the purpose of sample distribution which was done base on each of their proportionate population of farmers (Hair,Celsi & Samouel 2011**).**

The sample size of the study was at 95% confidence level with a margin of error of 5%. Owing to the anticipated large number of farmers, the study employed the Yamanes (1967) formula for determining sample sizes in large populations. This is as shown below:

$$\mathbf{n} = \frac{N}{1 + N(e)^2} \quad \text{...(3.1)}$$

Where;

n = the sample size,

N = the population size,

e = the acceptance sampling error

$= 40000/1+40000(.05)^2$

= 40000/101

= 396

The study thus reached a sample population of 396 farmers both small and large-scale respondents to participate in the research in each of the three sub counties.

Table 1: Distribution and Proportionate Sampling of Farmers in Uasin Gishu County

	Population of farmers	Small scale	Large scale	Small scale	Large scale	Total sample size
Eldoret West	17520	12264	5256	121	52	173
Wareng	11679	8175	3504	81	35	116
Eldoret East	10801	7561	3240	75	32	107
TOTAL	**40000**	**28000**	**12000**	**277**	**119**	**396**

Data was collected through Survey method by use of questionnaires as a tool for collecting quantitative data. The data was collected by use of likert questionnaire, which consist of

closed ended questions, since they facilitate faster coding recording and analysis. The study generated quantitative data. Fitness of purpose was to describe, explain and seek causality between government input subsidy programs on maize production in Kenya. Quantitative data was coded and entered into Statistical Packages for Social Scientists (SPSS Version 24.0) and analyzed using descriptive statistics. This was attained through frequency distributions, means, modes, percentages, and standard deviations, simple and cross tabulations. The study also used inferential statistics to establish effect of the government input subsidy programs and its effects on maize production in Kenya. Specifically, the study used Karl Pearson's coefficient of correlation and linear regression analysis to establish this relationship. For these tests, ANOVA, t-test, and F-test were used.

The linear regression analysis was formulated and performed in the following general regression equation: -

$$\mathbf{Y= \beta_0+ \beta_1 X_1+ \varepsilon}$$

Where; Y = The dependent variable (Maize Production); X_1 = Government input subsidy programs); While β_0 is a constant, which denotes financial inclusion, β_1 are slope coefficients and ε is the standard error term.

4.0 RESEARCH FINDING AND DISCUSSION

The sample size consisted of 396 maize farmers from Uasin Gishu County. To this end, a response rate of 90.66% was achieved with 359 respondents reached out of the 396 targeted. Mugenda and Mugenda (2003) indicates that for generalization a 50% response rate is adequate for analysis and reporting, a 60% response rate is good, while a response rate of above 70% and over is excellent. The high response rate was attributed to the data collection procedure and tenacious following by the researcher. The drop and pick method gave the respondents ample time to fill and return the questionnaire.

4.1 Maize Production

The study sought the level of agreement on various aspects related to maize production. The results were as shown in Table 2

Table 2: Maize Production

	Mean	Std. Deviation
Maize production per acre has increased since the introduction of input custody	3.538	1.053
More acreage has been put under maize over introduction of input subsidy	3.327	1.175

A represented in Table 2, the respondents agreed that maize production per acre has increased since the introduction of input subsidy as indicated by mean of 3.538; the respondents were neutral that more acreage has been put under maize over introduction of input subsidy (3.327). The findings concurs with Gitu (2008) who indicated that the future growth in the subsector will be a function of intense use of production enhancing technologies, such as improved farming methods and fertilizers among others to increase production per area. Urassa (2015) noted that access to fertilizer, improved seeds and chemicals and extension services have been notable constraints hindering maize production.

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4.2 Effect of government input subsidy programs to farmers

The study sought to determine the effect of government input subsidy programs to farmers within Uasin Gishu County.

Table 3: Government input subsidy programs to farmers on Maize Production

	Mean	Std. Dev
The current cost of fertilizer has led to more production of maize	3.549	1.031
The cost of fertilizer under subsidy program has motivated farmers to plant maize	3.443	0.998
Timing of distribution of fertilizer under subsidy has led to improvement of maize production	2.401	1.068
The current centres of distribution of fertilizer under subsidy are closer to the farmers	2.585	1.100
The procedures followed in purchasing subsidized fertilizer from the distribution centres are farmer friendly	2.209	1.195
The types of fertilizer sold under subsidy program have led to increase in maize production.	3.126	1.038
The fertilizer sold under subsidy program are always sufficient	2.008	1.095
Use of fertilizer increase with the better NCPB prices	2.947	1.177

According to the findings, respondents agreed that the current cost of fertilizer has led to more production of maize (3.549). Further, the farmers partially agreed, that the cost of fertilizer under subsidy program has motivated farmers to plant more maize (3.443). However, the farmers disagreed that timing of distribution of subsidized fertilizer had led to improvement of maize production (2.401), despite partially agreeing that current centres of distribution were closer to farmers (2.585). Further, the respondents disagreed that the procedures followed in purchasing subsidized fertilizers from the NCPB distribution centres were farmer friendly (2.209). Concerning the types of subsidized fertilizer, respondents partially agreed that they have led to increase in maize production (3.126). In case of sufficiency of subsidized fertilizer, respondents partially disagree that the fertilizer under subsidy was sufficient (2.008). Lastly, respondents partially agreed that the use of fertilizer increase with the better NCPB output prices (2.947). The findings concur with Ajah and Nmadu (2012), that use of fertilizer under subsidy partially increase with the NCPB prices. The quantity of fertilizers used by farmers is mostly influence by exposure of farmers to extension services.

4.3 Inferential Statistics

A univariate regression analysis was used to determine the weight of the relationship between the government input subsidy program and maize production.

4.3.1 Regression Analysis

The coefficient of multiple determinants denoted by R^2, is a measure of proportion of the variation of the regress and explained by the corresponding explanatory variables. The value

of R^2 lies between zero and unity $0 \leq R^2 \geq 1$. A value of unity implies that 100% of the variations of Y have been explained by the explanatory variables. The study also used univariate analysis to assess the influence of government input subsidy on maize production in Uasin-Gishu County

According to the findings, the R-squared for the relationship government input subsidy and maize production in Kenya was 0.317. This implies that government input subsidy explains 31.7% of maize production in Kenya.

Table 4: Model Summary for government input subsidy program

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	..563[a]	.317	.316	.6172147

a. Predictors: (Constant), Government_input_subsidy_program

As indicated in Table 5, the F-calculated (166.050) is greater than the F-critical (2.42) and the p-value (0.000) is less than the significance level (0.05). This shows that the univariate regression model is a good fit for the data and hence can be used in predicting the influence of government input subsidy on maize production.

Table 5: ANOVA for Government input subsidy program on maize production

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	63.258	1	63.258	166.050	.000b
	Residual	136.001	357	.381		
	Total	199.258	358			

a. Dependent Variable: maize_production
b. Predictors: (Constant), Government_input_subsidy_program

As indicated in Table 6, the results show that holding Government input subsidy program constant, the maize production in Kenya will be 0.700. In addition, the beta coefficient for the association between government input subsidy program and maize production in Kenya is 0.681. This implies that a unit increase in government input subsidy program would lead to 0.681 increases in maize production in Kenya. The p-value (0.000) was less than the significance level (0.05). In addition, the t-calculated (12.886) was more than the t-critical (2.42).

Table 6: Coefficients for Service investment and Financial Inclusion Coefficientsa

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.700	.151		4.647	.000
	Government_input_subsidy_program	.681	.053	.563	12.886	.000

5.0 SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Discussion

The study disclosed that majority of the farmers sourced their fertilizers from NCPB due to lower prices compared to the commercial one, owing to the government subsidization. The other inputs key in maize production include agro chemicals (pesticides and herbicides) and maize seeds among others though they are not subsidized except those supplied by some co-operative societies and non-governmental organizations. The cost and types of fertilizers from the study had partial impact on maize production as per the respondents, a situation that is attributed to the poor absorption of extension services, which remain to be critical in optimal utilization of the fertilizers and other farm inputs. Therefore, increased in utilization of fertilizers is likely will have a direct and positive impact on maize production (Urassa, 2015; Ajah and Nmadu, 2012) similarly distribution centres of subsidy appears to have mix response in that some indicates to have positive impact while others are not which is due to variability in distance between the distribution centres and farmers, where some are close and others are quite far therefore having varied responses. Inclusion the study points out procedures followed by farmers in purchasing subsidy fertilizers, inadequacy and timeliness of distribution of fertilizers remain to be challenged in effective utilization of the inputs by maize farmers.

Conclusions

The study concludes that government input subsidy program has a significant positive relationship effect on maize production as depicted by a significant p-value of 0.000. The study established that the current cost of fertilizer has led to more production of maize. However, the cost of fertilizer does not motivate farmers to plant maize and that the types of fertilizer sold under subsidy program have not led to increase in maize production. The study concludes that fertilizer acquisition remains the most costly input in maize production. In addition, this shows that most farmers still cannot afford fertilizer due to high prices despite government subsidized fertilizer being available leading to low maize yields. Procedures outlined in purchasing subsidized fertilizer have not been friendly. Insufficiency of subsidized fertilizers has led to low usage by famers in Uasin Gishu County. Human and skilled labour is expensive to acquire although is necessary to assist farmers in their farm operations. Efficient labour makes work easier and accomplished within datelines. There is a need by the farmers to employ different kind of labour in order to ensure there are high yields.

Recommendations

Government input subsidy program and maize production. Farmers still cannot afford fertilizer due to high prices despite government subsidized fertilizer being available. The study recommends that the government should address the high pricing of fertilizers. The government to ensure that the farmers get farm inputs on time at a reasonable price and in sufficient amount, in order to enable them improves maize production. The government should also develop policies to make procedures of purchasing the subsidized fertilizers customer friendly. Also, there is need for extension services to focus on farm management practices alongside other farming practices in order for farmers to improve their methods of farming to be able to utilize labour available in a profitable means.

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