IOSR Journal of Computer Engineering (IOSR-JCE)
e-ISSN: 2278-0661,p-ISSN: 2278-8727, Volume 18, Issue 1, Ver. III (Jan – Feb. 2016), PP 115-127
www.iosrjournals.org

"The Impact Of Incentives To Indigenous Farmers (A1 And A 2) In Maize Production In Zimbabwe" A Case Of Mashonaland East Province, Macheke, Zimbabwe.

Charles Mavhunga (MBA)
(Part Time Tutor: Zimbabwe Open University Harare Region (ZOU)

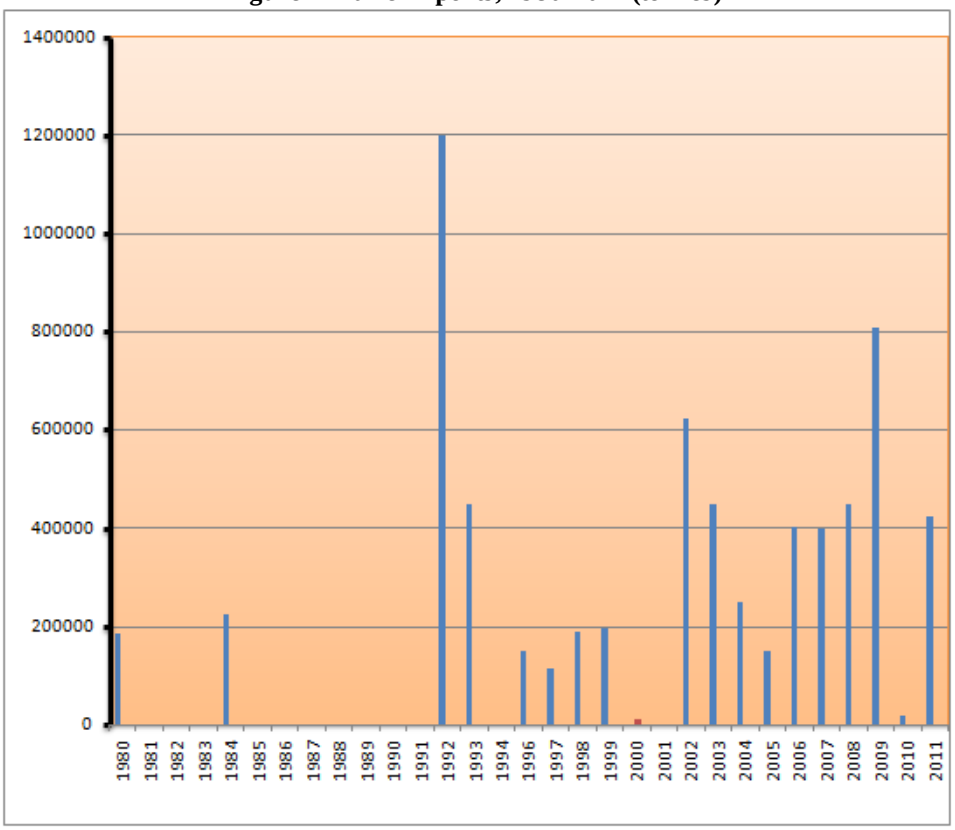
Abstract: *The current study was concerned with the need to establish incentives for farmers to boost production of maize in Macheke, Mashonaland East Province, in Zimbabwe. This study was motivated by an observation that there was a serious disparity between government `s expectation to guarantee food security in the country, and the activities of New Farmers in the area of Macheke. The full production capacity of the Grain Marketing Board of Macheke is 72 000 metric tonnes per year but for the past five years since 2010 , the GMB is receiving a mere 1000 tonnes of maize deliveries or less. The research design was mainly descriptive and both quantitative and qualitative research methods were used to capture the data. Questionnaires and interviews were employed as the main research instruments and the response rate was very high. Questionnaires and interviews were the main instruments for data collection. The study engaged A1 and A2 farmers, GMB staff and Officials from the ministry of Agriculture as the main informants. The researcher faced challenges of limited resources and access to confidential information, but had to employ mitigatory strategies to meet the research needs to access classified information relevant to the study. The major findings of the research were that farmers lacked financial resources to boost production in Macheke area. The government was providing fertilizers, and seed inputs to A1 and A2 farmers through various schemes, but these schemes remained ineffective to boost production owing to lack of timeliness of inputs supply, inadequacy of inputs and relevance of inputs to individual farmers. Production in farms is boosted if farmers have access to cash loans through which banks have to offer support. A commission dealing with strategic crops (Maize) may need to be appointed to monitor usage of agriculture loan schemes and implementation of strategic crops policy.*
Key Words: *Maize Production, Incentives, The New Farmer, Food security*

I. Introduction

Maize is Zimbabwe's major staple food for the majority of people taking over from the traditional sorghum pearl and finger millet. White maize is primarily used for human consumption as well as stock-feed while yellow maize is used primarily for stock-feed although it is also consumed by people when necessary. Chitsike, (2003) points out that Zimbabwean farmers produced 2,148,000 tonnes of maize in 1999 and only 525,000 tonnes of maize in 2008. Zimbabwe was once crowned the title, 'The Bread Basket of Southern Africa' in the 1990s and was by 2008 known as 'The Basket Case of Southern Africa'. Zimbabwe's experience in this case demands a closer scrutiny of issues surrounding this material change in production of maize. The study is based on Anderson and Cook (2008)`s Community Food Security theory (CFS),which is a variation on the concept of food security. The theory clarifies the relationship that exists between hunger, malnutrition, poverty and development. The theory is a new conceptual framework that advocates for the development of food systems that are decentralized, environmentally friendly, and supportive of collective means and sustainable. The theory is useful to policy makers when establishing strategies to address food related challenges for a particular group of people. Chitsike`s statistic rhymes well with the 'bread basket versus basket case'.

A "fast track" land reform programme was launched on the 15th of July 2000 to address skewed land ownership (Chitsike, (2003:3). This occasion is significant to this study because as a result of this programme, thousands of landless black people became involved in maize production with government support of inputs through the Grain Marketing Board (GMB). Currently, the maize value chain in Zimbabwe is in a bad state with some key actors. Some farmers are abandoning the production of maize and switching to tobacco which is perceived to have a viable value chain. Zimbabwe`s maize imports have become more regular since 2000 (See Figure 1 below).

Figure 1 Maize imports, 1980-2011 (tonnes)



Source: FAO Statistics (2011)

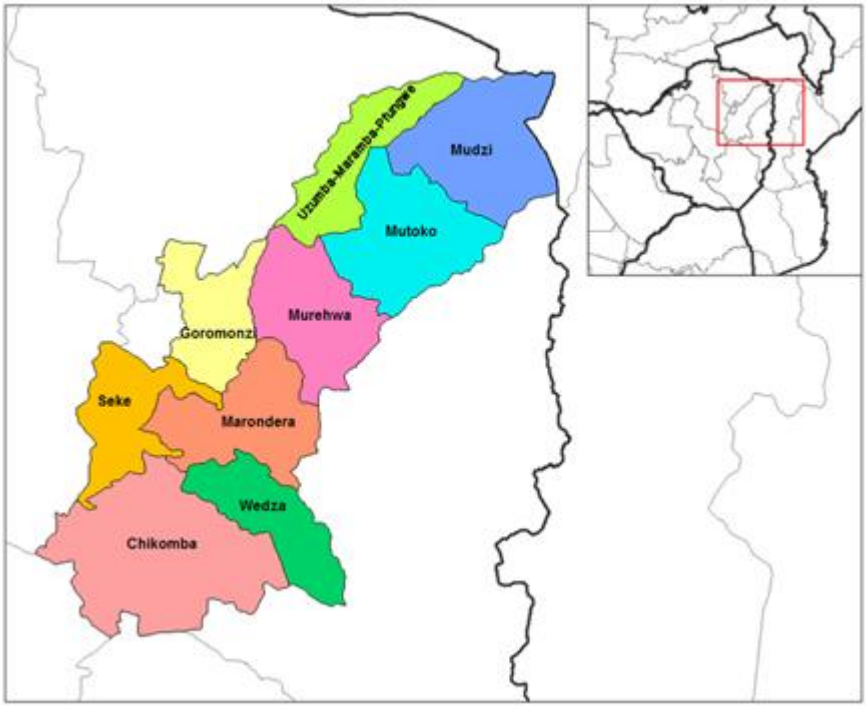
Figure 1 shows maize imports from 1980 to 2011, and the country`s major maize imports were in 1992 when Zimbabwe experienced a major drought. The same Figure also shows some occasions in the period from Independence to the period of land reform – 1980, 1984, 1993, 1996, 1997, 1998, and 1999 as years of high inflows of maize in the country. Each of these years were associated with production collapses, due to multiple causes usually precipitated by drought. A notable increase of levels of variability could be noted between the period 2002 up to 2011 causing the researcher to pose the question why? From the same figure (1), maize inflows became a relative constant in 2002, 2003, 2004, 2005, 2006, 2007, 2009, 2010 and 2011 posing a further question on food insecurity in the country.

This study was carried out in Mashonaland East Province in Macheke district and the following are the details of the province.

1.1.1 Mashonaland East Province

According to Zimstats (2012), Mashonaland East Province has an area of 32,230 km² and a population of approximately 1.35 million people. The province has nine districts and the provincial capital is called Marondera (See figure 2 below).

Figure 2 Districts of Mashonaland East Province



Source :Zimbabwe National Statistics Agency (2012)

Figure (2) above shows the main districts of Mashonaland East Province in Zimbabwe. The major economic activities of the province include mining, agriculture, tourism, horticulture and animal husbandry. The province is counted among the best in the country in terms of maize production(See Table 1 below)

The following table (1) is a comparative analysis of provincial activities in Zimbabwe, and Mashonaland East Province is among the best: in terms of various economic activities that include maize production.

Table 1 Provincial comparative analysis of main economic activities.

Province	Mining	Agriculture	Tourism	Horticulture	Plantations	Animal Husbandry
Mashonaland West	X	X	X	X	-	X
Mashonaland Central	X	X	X	X	-	X
Mashonaland East	X	X Maize	X	X	-	X
Manicaland	X	X	X	X	X	X
Masvingo	X	-	X	-	-	-
Midlands	X	-	X	-	-	X
Mat South	X	-	-	X	-	X
Mat.North	X	-	X	-	-	X
Harare Metro			X	X	-	X
Bulawayo Metro	-	-	X	X	X	-

Source: Zimbabwe National Statistics Agency (2012)

Table 1 shows the main economic activities of provinces in Zimbabwe. The ecological variation in the regions of the country confers certain distinct advantages on a province by province basis. The high veld regions of Mashonaland East, Mashonaland Central, and Mashonaland West and Manicaland provinces have higher than average rainfall. The above stated provinces appear to be the heart of the country`s agriculture based economic activity of which the production of maize is ideally suitable. The focus of this study is mainly Mashonaland East Province and is one of the most important provinces of the country in terms of agriculture. The province was also the first to initiate the fast track land reform programme under the guidance of Chief Svosve who led the protest to motivate the government to redistribute land in Zimbabwe. The main question now is why Zimbabwe is importing maize yet the number of farmers has increased, particularly in Mashonaland East province in Macheke in Murehwa district.

II. Statement of the problem

Maize deliveries at Macheke Grain Marketing Board (GMB) have significantly dropped from an average annual delivery of 700,000 tonnes per year at full capacity down to less than1,000 tonnes per year between the period 2008 to 2015 (Macheke GMB records 2015).The latest annual delivery at the GMB for the year 2015 was merely 176 tonnes of maize .The sharp drop in the delivery of Maize in Macheke begs the question, why? Yet the number of farmers has increased from 70 old resettlement farms up to 4517 A1 farmers plus 296 A2 farmers (See Table 2).The increase in the population of farmers should have necessitated an increase in the production of maize to full capacity at the Grain Marketing Board of Macheke, but current results appear to be producing the opposite, Why?.Zimbabwe is on the record of increasing its budget on maize imports, yet the country has all the necessary basic needs for the full production of the product. According to Butamucho,the periods between 1993, 1996, 1997, 1998, 1999, and earlier in 1980 and 1984 were associated with production collapses, due to multiple causes usually precipitated by drought, and maize imports are justified here, but the other years that follow, Zimbabwe continues to receive normal and above normal rains, although they may be cases of poor distribution throughout the season. This study therefore seeks to answer the question why farmers in Macheke were failing to meet maize production needs of the country?

1.3 The study objectives

1.3.1 To establishes reasons why production of maize has dropped in Macheke yet the number of farmers has increased?

1.3.2 To identify incentives for new farmers to boost production of maize for the national economy in Macheke area?

1.4 The main research questions

1.4.1 Why has the production of Maize dropped in Macheke area, in Mashonaland East province, yet the number of farmers has increased?

1.4.2 What could be the necessary incentives to boost maize production in Macheke area in Mashonaland East province?

1.5 Literature Review

In terms of maize production, some researchers argue that there were two green revolutions that took place in Zimbabwe (Rukuni *et al*, (1994, 2006). However, others disagree with this discourse citing that a green revolution has to be structural not accidental and that it must have globally competitive yields (Mano, 2001). This has not been the case in Zimbabwe. With global yields having reached more than 10 tonnes per hectare some may argue that it is premature to refer the unstructured growth in the Zimbabwean maize yields as a green revolution (FAO, 2006). However, those who agree with this discourse, argue that Zimbabwe's first green revolution (1960-80) was spearheaded by the white commercial farmers (Eicher, 1995). During this period, maize exports grew by 18.8% due to the growing demand of starch in England's industries (Masters, 1993). Land ordinances assured white supremacy to the detriment of the blacks through dispossession of land and suppression of wages where black labourers were subjected to a system next to servitude without remuneration. The licensing act of 1942 made it mandatory for all commercial farmers to buy licence plate from the Rhodesian national farmers union which was renamed commercial farmers union (CFU). This was described as the 'stroke of organisational brilliance' as it assured a strong financial base for the union (Masters, 1993).

The preconditions for the green revolution were both technical and institutional. The new technology in research and investment in human, biological and physical capital such as roads, dams and irrigation to name a few were among the prime movers. In addition, investment in farm support institutions such as marketing, credit, as well as fertiliser and seed distribution systems were among the principal preconditions. New maize varieties such as SR-1 (1949) and SR-52 (1960) increased the yields. Federation of the late 1950s led to the establishment of the regional research network and the substitution of maize for tobacco due to reduction in relative profitability of tobacco in the 1960s (Eicher, 1995).

The second green revolution (1980-1986) was led by smallholder farmers who in 1980 with a population of 700 000 owned half of the arable land with the other half being owned by the 5000 commercial farmers (Rukuni *et al*, 2006). The smallholder farmer maize production doubled in six years from 1980 to 1986 and this was attributed to a number of factors (Jayne and Nuppenau,(1991). These factors included the use of land abandoned during war, use of hybrid varieties and inorganic fertilisers. In addition, the removal of racial and institutional barriers and the expansion of the marketing services were also identified as the preconditions for this second revolution (Eicher, 1995). This occurred at a time when the region was in deficit for instance a famine killed more than a million people in Ethiopia in 1984/85. Again the success of this revolution awarded President Mugabe the African Leadership Award in 1988. A critical lesson from this period

is that infrastructure such as roads and institutions such as extension services, research and and development, Financialr services played a critical role in boosting maize productivity and therefore analysis should go beyond price incentives as the only factor affecting production response.

The current situation in Zimbabwe shows that the nation needs more than 2 million tonnes of cereal including 1.7 million tonnes for direct human consumption (FAOSTAT, 2010). From a food provision perspective, the country requires approximately 1.5 million tonnes of maize annually (Rukuni & Eicher, 1994; 2006). Whilst Zimbabwe traditionally imported wheat, its maize industry used to be one of the largest in the SADC region (Jayne *et al*, 2006). The Zimbabwean maize sub-sector was traditionally a net-exporting sector and played a prominent role in regional grain markets through maize grain exports mainly to Zambia, Malawi, Mauritius, Kenya and Mozambique. However, Zimbabwe's self-sufficiency ratio of maize dropped from 21% in 1985 (Jayne *et al*., 1994; 2006) to 67% by 2004 (FAO, 2010), signifying the country's shift from a net exporter to a net importer of maize. As a result, Zimbabwe's maize trade policy has seen imposition of export bans, and after the onset of the food crisis, the issuing of government tenders for the importation of subsidized maize.

The earth, God's gift to humanity, and a garden for all creation, needs to be tended responsibly, recognizing the limitations in land space as well as legal and moral grounds for such kind of treatment. In highly developed societies, it is possible to measure sustainability and productivity through scientific tools. Thus to have titles over the land is not to license one to be irresponsible, and as such being entitled to land demands accountability towards the integrity of the land. This, guards against the capitalist extractive economic strategies of the west on African resources (Rasmussen, 1996:124). Farmers in Macheke should understand that land reform was done from a poverty alleviation perspective, mindful of people's spiritual convictions (Mbaya, 2001). During colonization, acquisition of large land tracts impoverished most African populations who were reduced to farm workers during all the time colonialists ruled Zimbabwe. This led to a legacy of poor commercial farm workers, "the largest proportion of Zimbabwe's proletariat", with neither land nor housing rights (Magaramombe, 2001:1). The Fast Track Land Reform Program (FTLRP) thus promised to tackle the poverty disparity created by lack of land ownership and use among the landless poor workers. Now that the black majority has land, production must be motivated.

III. Research Design

In conducting the study, the researcher used the mixed method. Mixed method is a procedure for collecting, analyzing and "mixing" both qualitative and quantitative data (Creswell, 2002). The rationale for mixing was that neither qualitative nor quantitative methods were sufficient enough to capture the trends and details of the situation. When used in combination, qualitative and quantitative methods complemented.Questionnares and interviews were the main instruments for data collection. The target population were ,Grain Marketing Board Officials in Macheke, Extension Officers in Macheke, New Farmers in Macheke ward 22,23 and 24 (See the Table 2 below)

Table 2 Study Population

Ward	A1	A2	Total
Ward 22	1 682	141	1823
Ward 23	1 223	57	1280
Ward 24	1 612	98	1710
Extension Officers	5	3	8
GMB staff			10
Ministry of Agriculture			10
Total	**4522**	**299**	**4841**

Source: This data was collected from Macheke Agritex Offices
Macheke Area Farm Statistics

Key
A1 – Small Scale Farms
A2- Medium Scale Farms

1.6.1 Sample size

To determine the size of the sample used, the Yamani Taro (cited in Yilma 2005) formula was used. It states that the desired sample size is a function of the target population and the maximum acceptable margin of error (also known as the sampling error) and is expressed mathematically thus:

$$n = \frac{N}{1 + N_e^2}$$

Where:

n = sample size
N = target population (4841)
e = maximum acceptable margin of error (5%)

Sample size calculation

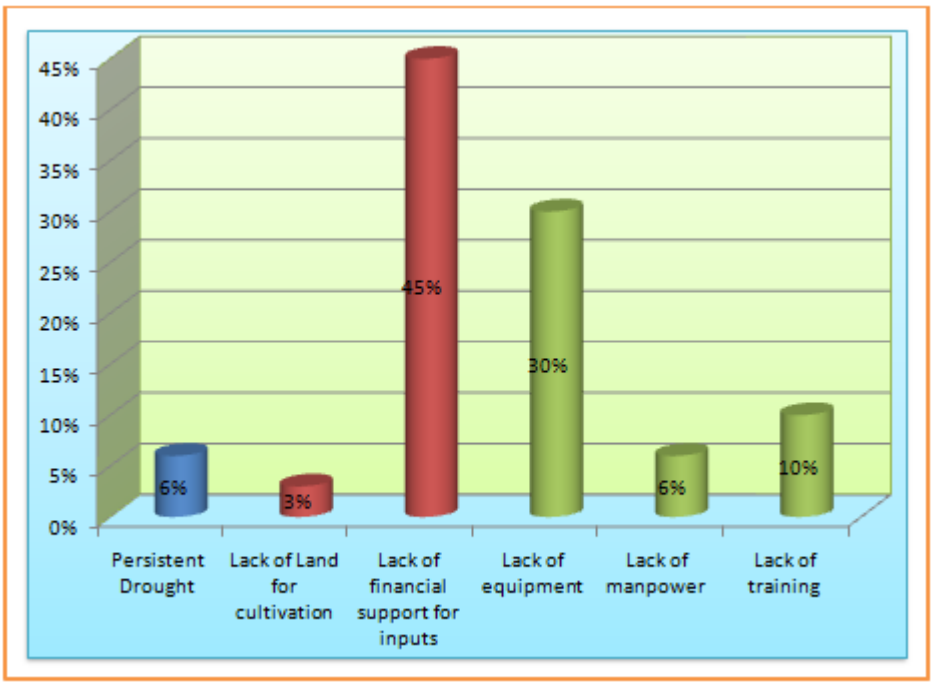
$$n = \frac{4841}{1 + 4841(0.0025)}$$

$$n = 4841/13.1025$$

$$\mathbf{n = 369}$$

The study sampled 369 participants namely A1 and A2 Farmers,GMB officials and Agriculture Extension officers in Macheke area. The New farmers used in this study were the creation of the land reform program initiated by the government in the year 2000. The study used both quota sampling and simple random sampling technique to capture all the categories of the research participants. Personally administered questionnaires were used to collect data. The questionnaire comprised of 20 items, out of which 5 questions analyzed the historical production of maize in Macheke, 7 questions were related to maize production challenges facing people in Macheke,5 focused on incentives to boost production of Maize in Macheke.369 questionnaires were distributed and a response rate of 70% was achieved.30 interviews were scheduled and 90% of the interviews were successful. Reliability of questionnaire was checked and it was found to be.82. For the purpose of analysis. Statistical findings of the study are given below.

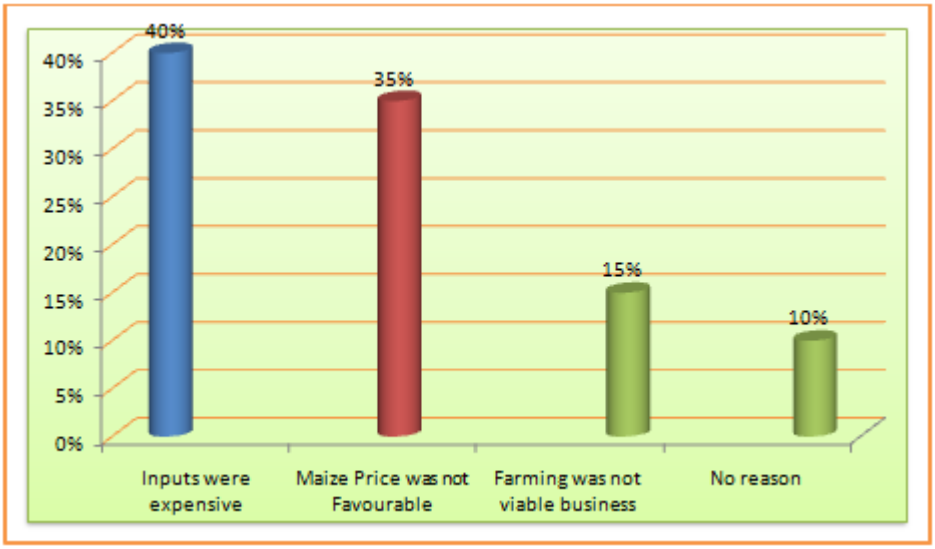
1.7 Tabulation of Research Results



1.7.1 Tabulation of result showing reasons why agricultural production had dropped in Mashonaland East area

Figure 1.7.1 shows that Farmers in Macheke were not producing owing to lack of financial support to do their business. The majority of respondents 45% blamed lack of the necessary financial support for the production of maize in Macheke. According to Gwara (2010), farming is a capital intensive business, and therefore farmers in Macheke need financial support to be productive.30% of the respondents blamed lack of equipment, and 10% blamed lack of training. The least score was 3% where farmers in Macheke indicated that they did not have enough land for farming activities. This confirms that the land reform program was a success because the majority got land, and the issue of land was not the main challenge causing poor production in Macheke. This result was consistent with Gwara (2010) who highlighted that farmers were experiencing shortage of financial support to be productive.

1.7.2 Tabulation of results to explain why farmers were not getting financial support



1.7.2 Tabulation of results on why farmers were not getting financial support

Figure 1.7.2 shows that the majority of respondents (40%) established that inputs were too expensive to be used in the production of Maize profitably.(35%) pointed out that maize prize was too low to be productive, and funding in the product would be disastrous.15% have established that farming was no longer a viable business in the country. This result was consistent with Takavarasha (2012) who pointed out that the price of inputs such as fertilisers and seed was too expensive for the farmer. The possible explanation in this result could be that farmers were not getting financial support because financiers were being discouraged by viability of the maize.

1.7.3 Tabulation of incentives used by the government to motivate farmers to be productive in Mashonaland East in Macheke.

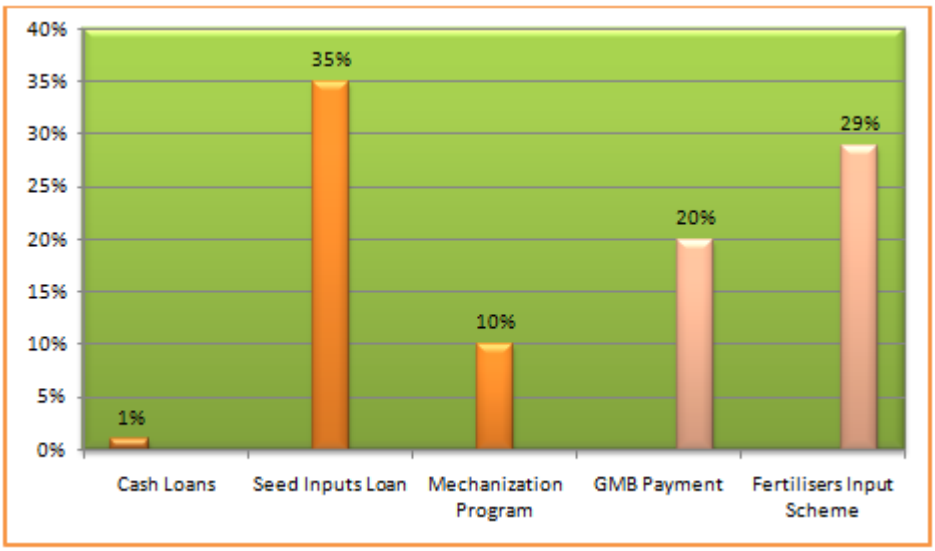


Figure 1.7.3 Incentives from Government for Farmers (A1 and A2) in Mashonaland East Macheke

Figure 1.7.3 shows that farmers in Macheke were getting incentives to boost production. The dominating incentive was the Fertiliser Input Scheme supported by 29% of the respondent, followed by the Seed Input Scheme with a support base of 35%, Mechanisation program 10%,and finally GMB payment program at 20%.The least being the cash loan with 1%.This result shows that the government did not have enough cash resources to offer to farmers to buy own inputs. Supply of seed was very dominating, and this result was consistent with the findings of Gwara (2011) who established that farmers in Zimbabwe were getting some support from the government to boost production. Programs such as Operation Maguta, and the Grain Loan Scheme were some of the initiatives to encourage farmers to be productive, but the major question remained on the reasons why production remained poor. It was therefore important to establish the effectiveness of government support to boost production.

1.7.4 Tabulation of results to establish the effectiveness of government incentives to boost maize production in Mashonaland East Macheke.

Extent of Effectiveness of the incentive scheme	Ministry Officials (N=5) F1			A1 and A2 Farmers N =20 F2			GMB Officials N=5 F3		
X	F 1		XF1	F2		XF2	F3		XF3
1.Highly effective	0	0		2	2		0	0	
2.More than effective	1	2		2	4		0	0	
3.Effective	1	3		5	15		2	6	
4.Less than Effective	3	12		10	40		3	12	
5.Disgusting	0	0		1	5		0	0	
	ΣF1= 5		ΣXF1 =17	ΣF2 =20		ΣXF2 = 66	ΣF3=5		ΣXF3=18
Results	Mean = 3.4		Mode= 4	Mean = 3.3 Mode = 4			Mean=3.6 Mode = 4		

F1 Ministry Officials: As the values of median and mode indicate low degree of effectiveness (3.4) in regard to "incentive schemes to boost production" and also the value of mean is (4): it was apparent that the majority of the respondents holds the view that the incentive schemes were not effective to boost production in Macheke.

F2 Farmers (A1 and A2) As the values of mean (3.3) and mode (4) indicates a low degree of effectiveness, it was apparent that farmers in Mashonaland East were not motivated to boost production as a result of the schemes.

F3 GMB Officials: As the values of mean (3.6) and mode (4) indicate a low degree of effectiveness in regard to incentive schemes for farmers to boost production in Macheke,it was also apparent that GMB officials were not satisfied with the effectiveness of the incentive schemes to boost production of farmers in the area of Macheke.

On the whole, the question of less effectiveness of incentive schemes to boost production was quite significant. These results were in agreement with those of Ross et al (2010) who highlighted that Zimbabwe`s agriculture production was deteriorating despite the government support in form of inputs and other logistical needs. This result could have been influenced by the fact that farmers failed to utilize the inputs as detailed in Gwara 2011.

1.7.5 Tabulation of results to establish why government Agriculture incentives were not being effective

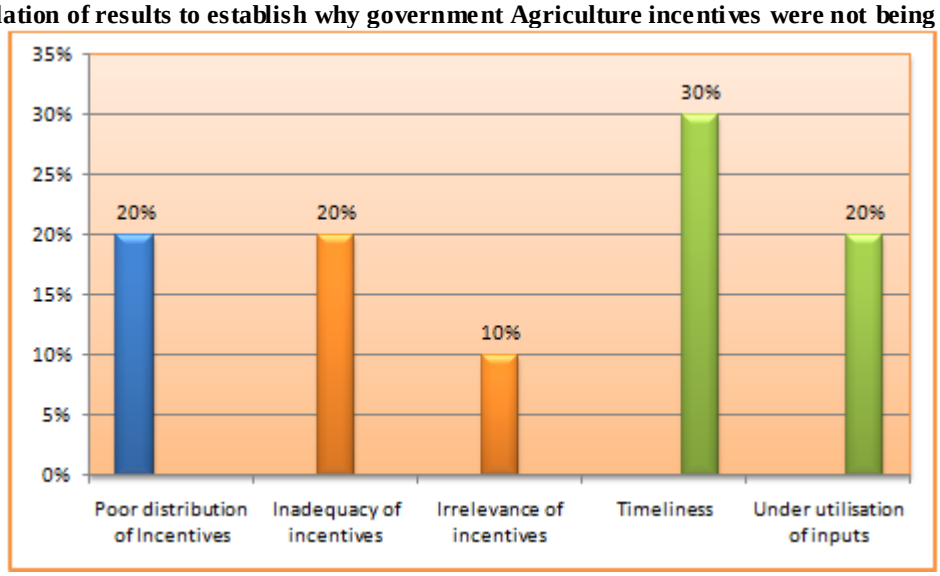


Figure 1.7.5 The Reasons why incentives for Farmers in Macheke were not effective to boost production.

Figure 4.13 tabulates reasons why farmers in Mashonaland East Macheke were not being productive despite government efforts to provide incentives. The majority of respondents (30%) have indicated that timeliness of the delivery of incentives was the major factor. This could mean that delivery of inputs could be done in January or late December, when the farming season has already started, and some of the farmers with enough inputs would have started production. This was followed (20%) poor distribution of incentives,(20%)inadequacy of incentives and (20%)under utilisation of the incentives.Respodents had an equal judgement of the reasons why incentives were not being effective in terms of the items listed. This result could

mean that a multitude of problems marred the incentives for them to be effective. Poor distribution could be a result of timeliness and an unfair distribution of inputs by the authorities. This result was consistent with the findings of Mavedzenge (2010) who established that farmers need to be monitored to ensure that the inputs are reaching them on time or else resources were being wasted owing to logistical challenges facing farmer input schemes.

1.7.6 Tabulation of results showing Farm Utilisation by Farmers in Macheke

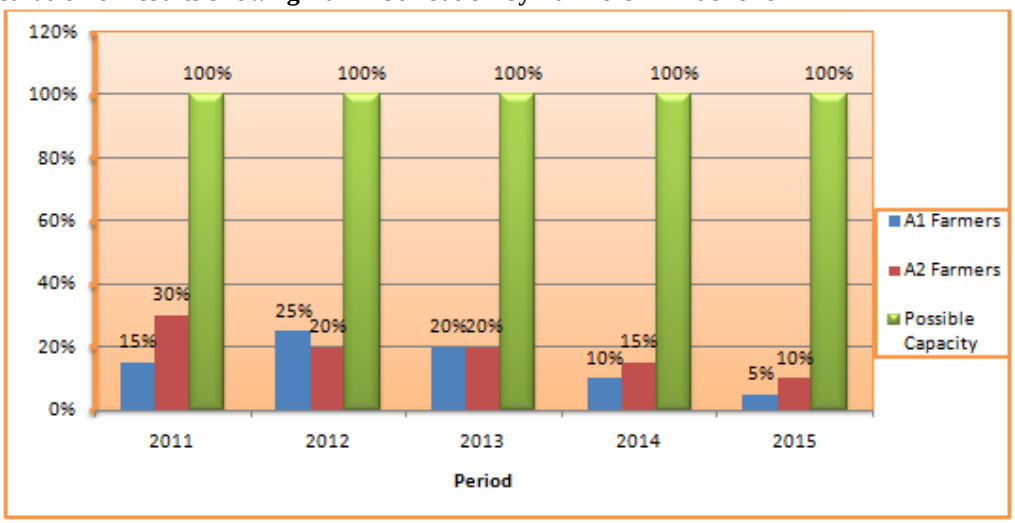


Figure 1.7.6 Farm utilization by Farmers against the possible

Figure 1.7.7 seem to suggest that the majority of farmers in Macheke have failed to utilize the land given to them at full capacity between the period 2011 and 2015.The variance averaged 83%.This result implies that farmers in Macheke were only using 15% of the total land allocated to them through the land reform program. This result could mean that farmers were having serious challenges in the production of maize because land utilization variance was too high.The implication of the result could be that the government needs to take action to ensure that farmers utilize land given to them through the land reform program. Farmers appear to keep the land for inheritance purposes instead of production threatening food security in the country. Feresu, 2011 established that FTLR had the potential for increased agricultural production; however, it needed financial and technical resources to profitably and sustainably use acquired land. This endeavor can also be viewed in terms of the Millennium Development Goals, "to eradicate extreme poverty". It thus could not be possible to achieve this without considering use of appropriate technology to intensify on agricultural production rather than on increasing the area under utilization.

1.7.7 Tabulation of areas that need to be improved to boost production of New Farmers in Mashonaland East Macheke

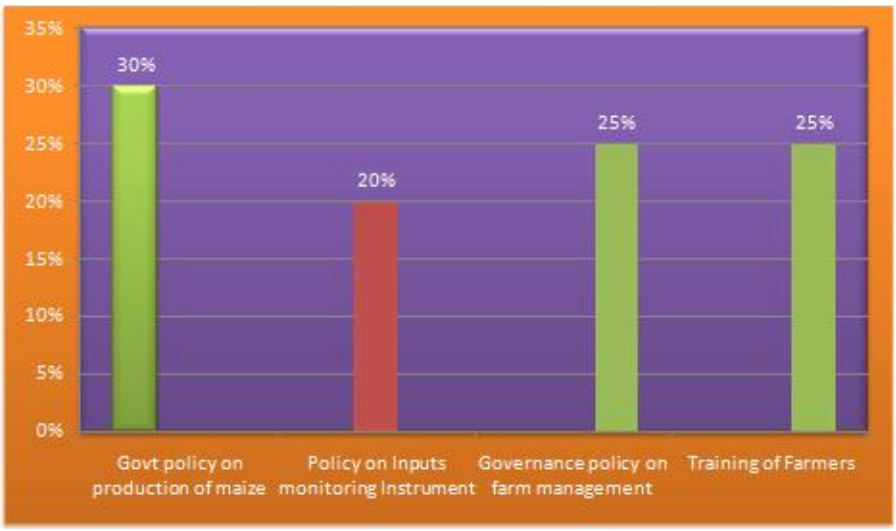


Figure 1.7.7 Areas of improvement to boost production of New Farmers in Mashonaland East Macheke

Figure 1.7.7 show that policy issues on strategic crops (Maize), Farm management, and training of farmers have dominated the study.Futhermore, policy on inputs was also an issue whereby 20% of the respondents have indicated that farmers need training to boost production. Policy on production of maize implies that farmers need to be encouraged to grow the crop as a requirement to ensure that the product is available in the country. This result was consistent with Ndlela (2011) who established that the government policy on farmers in the A1 and A2 category was not clear enough to motivate them to boost production of maize in the country. The implication of this result in the current study is that the government need to adjust the spanners on input schemes, maize production as a strategic crop, and farm management to ensure that Agriculture production is boosted.

1.7.8 Tabulation of input distribution strategies to motivate Farmers in Macheke to boost production

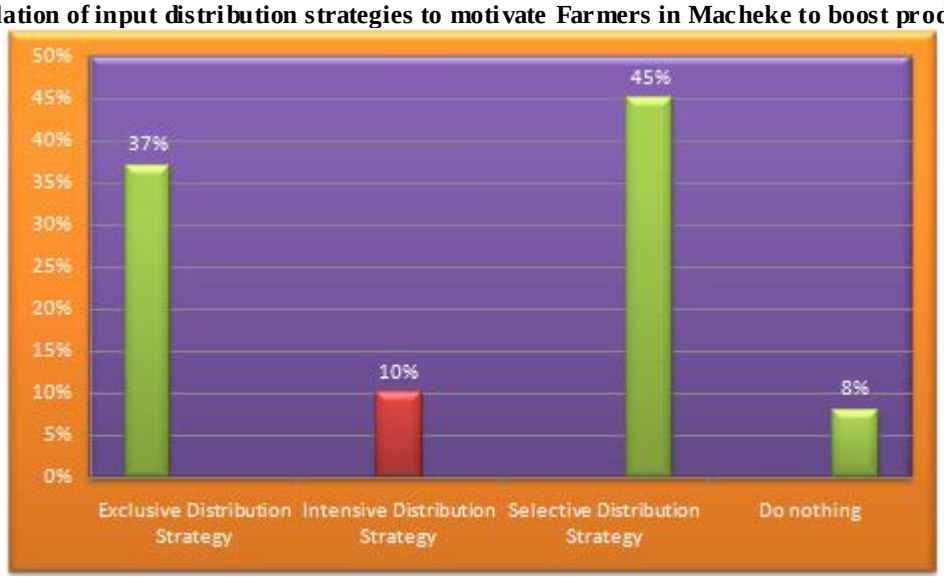


Figure 1.7.8 Input distribution strategies to motivate farmers in Macheke to boost production

Figure 1.7.8 seems to suggest that selective distribution was dominant and got the support of 45% of the participants. This was followed by Exclusive distribution strategy supported by 37%,and intensive distribution was supported by 8%.This result would mean that selective distribution of inputs appeared more popular, and the strategy implies that distributors of inputs identify farmers who are serious with production, and provide them with inputs. This result is consistent with the findings of Etzel et al (2004) that there is greater partnership and contact between seller and reseller and results in a great deal of loyalty. In a bid to explain exclusive distribution, (Etzel et al., 2004) say "suppliers agree to sell their products only to a single given market. This kind of distribution is used when suppliers of inputs are interested in the maintenance and control the service level and service outputs of farmers. Intensive distribution was not supported by the mainly because, the strategy does not select farmers to get inputs. Some of them will end up under-utilizing the inputs. This result meant that the government should identify farmers to support with inputs and monitor the distribution up to finality to ensure that there is effective utilization of the inputs.

1.7.9 Tabulation of loan conditions for A1 and A2 Farmers

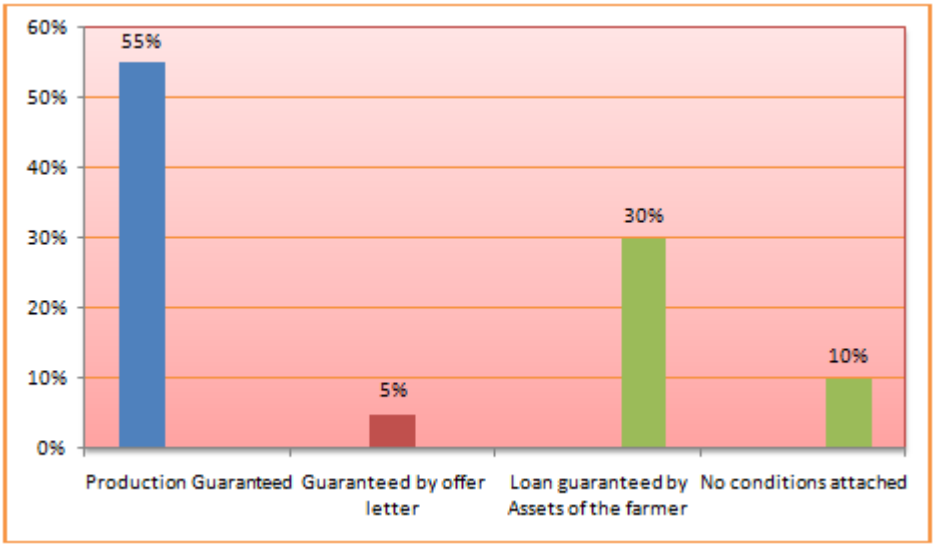


Figure 1.7.9 Loan Conditions for A1and A2 Farmers

Figure 1.7.9 show loan conditions that farmers advocate for inclusion when borrowing funding from financial institutions. The dominating feature is that loans need to be assessed on the basis of production that the farmer estimates, and the level of experience that farmers have in the production of the crop.55% of the respondents had the view that a production oriented loan facility means farmers borrow as per a detailed schedule of the inputs and expected yield as detailed in the production schedules prescribed by experts.30% of the respondents have subscribed to the view that loans need to be guaranteed by assets of farmers to boost production. Some of the respondents (10%) have argued that loans need not to have conditions at all, to ensure that farmers get what they want to boost production. This result was consistent with what is happening in Nebraska where the National Bank is offering a cash incentive to all farmers using the following stated NIFA (2010) conditions:

- Interest rate and all other loan terms are negotiated purely between the borrower and lender
- Lender's interest rate offered to the borrower must be below the normal interest rate
- Anyone can lend - a lending institution such as a bank, a private seller-lender using a land contract, or a private investor lender
- Loan cannot go beyond 30 years
- No farming Experience required.

The implication of the above result shows that farmers were advocating for cheaper and reasonable loan conditions to access funding for production pruposes.Given the NEBRASKA status, Zimbabwe will be able to boost production if farmers get the support that they need.

IV. The study Conclusions

The study conclusion was that farmers were underutilising land at the rate of 85% owing to lack of farming equipment and financial resources to boost production. The government was offering fertilisers and seed inputs to farmers to, but production was low because of timeliness of the distribution of the inputs and the methods of distribution. Farmers need financial resources to plan and prepare land for agriculture, implying that the incentives were not serving the major purpose of boosting production. The incentives were not adequate to meet the needs of requirements of farmers, delivery is often late, and sometimes irrelevant inputs were being supplied to farmers. The inadequacies have contributed to the failure of incentives to motivate farmers to boost production in Mashonaland East area. Furthermore, policy on farm management and training of farmers was also not very clear for farmers to boost production of the strategic crop. The GMB was also contributing towards the production of strategic crops in the country, in that farmers were not getting paid on time to prepare for the next season. The price of maize was too low to be viable because maize inputs such as fertiliser was too expensive to be viable, and funding was not possible when business prospects are not viable. Farmers lacked the incentive to produce maize in Macheke and government policy was not clear about this product. The government policy on incentives need to be revised, and guarantees for loans need to be production oriented. It is also the conclusion of the study that farmers need to be trained to utilise farm inputs received and the land.

Loan conditions need to be relaxed to allow farmers to access inputs and cash resources and extension officers need to be motivated to visit farmers and continue to advise them on good farming methods.

V. Recommendations of the Study

Maize product should be treated as a strategic crop, and both A1 and A2 farmers should be encouraged to grow the crop. Everyone in the Zimbabwe is concerned about food security; This study therefore recommends that the government should establish a commission to implement policy meant to boost the production of maize. The function of the commission is to monitor the effective utilization of land and incentives advanced to farmers by the government, and root out possible challenges facing farmers. The commission will also be responsible of training programs for farmers benefiting from the input supply program. Resources to fund the commission should be raised from the farmers through contributions from land tax that the government collects from the farmers. The commission must also establish markets for Agriculture output to motivate farmers to be productive. These markets will be responsible for the entire sale of output and remove farmers from the street selling their products using vending means. The commission would also be responsible for the formulation of policy on farm management, production of strategic crops, agriculture loans for farmers, farm equipment and funding proposals for farmers in need of cash resources to run their farms. The GMB need to be active in the payment of farmers to motivate them to deliver the product to the station. Support is needed for agricultural ventures in Macheke .Supermarkets, Industries, and other retail shops in the area of Macheke must develop a network of support to ensure that travel costs for farmers are reduced, and farmers would be motivated by the market incentive. If the market is ready, the farmer is motivated to become productive.

Production in farms is boosted if farmers have access to cash loans (FAO 2005).This study therefore recommends that the Government of Zimbabwe need to adopt The Nebraska Investment Finance Authority strategy to support farmers owning land but lacking financial resources. The government Financial institution such as Agri-Bank should provide farmers with loans to ensure that production is increased and guaranteed by the State. The loan evaluations should be based on production of farmers, and get a boost if the farmer manage to increase the production level,however,the major issue is governance, and this study proposes the use of a commission to effectively monitor loan usage to ensure that farmers do not abuse the funding structure. Loans should be used for the purpose in which there were borrowed for, and if the loan is not used as proposed in the application, the commission must be able to establish the challenge. This is done to motivate farmers to be productive in Macheke.

References

[1]. ABSA, 2011 Agri-Trends Weekly market analysis: Economic and Administrative Series,Issue 5, pp131-148
[2]. Arksey L Knight, F (1999) Estimating Supply Response Function for Wheat. A Case Study Agricultural Sciences, Sultan Qaboos University, **7,** 29-35.
[3]. Denscombe, (1999) Ground Rules for Social Research: Guidelines for Good Practice; Open University; Press Berkshire Britain
[4]. Eicher,K.C (1995) Zimbabwe's maize based green revolution Preconditions for replication.Working Paper University of Zimbabwe department of agricultural economics.
[5]. Food and Agricultural Organisation, (2010) FAO/WFP Crop and Food Security Assessment Mission to Zimbabwe.
[6]. Food and Agricultural Organisation (FAO), 2006 Maize: International Market Profile, Economic and Social Department Trade and Markets Division.
[7]. Food and Agricultural Organisation, (2010) FAO Statistical Data Base. http://apps.fao.org and FAO Stats CD Rom 1999, FOA, Rome.
[8]. GMR, (2011). Agricultural Policy and Performance in Zambia. Institute of International
[9]. Studies Berkley University of California.
[10]. Jayne, T.S. and Nuppenau, E.A. (2006) Maize market reform in Zimbabwe University of Zimbabwe/Michigan State University Food Security Project.
[11]. Mano, R. (2001) A review of the policy processes in Zimbabwe in Sikume, C. and Hungwe, M. (eds) Food, Agricultural and Natural Resources Policy Analysis network of Southern Africa (FANRPAN) Agricultural Policy Making in Southern Africa: Issues and Challenges.
[12]. Masters, W. (1993) The Policy Analysis Matrix in Zimbabwe, An Introduction. Working Paper Harare. University of Zimbabwe Department of Agricultural Economics an Extension
[13]. McMillan & Schumacher, (2001) Aggregate supply response in Tanzanian Agriculture. The Journal of International Trade and Economic Development, **8,** 107-23
[14]. Nyakazeya L and Marongwe D (2010) Zimbabwe`s Land Reform Program.Brighton
[15]. Patton,D. (2002) International Farm Prices and the Social Cost of Cheap Food Policies.
[16]. American Journal of Agricultural Economics, **61**, 12–21.
[17]. Scores D (2012) Managing The Supply Chain Networks .Palgrave MacMillan, New York.
[18]. (UNFAO) (2006) Maize production in Africa :Economic and Social Department Trade and Markets Division
[19]. Creswell J.W (1996) Resign, Design, Qualitative And Mixed Methods Approaches 3rd Edition Sango Publication, California pp 190.
[20]. Creswell J.W (2002) Resign, Design, Qualitative And Mixed Methods Approaches 3rd Edition Sango Publication, California pp 190.
[21]. Creswell J.W (2014) Resign, Design, Qualitative And Mixed Methods Approaches 3rd Edition Sango Publication, California pp 190.

[22]. Kvale, (1996) Supply Response of Indian Farmers Volume 1: Pre and Post Reforms Indira Gandhi Institute of Development Research, Mumbai WP-2006-009.
[23]. Kvale (2000) Supply Response of Indian Farmers Volume 2 : Pre and Post Reforms Indira Gandhi Institute of Development Research, Mumbai WP-2006-009.
[24]. Abbassian, A. (2006) Competitive Commercial Agriculture in Sub–Saharan Africa (CCAA) Maize International Market Profile, Food and Agriculture Organization of the United Nations
[25]. Anderson, J. (2004) How Much Did the Expropriation of Commercial Farms Matter to Food Insecurity in Zimbabwe? Journal for African Affairs, October 2007. http://afraf.oxfordjournals.orgs/cgi/context/citation [Online]. Accessed 29 November 2008
[26]. Blaikie (2002); A Note on the Nerlove Model of Agricultural Supply Response: International Economic Review, Published by Blackwell Publishing Osaka University Stable URL: http://www.jstor.org/stable/252647423-February 1982, 241-244.
[27]. Bless &Higson-Smith (2003) Re-thinking aid policy in response to Zimbabwe's protracted crisis. ODI Discussion Paper.
[28]. Bogdan and Biklen (1992) Understanding Syntactic Complexity: The Measurement Of Change in Syntax Of instructed, University of Hawaii , Manoa.
[29]. Burns & Groves, (2003); African workers and colonial racism, Johannesburg: Witwatersrand University Press
[30]. Butamuchoto D (2012) Inventory of Smallholder Contract Farming Practices in Zimbabwe. Support Capacity for Enhanced Market Access and Knowledge Management (SCAPEMA) SNV Netherlands Development Organisation.
[31]. Chitsike, (2003), "Land use and agriculture productivity in Zimbabwe", Journal of Modern African Studies 23.2: 251-285
[32]. Corbin and Strauss (2008), Grain and Feed Quarterly Update, Global Agricultural Information Network.
[33]. Green et al. (2015); Estimating crop supply response in the presence of farm programmes: National Superior Agronomique de Rennes (ENSAR) Dept. of Economics, France.
[34]. Hamlet, B. (2005). An Educator's Guide to Qualitative Practitioners Research. California: Corwin Press.
[35]. Helliker (2012) Uncertain one advantage of analytical tools. A journal marketing
[36]. Hittleman and Simon (2007) Zimbabwe's maize based green revolution Preconditions for replication. Working Paper University of Zimbabwe department of agricultural economics.
[37]. International Institute for Sustainable Development (IISD) (1999)
[38]. Kapuya G.F (2010) "Searching for a weapon of mass production in rural Africa: Unconvincing arguments for land reform", Journal of Agrarian Change 4.1 & 2:142–165
[39]. Kumar, R, (2005). Research methodology: A step-by-step guide for beginners (2nd ed). London: Sage Publications.
[40]. Litwin, M.S. (1995). How to measure survey reliability & validity. California: Sage Publications.
[41]. Maykut, P. & Morehouse, R. (1994). Beginning Qualitative Research A Philosophic & Practical Guide. London: Falmer Press.
[42]. McMillan, J.H. and Schumacher, S. (1993). Research in education; A conceptual understanding. New York: HarperCollins.
[43]. Meyer, F., Cohen, L., Marion. L. & Morison, K. (2004). Research Methods in Education (5th ed). New York: Routledge Falmer.
[44]. Miles, M.B. & Humberman, A.M. (2001). Qualitative Data Analysis: An Expanded Source Handbook (2nd ed). Thousand Oaks, CA: Sage.
[45]. Mouton, J. & Marais, A.M. (1996). Qualitative data analysis: A source book (2nd ed). Thousand Oaks, CA: Sage Publications.
[46]. Mugenda, O. & Mugenda, A. (2003). Research Methodology: Quantitative and Qualitative Approaches. Nairobi, Kenya: Acts Press.
[47]. Morse & Field, (2010) "Success strategies for business that perform poorly", Interfaces, Vol.18 No.3, pp. 32-45.
[48]. Kvale, S. (1996). An introduction to qualitative research interviewing. Thousand Oaks, CA: Sage.
[49]. Ndlela (2011) "Integration of agriculture in urban land use planning and adaptation of city regulations", Cities farming for the future,
[50]. Painter and Rigsby (2005) Agricultural Statistical Bulletin. Ministry of Agriculture Mechanisation and Irrigation Development.
[51]. Patton G (2002), Agricultural Production and Pricing Policy nexus: a reflection of the Ghana cocoa industry. A research paper The Hague, Netherlands
[52]. Polit and Hungler (1999) Distinguishing between and Integration in Market Analysis.
[53]. Department of Finance Yi-shon University Kaohshung, Taiwan ROC.
[54]. Rukuni, M., Tawonezvi, P., Eicher, C., Hungwe, C.M. and Matondi, P. 2006 Zimbabwe's Agricultural Revolution Revisited. University of Zimbabwe Publications.
[55]. Scandura and Williams (2000) "Searching for a weapon of mass production in rural Africa: Unconvincing arguments for land reform", Journal of Agrarian Change 4.1 & 2:142–165
[56]. Shneiderman and Plaisant (2005) Quantitative Development Policy Analysis, The Johns
[57]. Hopkins University Press Baltimore and London.
[58]. Singh F (1994) Uncertain one advantage of analytical tools. A journal marketing
[59]. Slack N. and Lewis M. (2001) Operations Strategy, Prentice Hall; Financial Times, Prentice Hall, Harlow.
[60]. Stainback and Stainback (2010) "The development of ownership in the German Democratic Republic and in Eastern Europe", in AJ van der Walt (ed.), Land reform and the future of land ownership in South Africa, Cape Town and Johannesburg: Juta and Co. Ltd.
[61]. Street, (1998) Price supply response of vegetable growers in the Sultanate of Oman, Agricultural Economics,
[62]. Takavarasha, T. (2012)Agricultural Price Policy, in Rukuni, M. and Eicher, C. (eds), Zimbabwe's Agricultural Revolution. University of Zimbabwe Publications.
[63]. Tashakkori, (2010). Relational Dynamics Within Vertical Business Networks: The Need for a transdiscplinary Approach, AnaleleUniversitatiiBucuresti.SeriaStiinteEconomicesiAdministrative, Analysis Of The University Of Bucharest: Economic and Administrative Series, Issue 5, pp131-148
[64]. Utete Report(2002), Report of the presidential land review committee on the implementation of the fast track land reform programme, 2000-2002 ('The Utete Report')
[65]. Welman et al. (2005) The Economics Of Organization: The Transaction Cost Approach
[66]. Zimbabwe National Statistics Agency (2012): Zimbabwe Quarterly Digest of Statistics.
[67]. Zimstats (2012), Zimbabwe Quarterly Digest of Statistics.