

Effects of Insecurity on Agropreneurship Performance in Katsina State: Strategies for Survival

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Abstract

This study examined the effects of insecurity (cattle rustling and kidnapping) on Agropreneurship (livestock farming and crop production) in Katsina State; Strategies for survival. The study adopted descriptive survey research design. The population of the study consisted of all 750 small scale farmers that are registered with Farmers' Cooperative Association and a sample size of 254 farmers was determined using Krejcie and Morgan formula. Multiple regression technique was employed. Statistical Package for Social Sciences (SPSS v.22) and SmartPLS-4 were used to analyze the data collected. The result shows that cattle rustling and kidnapping have significant and negative effects on livestock production in Katsina state. Also, the result indicated that cattle rustling and kidnapping has a negative and significant effect on crop production in Katsina state. The study therefore, recommends that Agropreneurs need to adopt online marketing means to sell their products. This will go a long way in reducing the threat of insecurities in their lives and products.

Keywords: Agropreneurship; Kidnapping; Cattle Rustling; Livestock Production; Crop Production.

1. Introduction

Agropreneurship had been critically affected by insecurity in Africa in General and Nigeria in Particular. ThankGod and Nwikina (2024) noted that insecurity encompasses a range of threats to individuals, communities and nations. These include but are not limited to crime, conflict, economic instability, and vulnerabilities to external pressures (Amadi-Robert et al., 2024). In Africa, insecurity has continued to ravage its horn, East and Central Africa and the trans-Saharan trade routes from the Niger Republic to Libya (Aregbesola, 2020). Nigeria which is seen as the giant of Africa has attested an unprecedented occurrence of insecurity ranging from the activities of Fulani Herdsmen; Boko Haram Insurgencies, kidnapping, cattle rustling,

political/religious crisis, murder, destruction of oil facilities by Niger Delta Militants, Child Abduction/Trafficking and so on (Amadi-Robert et al., 2024). These challenges have made security a major issue that has caused the failure of many businesses in the country and cattle rustling and other animal theft have many significant effects on cattle rearing and crop production.

In addition, the rising cases of livestock rustling is a part of the challenges in rural areas which may not be unconnected to the problems of weapons and arms that availed to the non-state actors (Amadi-Robert et al., 2024). This now let to banditry which came to Nigeria as a result of nearly four decades of unresolved conflicts between settled farmers and pastoralists'

communities that wander on the high plains of northern Nigeria particularly the North West geo-political zone in states such as Zamfara, Katsina, Kaduna, Sokoto and Kebbi. Banditry in the Zone started around 2009 and increased in 2011 especially after the general elections (Anka, 2017). They started from Zamfara State and later spread to Katsina State, they spread by riding motorcycle and operate and later hide in their forest dens (Farouq & Chukwu, 2020; and Ladan & Matawalli, 2020).

Consequently, Katsina State is presently affected by cattle rustling and kidnapping which started firmly from July 2018 to date. This affects mainly the eight frontline Local Government Areas (LGAs) namely Jibia, Batsari, Safana, Danmusa, Kankara, Faskari, Dandume and Sabua. The situation became so tense that in January 2019 the Governor of Katsina State lamented that “Katsina State is under serious siege by bandits and kidnappers, even me as a Governor am not safe” (Aminu, 2019). The bandit attacks in some parts of Katsina state are posing serious challenges/threat to agricultural activities in the state as farmers’ desert their affected villages in droves. It has affected the state’s annual crop production by 30 percent (Abba, 2020; Mustapha 2020). Admittedly, hundreds of lives were lost, many women raped, several persons maimed just as thousands of animals worth billions of naira were lost to the activities of such bandits who have made the forest their hideouts (Ladan, 2019).

According to Amadi-Robert and ThankGod (2023) agriculture sector refers to the sector of the economy which includes; crop and animal production as well as agricultural engineering, production of agricultural machinery, fertilizers, and other kinds of products to support farming. The agriculture sector is a country's major developmental tool that ensures a constant food supply and security

for the population, and also guarantees that the workforce feeds with energy to supply labour to industries. Agriculture is an inevitable sector that contributes to the wellbeing of the society because it does not only serve as a source of food to people but also a source of livelihood. Many people today rely on it as a business (agribusiness). Agropreneurship through active participation in the food and agricultural sector strongly impacts on human lives, industrialisation efforts, quality of life, economic growth, and political stability and, to a certain extent, a nation’s position in international relations and trade (Chima, 2023). It is paramount to Katsina state for its distinct comparative advantage; it holds the key to the future growth and development of the state. Conversely, agropreneurship or agribusiness in the state is currently characterized by the preponderance of insecurity as over 50,000 hectares of farmland were abandoned by farmers in the state in 2020, due to bandits’ attacks (Aminu, 2020).

More also, The President of All Farmers Association of Nigeria (AFAN), on the occasion of World Food Day 16th October, identified the present challenges faced by farmers which included corona virus pandemic, occurrence of flood disasters, drought in some parts, and insecurity especially banditry in the North West (FRCN, 2020). Irrespective of the amount of money that the Government is spending on security, agriculture, and entrepreneurship in the country, it appears that banditry in Katsina State is increasing and leading to loss of lives, damage of farmland, crops, livestock, and making it difficult to yield more on farmers to farm (Okoli & Addo, 2018). A larger percentage of the population (about 80 percent) is made up of farmers, pastoralists, agropastoralists or small-scale entrepreneurs. Livestock farming in the region has been the major component of

agribusiness that is making a significant impact on the level of income of the youth (National Research Council of the National Academy, 2003).

Prior studies concentrated mainly on food insecurity, Ladan and Matawalli (2020), Olarewaju and Kyarem (2020), Owolabi, et al. (2016) while others like Adofu and Alhassan (2018) evaluate Insecurity and economic development, and Abdurashheed et al. (2018) researched on "Incidence and impact of cattle rustling in some rural communities. Therefore, this study looks at the direct impact of insecurity on agropreneurship and also comes up with strategies for the survival of the agrobusinesses in the state. It is against this background that this study seeks to examine the effects of insecurity on Agropreneurship in Katsina State.

1.2 Objective of the Study

The general objective of the study is to examine the effects of insecurity on agropreneurship in Katsina State. Looking at the strategies for survival. Specifically, the objectives are to:

- i. Evaluate the effects of cattle rustling on Livestock production in Katsina state.
- ii. Evaluate the effects of kidnaping on Livestock production in Katsina state
- iii. Examine the effects of cattle rustling on crop production in Katsina state.
- iv. Examine the effects of kidnapping on crop production in Katsina state.

1.3 Statement of Hypotheses

To achieve the objective of this study, the following two hypotheses are formulated.

H₀₁; Cattle Rustling has no significant effect on livestock production in Katsina state.

H₀₂; Kidnapping has no significant effect on livestock production in Katsina state.

H₀₃; Cattle Rustling has no significant effect on crop production in Katsina state.

H₀₄; Kidnapping has no significant effects on crop production in Katsina state.

2. Literature Review

This section reviews the concept of insecurity and agropreneurship. Also the section reviews relevance to empirical studies and discusses the theory that underpinned the study.

2.1 Insecurity

In Nigeria, it was observed that the level of insecurity has increased since the return to democratic governance in May, 1999. These insecurities are caused by communal clashes, ethnic/tribal conflicts, religious riots/conflicts, militancy and ritual killings, cultism and ethnic militia attacks and the farmers-herdsmen conflicts (Akinola, 2016). These further increased with the arrival of the Boko Haram insurgency in the North east from 2009 to date. The level of insecurity further increased with the changing of the farmer herdsmen clashes into banditry and cattle rustling between 2010-2015. In some states of the North, this form of insecurity further changed to not only banditry, cattle rustling but to also include kidnapping of people for ransom.

2.1.1 Kidnapping

Hostage-taking is 'the seizure or capture of a person depriving him or her of liberty as a guarantee that certain actions or promises will not be carried out (Attoh 2012). It is the act of holding somebody as a prisoner by a person or persons such as criminal or terrorist organizations, until specific demands are met or money handed over. Hostage-taking today is an act of terrorism and a very serious crime (Asokan, 2009). It is a new trend of domestic terrorism in Nigeria used by the perpetrators or criminals to force relatives of any one held hostage to pay a ransom fee (Attoh, 2012). It is also used to 'compel multi-national companies and governments to take certain actions or refrained from some. The criminal activity involved in hostage-taking is kidnapping (Microsoft Encarta 2009). On the other hand, kidnapping is the act of taking a person against his/her will

from one place to another under circumstances in which the person so taken does not have freedom of movement, will, or decision through violence, force, threat or intimidation (Free Dictionary, 2009). Kidnapping is an act of domestic terrorism now in vogue in Nigeria. Kidnappers' use it for ransom or reward purposes and view it as economically viable hence the upsurge in Nigeria. Both definitions border on limiting the liberty and freedom of persons kidnapped and kept hostage for the purposes of ransom or reward. It is another devastating impact of banditry where farmers were kidnapped when they went to the farm to work. In cases where farmers were kidnapped, they were taken to the forest and will not be released till large sums of money are paid as ransom. This payment of ransom impoverished the farmers and in some cases the farmers had no option but to sell their properties including their farmlands to get money to pay ransom.

2.1.2 Cattle Rustling in Nigeria

The growing phenomenon of cattle rustling is one of transformation from the hitherto Fulani cultural practice of testing a person's bravery and prowess at bloody warfare involving various groups and actors. This transformation has seen the development of well-coordinated and well-founded banditry in almost every state in the northern part, with the Fulani ethnic group frequently considered at the epicenter of the scenario because of its profound involvement in pastoralism (Olaniyan & Yahaya, 2016). Nonetheless, herding livestock is not a limiting practice of Fulani alone in Nigeria; 14 other ethnic groups, including the Shuwa, Kanuri, Kanembu, among others, are other groups associated with it (Blench 2010).

Fulani possess roughly 90 percent of the domesticated animals and contribute about 3.2 percent of the nation's GDP (Köster & de Wolff, 2012). Fulani views cattle herding not really as a delightful enterprise

but rather as a productive and lucrative job that is demanding, strenuous, and time-consuming (Olaniyan et al., 2015; Mashi, 2017). Subsequently, cows fill different needs for them, including the production of milk and beef, the chance to breed steers and enhance stock, and as bearers and wellsprings of pay. Similarly, Olaniyan and Aliyu (2016) stressed further that being working capital, the cattle represent a social-security guarantee and inheritable assets for the herder's family, particularly for his offspring. So focal is the group as peaceful capital that, besides working as a method for creation, stockpiling, and transport, and an approach to move sustenance and riches to the Fulani, its size demonstrates the economic wellbeing of the individual or family and inspires an implicit decree to endeavour to expand the herd (Mashi, 2017; Olaniyan & Aliyu, 2016). The pastoral system is deliberately both masculinized and youth-ruled, with women relegated to the background and owning a minimal stock. A woman with six cows is painstaking wealthy, while a male with 20 cows is perceived as poor.

2.2 Agropreneurship

Davis and Goldberg (2012) defined Agropreneurship as "the sum total of all operations involved in the manufacture and distribution of farm supplies; production operations on the farm; and the storage, processing, and distribution of farm commodities and items made from them". Three-quarter of the world's poor live in rural areas where they depend on agriculture and related activities for their livelihoods, with more than two-third of the world poorest relying solely on agriculture and related activities (Madeley, 2008). World Bank/IFC/MIGA (2011) reported that one billion people around the world are still chronically poor and undernourished, and these people are concentrated in rural areas.

2.2.1 Crop Production

It is the art or science of genetic improvement of crops to produce new varieties with increased productivity and quality. It involves use (and potentially overuse) of fertilizer nutrients, including nitrogen and phosphorus, and these fertilizers, both synthetic and from animal manures, can degrade the quality of surface and groundwater used by humans for recreation, fishing or drinking (Graham and Nachman, 2001). This is the agricultural practice that involves the cultivation of crops by man either through mechanization of manual process.

2.2.2 Livestock Production

According to (Graham and Nachman, 2001) Livestock farming is simply the management and breeding of domestic, livestock or farm animals for the purpose of obtaining their meat and products (milk, eggs, leather, etc.). It can also be described as the economic activity that involves raising domestic animals for human consumption and obtaining meat, milk, wool, fur, honey, among others. Livestock farming is one of the oldest economic activities of man started by early men. It guarantees food supply, hides, skins, bones, milk and other animal products without going to the forest to hunt. Livestock farming includes the breeding of cattle, sheep, pigs, goats, poultry, rabbits, snails, fishes, and honeybees.

Livestock production and development is a vital component of economic activities of Katsina State. The state, with its suitable climatic conditions and other geo-ecological advantages, is conferred with a vast potential for animal rearing and marketing and falls within the 5 top ranking centres of livestock production in Nigeria (Ladan 2020).

2.3 Challenges of Agricultural-Entrepreneurship in Nigeria

The challenges that confront agropreneurs in Nigeria are not too different from the ones that constrain SMEs and small-holder

rural farmers combined together. The fact that has emerged from the appraisal of the various past and policy initiatives on the promotion of agribusiness in Nigeria is that although finance is a major constraint to the development of agribusiness in Nigeria, it is by no means the only or most important constraint (Owoade, 1998; Hartwich, Kormawa, Bisallah, Odufote, & Polycarp 2010; Owoade, 2011). In the same vein, Chibundu (2006) observed that effective utilization of substantial financial resources provided under the various past SMEs development programmes, was constrained by such factors as lack of adequate entrepreneurship and managerial skills as well as absence of the enabling environment for investment in small and medium scale industries.

Non-access to money and capital market: - Access to finance, and to a lesser degree cost of finance, were found to be the second most constraining factor on businesses in Nigeria after electricity (Chibundu, 2006).

Inadequate supply and high cost of inputs such as feeds, fertilizer, herbicides, pesticides, improved initial stock etc which has limited their adoption and subsequent impact on yield, production levels and profits of farmers (Hartwich, Kormawa, Bisallah, Odufote & Polycarp, 2010). Since, farm inputs play a very critical role in the modernization of agriculture, this issue needs to be properly addressed. Then the way forward is the active involvement of the private sector in the production and distribution of farm inputs as evident in the Growth Enhancement Scheme (GES) of the federal government of Nigeria.

Poor management practices and low entrepreneurial skills, lack of relevant educational background and business exposure constrains agropreneurs ability to seize business opportunities and introduce innovations that may lead to growth and expansion (Chibundu, 2006).

Restricted market access: inability to compete with other market products because of small scale production, coupled with the people's belief that imported products are better than locally produced ones, often imposes constraints on the sector growth. This is further compounded by the absence of knowledge about the existence or requirements of fringe/export markets by agropreneurs. Although many agropreneurs produce inputs or raw materials for larger industrial enterprises, the non-standardization of their products, the problem of quality assurance as well as weak purchasing power, arising from consumers dwindling real incomes, effectively restrict their market access.

Lack of information on branding, certification and recognized standards for products to ensure that products are produced organically, traded fairly and are environmentally sustainable. Again, lack of quality assurance facilities at the local level, thereby creating the problem of having to carry the product to another place to have it inspected and standardized also hindered agricultural entrepreneurship development.

Insecurity: there is a high level of insecurity in the country that at times disrupts agribusiness activities and loss of valuable production time resources. This makes most of the agropreneurs abandon their farms, operate below installed capacity, make provision for insurance, private security, fortify their business premises and eventually close shops. This increases the overhead cost and further, increases the cost of doing business in the country and eventual early demise of enterprises.

The existing land tenure systems and land use planning have limited land availability for large scale farming and commercial agriculture. Hence, there is urgent need for the immediate review of the land use decree of 1978, as it is becoming increasingly difficult and expensive to

acquire land for commercial agriculture purposes.

2.4 Factors that Caused Cattle Rustling and Banditry in Katsina State

Cattle rustling in Katsina State major occurrence are caused by many factors such as unwillingness to share grazing land, rampant drought and famine in the area, etc. Cattle raiding has major effects on the communities living in the seven LGA. The raids have mainly resulted in deaths and immigration. The high livestock raids have also resulted to high illiteracy levels in the communities, high levels of hunger and poverty among others. In a study conducted by (Bashir, 2017) there exist different attributing factors to cattle rustling and banditry in the state, it depends on one's perception to the menace acts. However, he identified the following as major factors: Poverty which represented (16.6 percent), followed by political interference (14.4percent), climate change occasioned by droughts and reduced access to water sources (13.3 percent).

Competition over access and control of scarce natural resources that represented (12.8 percent) and limited natural resources (11.7 percent),

Pastoralist culture (Fulani herders) and traditions passed over the years that have promoted animosity in the area (11.7 percent),

Commercialization of cattle rustling which represented (10.6 percent) and Poor policies on pastoralists community that have destabilized the livelihoods of the community (7.1 percent) Invading of private farmlands and ranching in search of grazing land (1.9 percent) which have contributed detrimentally to cattle rustling.

2.5 Empirical Literature

In the literature, there has been mixed and inconclusive opinion about the level of relationship insecurity and agropreneurship in Katsina State, some of the studies conducted show a negative effect between insecurity and

agropreneurship, while others show otherwise. In this regard, below are some of the few empirical pieces of literature in this context of banditry concerning food security in Katsina state specifically and Nigeria generally.

Thankgod and Nwikina (2024) examined bank operation, insecurity and agriculture sector productivity in Nigeria for a period of 37 years (1985 to 2022). The study found that the lending rate is negative but has a substantial link with agriculture sector contribution to gross domestic product in the prior and second year period. On the other hand, kidnaping rate likewise indicated a negative but significant relationship with AGDP in the long-run, deposit rate has a positive but negligible association with AGDP in the near term. Last but not least, the analysis of the link between armed robbery rate and AGDP indicated that it is both negative and negligible in the long run, as well as in the second-year period of the short run.

Otuisi et al. (2023) examined the effect of kidnapping and theft on the output of arable crops among households. A multistage random sampling technique was applied in sample selection. Data were collected through the aid of questionnaires and analysed using descriptive statistics, regression models and Likert scale. The findings of this study were summarized to include that the majority of the respondents were males while most of the respondents were between the age range of 21 to 31 years having household sizes of 5 persons. It was shown that the effect of kidnapping had a negative impact on productivity at 1% level and negatively related to production output. This implies that the higher the incidences of kidnapping the lower the production output. The coefficient of theft was statistically significant at 1% level and negatively related to the production output. This indicates that the higher the incidence of theft the lower the production output. It is

recommended that the government should make security of the people a priority, also religious and ethnic leaders should continuously educate and enlighten their ethnic groups against kidnapping and theft which have negative effects on production output.

Ladan and Matawalli (2020) explain the impacts of banditry on food security and highlight the recent efforts of the Government in tackling banditry to improve food security among others. The methodology they adopted to generate data for the study is through the use of focus group discussion involving two groups of five persons each from the LGAs that are affected by banditry which is sampled for the study. The results have shown that banditry has negatively affected food security in Katsina State. These negative impacts include killing and kidnapping of farmers, chasing of farmers out of their farmlands, seizing of farmlands, theft of cattle, burning and raiding of grain silos, and blocking of local trade routes. The Federal and State Governments are making efforts towards tackling banditry and improving food security among others. These efforts are still on-going and have not achieved the desired objectives. It is therefore recommended that decisive measures should be adopted to tackle banditry for improved food security.

Similarly, Lawal et al. (2020) examine the impact of banditry on food security in Katsina State among others. They adopt a mixture of purposive and random sampling techniques in the selection of the sample for the study. They employed the use of a well-structured questionnaire and focus group discussion to source the information from the intended respondents in the sampled areas of the state. Their findings from the study revealed that the banditry crisis has a significant impact on food security in Katsina state. The banditry crisis was measured in their study using destruction of farms. From the study

analysis, it was revealed that the destruction of farmland has a significant impact on food security in the state.

Adofu and Alhassan (2018) evaluate Insecurity and economic development in Nigeria, using trend analysis, descriptive statistics and Pearson correlation of failed state index, Incongruent to this finding, the shocking effects of Boko haram terrorism on the economic environment of the North-eastern states of Nigeria, particularly Borno state and the recent displacement of people in some localities in Katsina state. This is as a result of the recurring kidnapping and banditry where schools were shut down, farming and trading activities are abandoned for fear of attack and the need to run for the safety of lives. Also, in the same year Gadzama et al. (2018) studied the appraisal of rural banditry in "Kamuku Forest" in Birnin-Gwari local government area of Kaduna state, Nigeria. They employed descriptive statistics on the qualitative data sourced through well-structured questionnaire from designated areas of Birnin-Gwari LGA to show that age, sex and marital status, poverty, greed, corruption poor security presence, among others are facilitating factors responsible for the initiation and deteriorating spate of rural banditry in the state that results to stealing and looting of farm produce/livestock and indiscriminate abduction of the citizen of the areas thereby posing challenges to both human and food security in the area and the state as a whole.

Similarly, Abdulrasheed et al. (2018), researched on "Incidence and impact of cattle rustling in some rural communities in Katsina state", adopted inferential statistics and classical independent t-test on the cross-sectional data of 1488 respondents selected from local government areas of the state. The data was obtained via the use of a structured questionnaire and focus group discussion in which there exists a huge variation in socio-economic variables

of the respondents in the sampled local government areas between the pervasive period of menace and the period before. The study concluded that, although there is no significant displacement and vacation of people of the rural communities, the cattle rustling menace distorts the economic well-being of the people through the reduction in income level.

The above studies reviewed mostly focused on the relationship between banditry and food insecurity and some economic development. Some others like the work of Gadzama et al. (2018) and Abdulrasheed et al. (2018) looked at the general effect without focusing on any particular variable. This study seeks to look at the effect of insecurity on business which is Agropreneurship in the affected areas. Also suggested strategies for survival.

2.6 Theoretical Underpinning

Below is the underpinning theory that guides this study and Frustration-Aggression-Displacement Theory serves as supporting theory.

2.6.1 Cognitive Dissonance Theory

Cognitive dissonance is experienced whenever there is a discrepancy between preferred value and actual value states. Such a situation has the tendency to produce hatred, anxiety, fear and the desire to hurt or eliminate the source. The discrepancies could manifest within economic, social, cultural, political and religious spheres as these issues form the micro level of analysis that could be regarded as the structural background conditions operating at the individual level (Alao, Alao & Atere 2012). It needs to be acknowledged that not in all instances of cognitive dissonance or everybody that experiences it as well as deprived individuals or groups may choose to commit terrorist acts. Some people may suffer in silence and adopt constitutional means to address their grievances. Galtung (1969) in addition to the theories

hypothesize the presence of significant socio-economic indicators that can serve as breeding grounds for terrorists, but they do not answer the question of why some people or groups in the same structurally disadvantaged situations choose terrorism and others do not. Hence, the Bandits, Boko Haram insurgency and other groups within the Niger-Delta could therefore be located largely in the real or perceived discrepancy between the preferred way of life and the actual state of living that influences the dissonance. The Bandits activities which started as a result of feeling deprived of some basic amenities and the Fulani Herdmen also felt their animals were being taken away from them. This caused the present insecurity faced in the regions.

2.6.2 Frustration-Aggression-Displacement Theory

Frustration-Aggression-Displacement Theory was also used to guide the study. In 1939, John Dollard, Neal Miller, Leonard Doob, Orval Mowrer, and Robert Sears proposed this notion. Aggression, according to the theory, is the outcome of a person's encountering obstacles, interference, or frustration in achieving their aims. The hypotheses were applied to scapegoating and hate crimes, indicating that as sources of frustration accumulate during economic crises, frustrated groups will be forced to unleash their aggression on a minority group (scapegoat), which may lead to criminal acts such as kidnapping, robbery, and killing, among other things. According to the hypothesis, dissatisfaction leads to violence, but when the origins of frustration aren't addressed, the aggression is directed against an innocent target (scapegoat). The expanding unemployment rate in the economy had been a key issue when this theory was applied to the study. As a result, some residents are compelled to transfer animosity on innocent people by engaging in illegal acts such as banditry, kidnapping,

and terrorism. This situation majorly affects farmer leading to low output.

3. Methodology

This study adopted a cross-sectional survey research design and was carried out in Katsina State. Bailey (2008) stated that if the Survey is well conducted, using representative samples, valid inferences can be drawn from the sample to make generalizations on the opinion, attitude and beliefs of the whole population on a topic. The independent variable is insecurity (cattle rustling and kidnapping) and the dependent variable is agropreneurship (crop production and livestock farming/production). The population of the study consisted of all 750 small scale farmers that are registered with Farmers Cooperative Association in Katsina State. The sample size is 254 which was determined using Krejcie and Morgan formula and cluster sampling technique was used as the sample technique for the study. Cohen, Manion, and Morrison (1980) stated that when a population is too large, a minimum of thirty (30) percent can be used as sample size. The affected Local Government areas are: Jibia, Batsari, Safana, Danmusa, Kankara, Faskari, Dandume and Sabua. Primary data were collected through the administration of a structured questionnaire. This study uses descriptive and inferential statistics as the method of data analysis. Statistical packages for social sciences (SPSS v.22) and SmartPLS-4 were used to analyze the data collected.

The following are used in explaining the relationships between insecurity (Cattle Rustling & Kidnapping) and Agropreneurship (Livestock Production).

$$LP = \beta_0 + \beta_1 CR + \beta_2 KIDN + \epsilon \text{ ----- (i)}$$

Where,

LP= Livestock Production

CR= Cattle Rustling

KIDN= Kidnapping

β = coefficient of the parameters.

ϵ = stochastic error term

The following are used in explaining the relationships between insecurity (Cattle Rustling & Kidnapping) and Agropreneurship (Crop Production).

$$CP = \beta_0 + \beta_1 CR + \beta_2 KIDN + \epsilon \text{ -----}$$

----- (ii)

Where,

CP= Crop Production

CR= Cattle Rustling

KIDN= Kidnapping

β = coefficient of the parameters.

Table 1: Descriptive Statistics of the Variables

	N	Minimum	Maximum	Mean	Std. Deviation
CR	213	1.00	5.00	3.6517	.77785
KIDN	213	1.25	5.00	3.6310	.72370
LP	213	1.71	5.00	3.6972	.73557
CP	213	1.43	5.00	3.6366	.74897

Source: Computed using SPSS

Table 1 shows the descriptive statistics result of the dependent and independent variables. A total of 213 observations were recorded. CP (crop production) which is a dependent variable has an average of 3.64 with a minimum of 1.43 and a maximum 5 with standard deviation of 0.75 showing that there is not much difference among the CP of the sampled respondents. LP (livestock production) has an average of 3.70 with a minimum of 1.71 and a maximum 5.00 with standard deviation of 0.74 showing that there is not much difference among the LP of the sampled respondents. KIDN (Kidnapping activities) has an average of 3.63 with a minimum of 1.25 and a maximum 5.00 with standard deviation of 0.73 showing

Table 4: Test for Independence

	Collinearity Statistics	
	Tolerance	VIF
CR	1.000	1.000
KIDN	1.000	1.000

Source: Computed using SPSS

According to the results in Table 4, it shows that the VIF for all the variables are below 10. The tolerance for all variables were all greater than 0.1 or 10percent.

ϵ = stochastic error term

4. Results and Discussions

This section presents the results of data generated through valid responses received from structured questionnaires administered.

4.1 Descriptive Statistics

The descriptive statistics shows the mean and standard deviation of each independent variables from the mean and standard deviation of the dependent variable.

that there is not much difference among the KIDN of the sampled respondents. CR (cattle rustling) has an average of 3.65 with a minimum of 1.00 and a maximum 5.00 with standard deviation of 0.78 showing that there is not much difference among the CR of the sampled respondents.

4.2 Test for Independence (Multicollinearity)

The study tested for independence among the factors to ensure that no variable measuring the same relationship was measured by another variable or group of variables. Independence exists when Variance Inflation Factor (VIF) is greater than 10 and Tolerance is less than 0.1. The results obtained were captured in table 4.

Therefore, the result shows that there is no independence among the variables. This was an indication that they are reliable to estimate.

4.3 Regression Result

The regression result shows the impact of each independent variable to the dependent variable. The regression coefficient values indicate the extent of the impact which range from 0 percent to 100 percent.

4.3.1 Measurement Model

Table 5: Cronbach's Alpha, Composite Reliability and Average Variance Extracted

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
Cattle Rustling	0.783	0.852	0.856	0.606
Kidnapping	0.802	0.819	0.883	0.717
Livestock Farming	0.812	0.823	0.888	0.726
Crop Production	0.797	0.828	0.880	0.711

Source: Survey, 2026

4.3.2 Structural Model

For the purpose of this study standard bootstrapping using 5000 bootstrapped samples to assess the significance of path

Reliability is checked for all the composite variables, and all of them are considered acceptable. The convergent validity was also achieved using the required AVE values of all constructs, which are greater than 0.50, and all the items' loadings were higher than 0.70.

coefficients were employed as suggested by (Hair et al., 2014). Figure 1 & 2 and Table 6 & 7 below shows the estimates for the structural model.

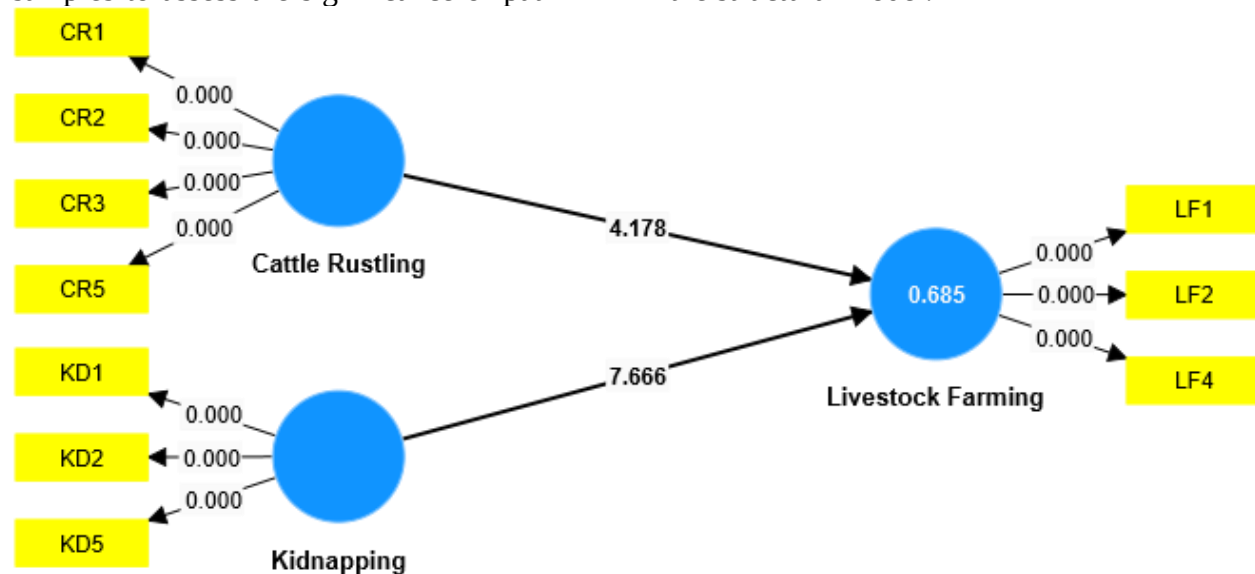


Figure 1: Research Model 1

In figure 1, there is a substantial predictive power for the key endogenous constructs for the proposed research model i.e., $R^2 = 0.685$, cattle rustling-livestock farming t-value = 4.178, kidnapping-livestock

farming t-value = 7.666. Hence, the research model explained a considerable degree of variance for the endogenous variables, as the R^2 suggests that the direct research model explains 68.5% of the total variance in constructive deviance.

Table 6: Regression Model 1

Paths	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values	Decision
Cattle Rustling -> Livestock Farming	-0.302	-0.302	0.072	4.178	0.000	Support
Kidnapping -> Livestock Farming	-0.574	-0.573	0.075	7.666	0.000	Support

Source: Survey, 2026

Table 6 shows the result of the direct relationship of the measures of independent variable and first measure of dependent variable, the result indicates a significant positive relationship between

two measures of insecurity (i.e. cattle rustling and kidnapping) and livestock farming ($\beta = -0.302$, $p < .05$; $\beta = -0.574$, $p < .05$). As such, the null H_{01} and H_{02} were rejected.

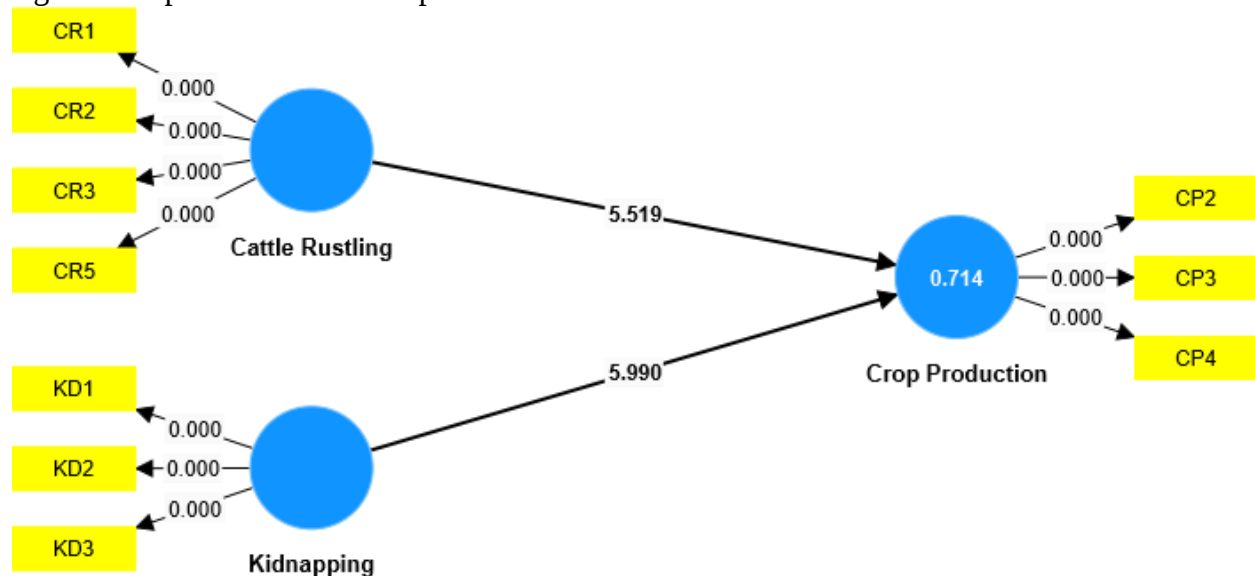


Figure 2: Research Model 2

In figure 2, there is a substantial predictive power for the key endogenous constructs for the proposed research model i.e., $R^2 = 0.714$, cattle rustling-crop production t-value = 5.519, kidnapping- crop

production t-value = 5.990. Hence, the research model explained a considerable degree of variance for the endogenous variables, as the R^2 suggests that the direct research model explains 71.4% of the total variance in constructive deviance.

Table 7: Regression Model 2

Paths	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values	Decision
Cattle Rustling -> Crop Production	-0.437	-0.443	0.079	5.519	0.000	Support
Kidnapping -> Crop Production	-0.466	-0.460	0.078	5.990	0.000	Support

Source: Survey, 2026

Table 7 shows the result of the direct relationship of the measures of independent variable and first measure of dependent variable, the result indicates a significant positive relationship between two measures of insecurity (i.e. cattle rustling and kidnapping) and livestock farming ($\beta = -0.437$, $p < .05$; $\beta = -0.466$, $p < .05$). As such, the null H_{03} and H_{04} were rejected.

4.4 Discussions of Findings

The objectives of this study are to examine the effect of insecurity on Agropreneurship in Katsina State. From the above result, one can see vividly that the selected proxies for insecurity can influence Agropreneurship in Katsina State.

From the first regression model the result shows that cattle rustling has significant and negative influence on livestock production. This means that a unit increase in cattle rustling will cause a 30.2 percent decrease in livestock production. By implication the more cattle are rustled the less their production in Katsina state. Also the result indicated that kidnapping has significant and negative influence on livestock production. This means that a unit increase in kidnapping will lead to a 57.4 percent decrease in livestock production. By implication the more the kidnapping the less the livestock production in Katsina state.

Meanwhile, the result from the second regression model shows that cattle rustling has significant and negative influence on crop production. This means that a unit increase in cattle rustling will lead to 43.7 percent decrease in crop production. By implication the more cattle are rustled the less the crop production in Katsina state. Also, the result indicated that kidnapping has significant and negative influence on crop production. This means that a unit increase in kidnapping will lead to a 46.6 percent decrease in livestock production. By implication the more the kidnapping the less the crop production in Katsina state.

This implies that, when kidnapping increases, crop production is reduced.

From the study results, the independent variables have strong negative influence on the dependent variables which makes this study to be in line with the Cognitive Dissonance Theory Which shows that Banditry is as a result of feeling deprived of some basic amenities and the Fulani Herdsmen also felt that their animals are been taking away from them.

5. Conclusion and Recommendations

Based on the above findings it is therefore concluded that insecurity has significant and negative effects on Agropreneurship. As insecurity rises, Agropreneurship is exposed more to threats of survival and growth. Agropreneurs need to survive against all odds, this means that strategies need to be identified for them to survive despite the challenge facing them. The following recommendations derived from this finding are useful and relevant to Agropreneurs which can guarantee their survival and growth. Some of these include;

- i. Agropreneurs need to adopt online marketing means to sell their products. This will go a long way in reducing their exposure to risk.
- ii. Payment of royalties to Bandits so that they can be able to farm. If agropreneurs must survive they should implore the strategies of payment of royalties to Bandits.
- iii. Engagement of the Vigilante group in the communities which will help them in reducing the level of insecurities in their areas.
- iv. Cooperation with rural dwellers; this will assist the Agroprenurs in getting valid information that can be useful.
- v. Lastly, application of trackers on cattle and other animals which make them traceable if rustled.

Suggestions for Future Studies

Future studies can focus on other sectors/businesses that may be directly affected by insecurities such as manufacturing firms, fish farming and so

on, also by looking at other parts of the country. Some other variables can be used such as; Social insecurity, and looking at how agropreneurship can be used to solve insecurity problems.

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