ADOPTION OF IMPROVED CROP PRODUCTION TECHNOLOGY BY AGRICULTURAL DEVELOPMENT PROGRAMME (ADP) CONTACT FARMERS IN ANAMBRA STATE, NIGERIA: A TRAINING AND VISIT (T & V) SYSTEM APPROACH

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Abstract

The study analyzed adoption of improved crop production technology by Agricultural Development Programme (ADP) contact farmers in Anambra State, Nigeria. 120 contact farmers selected using multi stage random sampling technique. The information needed for this study was captured using questionnaire and oral interview. Percentage response and Logit analytical model were adapted to capture the objectives. The result shows that the major determinants of farmers’ adoption of technology were farm size, educational level and income. The result further revealed the major problems faced by the extension agents were poor motivation, organizational problem, problems of climate change and economic problems of the extension personnel families. More so, the major problems that faced the farmers were high cost of farm inputs, poor visits by extension agents, illiteracy. The employment of more qualified and experience extension agents, especially subject matter specialists and the adoption of more qualified and paradigm” approach to agricultural research and extension were recommended.

Key words: Adoption, Improved Crop, Production Technology, Agricultural Development Programme (ADP), Contact Farmers and Training and Visit (T & V).

1. Introduction

Traditional system of farming is predominant in Nigeria as well as other developing nations.

Mixed with this system are certain aspects of modern agricultural production system (Okigbo, 1984). Awoye (2012) described our traditional farmers to be essentially small scale in structure, constitute about 90% of the farming population and are the main producers of over 98% of the bulk food of the nation. The other characteristics of these farmers according to Olayemi (2009), Abalu (2011) and Obikuaku (1983) include low capitalization, rarely hire labour but uses family labour often, land, labour and capital are the principal factors of production, lowly educated, highly susceptible to climate and other natural
disasters and indeed lack of access to opportunities for increased productivities and income.

Therefore, enhancing development in agricultural sector with such farmers with limited or insignificant scope for increasing agricultural production based on resources and technologies available to them require substantial efforts by government, private sectors and farmers themselves. Prominent among the government roles apart from provision of supportive infrastructures for economic development is to ensure that farmers are exposed to productive options/technologies developed by researchers (Benor et al., 1984).

Okereke (1983) defined technology as the systematic application of scientific knowledge to practical purposes. It includes innovations, inventions, techniques, practices and materials. These technologies and technical assistance to be given adequate response must be well understood by the farmers must be recent and applicable to the farmers’ farms as well as compatible to the agro economic environment in which the farmers operate (Benor et al., 1984). The process of applying scientific and technical knowledge in order to produce specific positive efforts according to Okigbo (1984) is an important process in national development as inadequate technology application generate poverty and limitations in inputs that can be employed, limits range of options in management planning and decisions available to the traditional farmers.

However, to expect an uneducated, traditional bound farmer to assemble and even effectively utilize new production techniques and related inputs required for modernization are doubtful, they need to be guided through educational process. This underlying professional agricultural extension system based on training and visit system in which Agricultural Development Project’s (ADPs) are promoting.

Training and visit system of extension services according to Benor et al. (1984) has singular characteristics from other forms of extension services which include unique methodology of explaining new technologies to the farmers and how to adapt and adopt improved production practices, continuous orientation of research towards farmers priority through feedback as well as resolution of important technological constraints. But, overall development in agriculture cannot be harnessed through only extension services, agricultural supportive services viz., provision of inputs, adequate marketing, transportation and communications have significant roles to play. Its indisputable high financial and managerial burdens will be accrued on simultaneous attempts at improving all (Obibuaku, 1983).

In Nigeria, the specific extension services problems include low morale, loss of sense of purpose and mission, a pre-occupation with supporting services such as the provision of inputs, low levels of skill and information, poor management, poor funding and inadequate logistical support for extension agents plus multiple chains of command (Arene, 2012). The separation of research and extension functions and the weak linkage between them exacerbated these problems. Whereas, researches are largely carried out by universities and allied institutions, responsibility for extension was vested in Ministries of Agriculture and Natural Resources (MAARs) and Agricultural Development Programmes (ADPs). In addition to these, the following deficiencies in Nigeria’s extension services were identified: lack of subject matter specialist (SMSs, lack of extension work with women farmers, lack of coordination between services and agricultural development agencies and vague and irrelevant technological recommendation which were both technically feasible, economically viable and culturally not compatible with the farmers’ circumstances (Okereke, 2013).

The training and visit (T & V) system of extension was designed to help ratify some of these problems. The central principle of this system is to produce competent, well-informed village level extension worker who will visit farmers frequently and regularly with relevant
technical messages and bring farmers problems to research (Nkematu, 2005). But, where it has been possible to implement this system as intended, it has brought substantial production increases, for example in Turkey and India (Benor et al., 1984). However, experience with T & V has been varied and it has proved less effective elsewhere, especially in Africa (Rolling and Engel, 2000). The extent of its impact on production performances in Nigeria particular study area is not known. The economic impact of this system on small holder farmers needs to be investigated. This may be the only problematic issues left to address the Nigeria food question. The specific objectives of the study are to;

(i) Position and predict low adopters prior to technology transfer
(ii) Examine the farmers and farm characteristics that may influence the farmers’ adoption position.
(iii) Describe the problems of the extension system from the viewpoints of the extension agents and the contact farmer-recipients.

Review of Training and Visits System of Agricultural Extension

Training and visit system of extension per se is not a new extension methodology but an efficient management tool to facilitate implementations of known extension principles (Benor et al., 1984). T & V is a carefully organized and time bound structure designed to deliver selected, timely and feasible technologies often referred to as ‘impact points’ are often tutored by subject matter specialists (SMSs) to extension agents at fortnightly trainings (FNIs) (Nkematu, 2005). Moris (2009) were of the view that T&V enhances continuous feedback from farmers to extension agents and research and consequently there will be continuous adjustment to the farmers’ needs.

During late 1970s and early 1980s, the training and visit system of extension largely pre-empted the field of serious efforts to improve agricultural extension and has been introduced to more than forty countries by the World Bank (Crompton, 1998). The wide spread of T & V according to Howell (2002) can be related to among other reasons, its effective management tool of known extension principle in agricultural department among developing countries. Secondly, T & V system of extension serves as an avenue to boast farmers’ productivity as well as their incomes.

In Nigeria, T & V system is applied by the agricultural development programmes (ADP) at the state levels with coordination by the Federal Agricultural Coordinating Units (FACU) and technical support and loans provided by the World Bank. The essential features of this system include – continuous training and regular fixed visits by staff solely occupied with agricultural extension, built in supervision, continuous upgrading of staff, monitoring and minimal office and paper work; single line of command, time bound work, close link with research (Awoye, 2012).

Training and Visit systems have been criticized by many scholars. These include Howell (1998) who was of the opinion that early criticisms of T & V system focused on the use of ‘contact farmers’ (C. F) and insistence on excluding input supply functions from the extension agents roles. Subsequent criticisms, he added was about the appropriate role of extension agents in different environments, the financing services and the link between extension, research and farmers knowledge.

On the contrary, others contended that in some areas the systems may actually be unworkable especially in complex heterogeneous rainfed environment (Roling and Engels, 2000) and where the researchers are incapable of producing appropriate technical recommendations or responding the farmers’ problems (Howell, 1989). Byerlere (2004) noted that a fundamental weakness of T&V is its emphasis on transfer of message to farmers who actually need to be educated in technical and managemental skills.

According to Warren (1991) training and visits is difficult to operationalize in a sustainable
way for various reasons including negative attitude towards farmer’s indigenous knowledge generated by century social sciences, colonialism and the institutionalization of the research and the extension system. T & V creates gap between theory and practice. The system may although look relatively simple but depends on defective implementation of a number of inter - related T & V activities (such as field visits by the staff, availability of proven technical information to extend, regular training, close supervision, absence of non-extension function etc. The absence of any of these can undermine T & V effectiveness and will result to or cause loss of its key features. Also, technical information expected to be transferred to the other farmers by ‘contact farmers’ in the group is a times ineffective (ASADEP, 2012).

According to Ogungbile and Olukasi (2012), the main criticisms of the first generation Agricultural Development Programme (ADPs) (Funta, Guasu & Gombe) in Nigeria include – large farmers benefited from sole cropping technological packages, exclusion of mixed cropping packages despite its popularity among the predominant farming group of the nation, recommendations are formulated without the consent of the indigenous national scientists. But the latter ADPs generations have solutions to some of these criticisms.

Also, Nwike and Chidebelu (2001) criticized extension agents to be working with progressive farmers whom are innovators in adoption categories and trickle down system are used to get to other farmers. These innovators should not be used as local leaders since small scale farmers do not have easy access to them.

Extension services are generally catalytic in nature and its impact is methodologically difficult to evaluate. The following indicators according to Chatherton and Chatheron (2001) can be used to evaluate T & V system’s quantitative effect. They include the extent in which the recommended practices conveyed by the village extension workers (VEW) are adopted or not visitors’ impression about the fields where the practice are performed, extension agents reaction to their new mode of operations and farmers’ reaction to the innovations.

However, the impact of T & V are impressing in India, China and Turkey but mixed developments are attested in many developing countries if not all (Howell, 2002). For instance, in Mahanashton State of India according to Benor et al. (1984), T & V was introduced there between 1980 - 1981 as three year programme. The following successful results were documented. These include, cotton and pulse are being intercropped, the same also with soybean and cotton, safflower is no longer intercropped with sorghum but planted solely, higher yield on sorghum hybrid introduced in many parts of the districts. Byerelee (2004) documented among wheat and rice farmers of Chambol in India, yield results of 1.3 - 3 tons/ha and 2.1 - 3 tons/ha respectively. In Seyen project in Turkey according to Benor et al. (1984) cotton growers recorded yield increase of 1.7 - 3 tons/ha. In Nigeria case, according to Nwike and Chidebelu, 2001 in their studies of Imo State Agricultural Development Programme, observed among other things that village extension workers do not reside in their circles, most production recommendations are not in line with farmer’s needs. Others include selective adoption of technology packages in cassava, rice and maize varieties.

2. Methodology

Anambra State was the study area and consists of 21 local government areas. It is bounded in the east by Enugu State, in the North by Kogi State, in the South and West by Kogi and Delta States respectively. Anambra State is located between longitude 6°03’7°21’E of Greenwich Meridian and latitude 5°38’6°47’N. The state has population of 4.182 million people (NPC, 2006) with land mass of 4415.54km². It has four agricultural zones; Aguata, Anambra, Awka and Onitsha. The state has 24 blocks and 120 circles. The state is agrarian with varieties of crops and animals being produced. Structured questionnaire and structured interview were used to capture information of farmers’ socioeconomic
characteristics such as age, educational level, farm size, membership of cooperatives, prices of inputs and output. The secondary data was collected from journals, textbooks, proceedings and other periodicals.

Multi-staged random sampling procedure was used to select zones, blocks, circles and goat farmers. In stage I, three zones were randomly selected from four; Anambra, Aguata and Awka. In stage II, two blocks each were selected randomly from the zones, given 6 blocks. In stage II, two circles each was randomly selected from each block totaling 12 circles. Finally, 10 farmers were randomly selected from each circle. This brought to a total of 120 farmers for detailed study. Thirty five extension agents who advised the farmers during the period of study were likewise sampled. Data were collected through personal interviews using two sets of pre-tested questionnaires; a set for the farmers and extension agents respectively. Descriptive statistics was used to examine the farmers and farm characteristics that may influence the farmers’ adoption position.

Logit analysis was used to position and predict low adopters prior to technology transfer. The model classified the contact farmers by using credit (x₁), farm six (x₂), income (x₃), age of farmers (x₄), number of years of farming experience (x₅), level of formal education of farmers (x₆), and household size (x₇), against adoption rate (y), into two mutually exclusive and exhaustive categories by means of probability distribution. The model can be represented explicitly by taking y as a probability, p and making its logarithm to depend linearly on the independent variables: Log P = a+b₁x₁ + b₂x₂b₁+ b₃x₃ + b₄x₄b₁+ b₅x₅ + b₆x₆ +b₇x₇ +e. This is a situation where P approaches O. Similarly, at the high end of the scale where y approaches I, Log depends linearly on the independent variables. When both ends of the scale are combined with the model, we get Log P. log (1+P) = a+b₁x₁ + b₂x₂b₁+ b₃x₃ + b₄x₄b₁+ b₅x₅ + b₆x₆ +b₇x₇ +e. That is log \( \frac{P}{1-P} \) is called the log odds or logit. The classification procedure is as follows if log \( \frac{P}{1-P} \) tends to zero, we classify the individual farmer as belonging to group I (low adopters), and if log \( \frac{P}{1-P} \) tends to one, we classify the individual farmers as belonging to group II (high adopters). The classification boundary will then be the locus of points where a+b₁x₁ + b₂x₂b₁+ b₃x₃ + b₄x₄b₁+ b₅x₅ + b₆x₆ +b₇x₇ = 0.5. The logit score, log \( \frac{P}{1-P} \) is estimated by the use of Maximum Likelihood Estimate (MLE) procedure. The logit coefficient b’s are estimated by solving simultaneous equations using matrix algebraic form.

Descriptive statistics was employed to describe the problems of the extension system from the viewpoints of the extension agents and the contact farmer - recipients.

3. Results and Discussion

In making the tabular analysis, farmers were dichotomized into low and high adoption groups. The specific recommended farm practices adopted by the farmers include improved seeds, fertilizer application, use of pesticides, appropriate planting distance, minimum tillage, and irrigation practice. Low adoption farmers were those with 0 to 3 levels of adoption while farmers categorized as high adopters were those with 4 to 6 levels (Table - 1) Credit (x₁): The average size of credit for the farmers was N3755.48. The low adoption farmers borrowed N2956.83 while the high adoption ones borrowed N4554.12 on the average (Table - 1).

Farm Size (x₂): The average farm size operated by the farmers was 2.73 because low adoption farmers had an average of 2.42 hectares while high adoption ones had an average of 3.04 hectares (Table - 1). Income (x₃): the average income of the farmers surveyed was N10, 995.18. Low adoption farmers had N9832.26 while high adoption ones had N12158.09 (Table - 1).
Age of farmer ($x_4$): The average age of the farmers was 46.94 years while those at the high adoption category had an average age of 52.65 years (Table - 1).

Number of Years of Farming Experience ($x_3$): Table - 1 shows that the farmers had an average of 26.64 years in farming, low adoption farmers had an average of 25.49 years while high adoption ones had 27.78 years. Level of Formal Education of Farmers ($x_6$): the farmers had an average of 5.02 years of formal schooling, low adoption farmers had 4.82 years while high adoption ones had 5.22 years (Table - 1).

Household Size ($x_7$): There is an average of about 16 dependents to each farmer surveyed between adoption categories, however, there were about 15 and 17 dependents on low and high adoption groups in low and high adoption groups respectively when categorized into adoption groups (Table - 1).

The set of socio-economic characteristics involved in the study are the same as those used in the Table 1. Those whose adoption levels ranged between 0 - 3 were assigned zero (low adopters) while those whose adoption levels ranged from 4 to 6 were assigned one (high adopters). Fifty six farmers were on the basis of this found to be low adopters. The problems indicated by the extension agents are presented in Table - 2.

The proportion of observations that have dependent variable equal to 1 is 86 and the restricted log likelihood is 71.483 for the model. Adoption of innovation was positively influenced by income as contained in Table - 2. This assertion concurred with the finding of Ume et al. (2016), who opined that is possible that high income farmers are more venturesome and can afford the risks involved in trying new ideas because of their financial position. Also the sign identity of farmers’ literacy level was positive, which implies that educated farmers are expected to appreciate the importance of the new ideas and effectively manage the resources purchased for increased crop production. The high educational attainment is a desirable condition for agricultural development, since it augured well for extension services in transferring research result for sustainable food production (Unammah, 2003). In addition the coefficient of farm size had direct relationship with adoption of technology and significant at 1.0 alpha level. Iheke (2006) reported that farm size played an important role in farm success because it reflects the availability of capital, access to credit and even good management ability. Moreover, against a prior expectation, the coefficient of credit had negative relationship with the crop technology adoption and significant at 10% probability level. The farmers unawares of loan scheme by most commercial banks could attest for the sign identity of the coefficient. Moreover, credit facilitates adoption of innovations in farming, encourage capital formulation and marketing efficiency (Nwaru, 2006; Iheke, 2010).

The most important problem facing the extension services as contained in Table – 3 was poor motivational problems, which was complained by 80 % of the total respondents. The poor motivation which could be in form of inadequate ICT facilities, logistics problems, inadequate mobility of staff and poor remuneration, which is capable of affecting the performances of the extension services. For instance on the problem of transportation, the commonly cited reasons such as large area of coverage and the difficulty in transportation due to the specific condition of the study area where there were a lot of river, canals and poor infrastructures (Ume et al., 2016). This was followed by organizational problem as reported by 68 % of the sampled farmers. Organizational problems include poor funding, weak or poor linkages between extension and knowledge generating institutions, poor linkage with metrological centers, poor funding of ADP, poor extension - farmer ratio, training, unnecessary bureaucracy or organizational bottleneck, poor working environment and inadequate in service, which have potentials of dwarfing the extension services (ASADEP, 2007). More so, Manpower problems to tackle the problems of climate change was viewed by 78 % of the respondents. The manpower problems include inadequate meteorological information inadequate capacity building in the area of climate change, poor
training in the area of climate change, poor training in decoding metrological information, lack of climate change subject matter specialist, inadequate climate change innovation or information, lack of meteorologist within the ADP, inadequate equipment for monitoring weather, poor access to knowledge and information on new technologies about climate change and lack of training opportunity. For extension to be relevant in tackling farmers’ problem through disseminating appropriate information to them, they should be adequately trained in the subject area. For instance in the area of climate change, the change agents should have handy meteorological information about climate change and also must have strong linkages with knowledge generating institutions e.g. research institute and metrological centers. To achieve this, there is the need for the incorporation of metrological services within the ADP (Magombo, et al., 2011). The least was economic problems of the families of extension (59 %). The low income can be seen as the big problems faced for almost all personnel as their salaries are meagre and their allowances are not forth coming. Therefore, with the low income and economic problem of families, they cannot have peace of mind to do good extension works.

The problems indicated by the contact farmers as shown in Table - 4 include high cost of farm inputs, especially agro-chemicals and other imported inputs. The economic recession currently witnessed in the country this propelled high exchange rate of the local currency to Dollar. This in effect resulting to high cost of agrochemicals and seed which are often produced abroad (Ume, et al., 2016). Furthermore, the high illiteracy status of the farmers affects their adoption of innovation no matter the technical and economic feasibility of the technology. Therefore, there is need to educate the farmers in technical and managerial skills of such transferred innovation in order to achieve its potentials. More so, poor visits by extension agent to the contact farmers were also reported. The irregularity and low frequency of farm visits by the extension agents as asserted by Asiabaka (2003) could be linked to lack of mobility and other incentives, in effect, the change agents’ basic responsibilities of innovation dissemination and technical assistants to the farmers in order to boost their production and productivity are often not achieved.

4. Conclusion and Recommendations

The major conclusions which are derived from this study are as follows:

- High adoption farmers have relatively positive attitude towards extension service.
- Significant determinants of adoption are income and level of formal education of the farmers.
- The major problems faced by the extension agents were poor motivation, organizational problem, problems of climate change and economic problems of the extension personnel families.
- The major problems that faced the farmers were high cost of farm inputs, poor visits by extension agents, illiteracy

Farmers encountered many problems in trying to adopt innovations and increase their crop output while the extension agents also had problems in the discharge of their duties. Considering the immense benefits that can be derived from a well-administered extension system, some recommendations are offered as follows:

- Efforts should be made to improve on the farmers’ adoption position by employing mire qualified and experienced extension agents (subject matter specialists) as well as crating opportunities for markets so as to increase the farmers’ income. “Farmer First Paradigm” should be adopted. This approach represents a reversal of the conventional ideas about how to achieve agricultural development.
- Instead of assuming that agriculture can only be transformed through the “top-down” transfer-technology involving outside “experts”, it argues for a participatory “bottom-up” approach based on the aspiration, experiments, knowledge
and priorities of the farmers themselves. The extension staff of the system should be given adequate encouragement and incentives on the job; particularly in distribution of farm inputs.

- Farmers should be given training in basic farm management and production techniques by the extension agents. Because of its potential impact in their productivity and adoption date. This is now considerable evidence to show that far from being conservative and ignorant; poor farmers in Nigeria do possess ideas, systems of organization and decision-making, techniques and knowledge useful for agricultural development. They also have capabilities to continuously adapt, experiment and innovate capacities which researchers and extensionists could build upon and support.

Table - 1: Farmer and Farm Characteristics between Adoption Groups 120 ASADEP Contact Farmers

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Adoption Group</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>Credit (in Naira)</td>
<td>2956.83</td>
<td>4554.12</td>
</tr>
<tr>
<td>Farm Size (in Hectare)</td>
<td>2.43</td>
<td>3.04</td>
</tr>
<tr>
<td></td>
<td>9832.26</td>
<td>12158.09</td>
</tr>
<tr>
<td>Age of farmers (in years)</td>
<td>40.94</td>
<td>52.65</td>
</tr>
<tr>
<td>Number of years of farming experiences</td>
<td>25.49</td>
<td></td>
</tr>
<tr>
<td>Levels of forma education of farmers (in years)</td>
<td>4.82</td>
<td>5.22</td>
</tr>
<tr>
<td>Household size (No. of dependents)</td>
<td>15</td>
<td>17</td>
</tr>
</tbody>
</table>

*Farmers were grouped into two according to their adoption levels, Low 0 to 3 and high 4 to 6
Source: Field Survey, 2016

Table - 2: Logit Result for 120 ASADEP Contact Farmers

<table>
<thead>
<tr>
<th>Variable</th>
<th>Slope</th>
<th>Standard Error</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Credit (x1)</td>
<td>0.0408</td>
<td>0.285</td>
<td>- 1.720*</td>
</tr>
<tr>
<td>Farm size (x2)</td>
<td>0.704</td>
<td>0.227</td>
<td>3.101***</td>
</tr>
<tr>
<td>Income (x3)</td>
<td>4.238</td>
<td>1.238</td>
<td>3.203***</td>
</tr>
<tr>
<td>Age (x4)</td>
<td>0.108</td>
<td>0.123</td>
<td>0.879</td>
</tr>
<tr>
<td>Years of Farming Exp. (x5)</td>
<td>0.026</td>
<td>0.026</td>
<td>1.013</td>
</tr>
<tr>
<td>Household size (x6)</td>
<td>0.210</td>
<td>0.326</td>
<td>- 0741</td>
</tr>
<tr>
<td>Level of Education (x7)</td>
<td>0.812</td>
<td>0.271</td>
<td>2.996**</td>
</tr>
<tr>
<td>Log-likelihood</td>
<td>-71.483</td>
<td></td>
<td></td>
</tr>
<tr>
<td>x² (Likelihood Ratio)</td>
<td>61.745</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Degree of Freedom</td>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% Correct Prediction</td>
<td>89.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of Cases</td>
<td>120</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Significant at 1% level of probability; **Significant at 10% level of probability; Source: Computed from Field Survey, 2016
Table - 3: Farmer - problems as Reported by the Contact Farmers in the Study Area

<table>
<thead>
<tr>
<th>Rank</th>
<th>Problems</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Negative attitude towards farmers' indigenous knowledge</td>
<td>42</td>
</tr>
<tr>
<td>2</td>
<td>Illiteracy of the farmers</td>
<td>62</td>
</tr>
<tr>
<td>3</td>
<td>High cost of farm inputs, especially agro-chemicals and other imported</td>
<td>85</td>
</tr>
<tr>
<td></td>
<td>inputs</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Poor visit to the farmers by the Extension agents</td>
<td>59</td>
</tr>
</tbody>
</table>

*Multiple Responses; Source: Field Survey Data, 2016

Table - 4: Extension-problems as Reported by the Extension Agent in the Study Area

<table>
<thead>
<tr>
<th>Rank</th>
<th>Variables</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Effect of climate change</td>
<td>78</td>
</tr>
<tr>
<td>2</td>
<td>Organizational problems</td>
<td>68</td>
</tr>
<tr>
<td>3</td>
<td>Poor motivation</td>
<td>80</td>
</tr>
<tr>
<td>4</td>
<td>Economic problem</td>
<td>59</td>
</tr>
</tbody>
</table>

Source, Field Survey, 2016

5. References


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