The Burden of Produce Cess and other Market Charges in Kenya’s Agriculture

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Abstract
The study was conducted to quantify the impact of produce cess and market charges on the cost structure of major agricultural commodities in Kenya under a newly devolved system of government. The study used a blend of qualitative and quantitative methods. Analysis of quantitative data involved computation of total costs, revenues, cess as a proportion of total cost, the impact of cess on costs and cost structure. To assess the impact of cess on costs, regression analysis was used. Results showed that produce cess significantly increased production and distribution costs. A one percent increase in cess raised the average distribution cost by 0.8% and average production cost by 0.2%. Therefore, county governments should review levying of cess to avoid charging it at multiple points. This is important for enhancing food and nutritional security, and improving incomes of households which are dependent on either production or trade in agricultural produce.

Key Words: Agricultural Cess, Trade, Food Security
JEL Classification: Q18, Q13, Q19
1. Introduction
Agricultural produce cess is an indirect agricultural tax charged on domestically traded agricultural commodities. Cesses are normally targeted on major tradable agricultural products. Ideally, cess is supposed to operate as an ‘earmarked levy’ where the revenue raised is ploughed back towards improvement of production and distribution of the taxed commodities. The earmarking of cess is an extension of the beneficiary principle that provides a direct link between the tax paid and provision of goods and services (Khan, 2001). On the other hand, market taxes (levies and charges) are generally levied to finance expenditures of local governments. Cess, market charges and other levies can be imposed using different rates: flat, proportional or graduated based on either quantities (volume) or value of the traded commodities.

Local government authorities favour cess, market charges and other levies because they have the potential to generate significant amount of revenue and are easy and inexpensive to administer. However, they can adversely affect incentives to produce and trade within the agriculture sector. This is because the incidence of these taxes can easily be shifted forward or backward depending on the elasticities of supply and demand as noted by Khan (2001). For example, if the elasticity of supply is high and the elasticity of demand is low, a cess-paying trader can raise the selling price. In this case, the incidence of the tax would fall on the consumer. On the other hand, if the elasticity of supply is low and the elasticity of demand is high, the cess-paying trader cannot raise the selling price. This puts the burden of cess on the trader. The actual incidence of the cess tax can fall on the trader, can be transferred to the final consumer, or can be shared, depending on elasticities of supply and demand for a given agricultural commodity. Therefore, the administration of produce cess and market levies involves the classical taxation challenge of striking a balance between generating revenue while maintaining the incentive to produce and achieve equity (Fjeldstad and Semboja, 2000).

Historically, before the Constitution (2010), collection of produce cess in Kenya was anchored in the Agriculture Act (Cap. 318) of the laws of Kenya. It conferred local authorities with power to impose cess in consultation with and the consent of the Minister in charge of local government. Section 192 A of the Act explicitly directed local authorities to spend 80% of all cess monies in maintaining roads and other services related to the sector from which the cess monies were levied. The Agriculture Act reinforced the cess as an earmarked levy to improve local infrastructure and services for the agriculture sector.

The Constitution ushered in a new legal regime that necessitated an overhaul of earlier laws. The establishment of 47 County Governments was a major change in governance structure. Under the devolved system of government, the Constitution provides for taxation by both levels of government and defines taxes that can be imposed by the national and county governments. According to Article 209 (1) of the constitution, only the national government may impose; income tax, value-added tax, customs duties and other duties on import and export goods and excise tax. Article 209 (3) of the constitution provides that a county may impose: (a) property rates; (b) entertainment taxes; and (c) any other tax that is authorized by an Act of Parliament.

Although the constitution provides a clear framework on taxation, there have been grey areas of contention. Collection of agricultural produce cess has been one such area. The Agriculture Act
(Cap.318) was repealed in January 2013 by the Agriculture, Fisheries and Food Authority (AFFA) Act (No.13 of 2013). During the transitional period up to September 2013, counties continued to charge cess under the Public Finance Management Transition Act. After that period, majority of counties entrenched cess tax into their legal system through statutes passed by the County Assemblies (i.e. the Annual County Finance Bills).

The need for governments to raise revenue to finance development is well acknowledged. However, taxation should not be imposed in a way that inhibits economic growth or unfairly burdens certain sections of the society. The Kenyan constitution itself under Article 209 (5) explicitly says that: ‘Taxation and other revenue raising powers of a county shall not be exercised in a way that prejudices national economic policies, economic activities across county boundaries or national mobility of goods, services, capital or labour.’

The rest of the paper is organized as follows. While Section two reviews the literature, section three spells out the methodology. Section four presents and discusses the findings. Section five concludes.

2. Literature Review
Taxation in agriculture sector in developing countries is widely acknowledged as being difficult (Rajamaran, 2004; Bahiigwa et al, 2004; Fjeldsad, 2001). As noted by Khan (2000), the problem of measuring the actual agricultural income earned by producers makes it difficult to establish balance between raising revenue while maintaining incentive to produce and ensuring equity. Agricultural producers in rural areas face both direct and indirect taxes. Examples of direct taxes include income tax, personal tax and wealth/property tax. Indirect taxes on the other hand include tax on domestic trade (e.g. VAT), tax on foreign trade, stamp duty and taxes levied in specific marketed products (excise tax and cess). In the rural areas, where agriculture is the dominant economic activity, local governments tend to impose many taxes on the sector especially on agricultural trade. Understanding the design and impact of such taxation regimes is important for evaluating their impacts. Some studies have uncovered serious flaws in design and practice of taxation regime. For instance, Bahiigwa et al(2004) showed that agricultural taxation by local governments in Uganda were characterised by leakages in revenue, negative impacts on income distribution and negative impacts on economic growth due to distortion in relative prices of goods and services. The study also showed that flat rate taxation was regressive because it disproportionately burdened the small traders.

In Tanzania, Nyange et al(2014) indicated that, because produce cess is charged on the gross value of production, cess rates can result in very high tax (even confiscatory) on net revenue among farmers that use a large amount of inputs but experience small net margins. Experiences gained from agricultural related trade taxes have led to a general consensus that there is need to reduce such taxes and focus more on value-added taxes (see Emran and Stiglitz, 2005; Goode, 1993). However, the matter is not completely settled especially in developing countries where the informal sector dominates. As noted by Emran and Stiglitz (2004), the existence of such an informal sector, the standard revenue-neutral selective reform of trade taxes and VAT may reduce welfare. It therefore means that it is critical to have context specific studies to inform tax reform debates with correct evidence. Furthermore, the actual incidence of the tax can only be
correctly ascertained by closely examining the context within which taxation occurs (see Shah and Whaelley, 1991 and Burgess and Stern, 1991).

In Kenya, no studies on the impact of produce cess on agriculture sector have been done especially after the establishment of autonomous County governments. While there are many studies on agricultural taxation (see Fjelstad, 2001; Fjelstad and Semboja, 2000; Nyange et al, 2014 in Tanzania); Bahiigwa et al. 2004 in Uganda; Kasara, 2007 in a 50 Africa country comparison; Olowu and Smoke, 1992 in inter-African country comparison; Khan, 2001 in several developing countries) a gap does exist on the impact of produces cess and other market levies on production (and consumption) of agricultural commodities. Generating empirical evidence on the impact of cess in Kenya’s agriculture in a new governance dispensation is critical for informing policy discussions and debates on produce cess. Furthermore, insights drawn from such a study can add to the body of knowledge on agricultural taxation on other parts of developing world. The study examines cost structure in the distribution of selected agricultural products, the practice and design of cess levies across Counties and the impact of Cess on production and trade in agricultural produce.

3. Methodology
3.1 Sampling
The study covered five products: maize, milk, livestock, vegetables (kales, onions and tomatoes), and fish. The products were purposively selected based on their importance in the Kenyan diet. Dependent of the products, 12 Counties were purposively selected for the study. Mombasa and Nairobi Counties were selected for their importance as markets for most agricultural products; Garissa, Isiolo and Kajiado were selected for their importance in livestock production and trade; Kiambu County was selected for its importance in milk and vegetable production while Uasin Gishu and Trans Nzoia were chosen for their importance in maize and milk production and trade. Kisumu, Homa-Bay and Migori were selected because of their relative importance in capture fisheries. Kisii County was chosen for its importance in production and trade in vegetables.

To comprehensively cover different sources of information on cess and triangulate it, three interview modules were adopted. The modules included individual trader interviews, Key Informant interviews (KII) and Focus Group Discussions (FGDs). A total of 763 traders were sampled (161 in maize, 156 in fish, 122 in milk, 94 in livestock, 101 in tomatoes, 47 in onions and 82 in kales). For any population of more than 100,000, a base sample of 400 is sufficient to yield reliable results at 95% level of confidence (Israel, 1992). The individual traders interviewed were randomly selected from the listing of traders in the different main markets of the target products in each of the target Counties. Besides the individual trader interviews, 34 Key informants were interviewed across the 12 Counties. Further, five FGDs were conducted (one for each commodity). The key informants included County officials, transporters and officials of traders’ associations who were knowledgeable in trade dynamics, cess and other market levies charged on agricultural products. Thus, they were purposively selected. Focus group discussion participants were drawn from leadership of trader associations in different markets within counties. Representation of the two gender groups was ensured for all focus groups.
3.2 Data collection
Data for this study came from both primary and secondary sources. Secondary sources provided production cost structures of different agricultural products (e.g. maize for the cereals, vegetables, livestock, dairy and fish). This provided individual production cost items, selling prices, distribution costs and farm level margins for the different enterprises. The secondary sources were also important in identifying and mapping trade flows from source to major consumption areas, and commodity flows within and across the Country’s borders due to normal price differentials. Among the secondary sources used were: County Finance Bills, price watch reports, relevant data bases, technical reports and grey literature, and peer reviewed journal articles.

Primary data were obtained from a field survey of markets and/or Counties, purposively selected to ensure coverage of maize (for cereals), kales, onions and tomatoes (for vegetables), livestock, dairy products and fish, and the most critical trade routes as reflected in the volume and direction of trade flows. The data were collected using semi-structured questionnaires administered on individual traders, and carefully designed checklists to guide discussions with key informants and focus group discussions.

3.3 Analytical Approach
Analysis of quantitative data involved computation of total costs, revenues, profits and profitability, proportion of cess to total cost and the overall cess burden. These analyses were carried out as follows:

1. Total Cost = \( \sum_{i=1}^{n} C_i \), where \( C_i \) refers to cost of an individual item/activity such as input, transport, packaging, cess, etc. Thus, for each level of the value chain, we got the total cost by summing up all the individual cost items.

2. Cess Proportion = \( \frac{\text{Cess Amount Paid}}{\text{Total Cost}} \)

3. Total revenue = \( Q_s \times P_s \), where \( Q_s \) is the quantity sold and \( P_s \) is the selling price.

4. Profit = Total Revenue - Total Cost

5. Profit per Unit = \( \frac{\text{Profit}}{Q_s} \)

6. Cess per Unit = \( \frac{\text{Cess Amount}}{Q_s} \)

To determine the impact of cess on distribution and production cost of agricultural products, regression analysis was used. Equation 7 was estimated for both the distribution cost and the production cost.

\( AC = c(y, w, x) \)

That is, average cost of distribution and/or production (AC) is influenced by the volume of sales or output (y) and cess or other costs of distribution or production (w) conditional on demographic characteristics of the trader or producer (x). The coefficient of y is expected to be negative because of scale economies. The analysis was based on the assumption that, conditional
on demographics, cess and/or other levies are exogenous. This is the conditional independence mean assumption of Angrist (1997). All the dependent variables were in log form. Further, except where there were dummies, the explanatory variables were also in log form. Qualitative data from key informant interviews and focus group discussions were processed through thematic analysis to provide insight into information from the individual interviews.

4. Findings
4.1 Dynamics in Commodity trade
This section examines source and ultimate sale markets of the different products under study, and the cost structure of trade in the different products. It further examines the profits earned by the traders from the different commodities traded. For clarity, we organize this discussion by product.

4.1.1 Trade in Maize
The study focused on four markets: Trans Nzoia, Uasin-Gishu, Nairobi and Mombasa. While Trans Nzoia and Uasin-Gishu were viewed as production Counties, Nairobi and Mombasa were viewed as major consumption markets. Although Trans Nzoia and Uasin-Gishu are main producers of maize, they also received maize from other areas. Trans Nzoia, for example, received maize mainly from Uganda, Uasin-Gishu, West Pokot and Bungoma. Uganda, however, was the most important external source, especially between July and September. In Uasin-Gishu, local production dominated the maize supply to traders. Smaller quantities, however, came from the neighbouring Counties of Elgeyo-Marakwet, Nandi and Narok.

The maize purchase price for the two counties ranged between Ksh 1800 and Ksh 2300 per 90-kg bag, depending on the season and the source of supplies. The traders sold their maize within their respective Counties and outside. Nairobi and Mombasa were the main external markets where the main buyers included millers and consumers. Selling price ranged between Kshs 2000 and Ksh 2800 per 90-kg bag. Other than from Trans Nzoia and Uasin-Gishu, Nairobi and Mombasa received maize directly from Uganda, Tanzania, Nakuru and Bomet.

Maize traders were involved in a number of value-adding activities which included drying, winnowing, preservation, and bagging. They incurred a variety of costs and experienced a myriad of challenges. Our findings revealed the following:

a) Maize traders incurred between Ksh 70 and Ksh 300 on transportation of 90-kg bag, depending on the source market.
b) Hire of storage space cost approximately Ksh 10,000 per month.
c) Cess charges were Ksh 3000 for 28-ton truck and Ksh 1500 for 10-ton truck.
d) For maize from Uganda, an additional charge of Ksh 5000 per truck would be levied for crossing the border.
e) For traders selling to millers, cess of either Ksh 70 per 90-kg bag or Ksh 6000 per truck was charged. Besides the cess, parking fees of Ksh 3000 per 28-ton truck and Ksh 1500 per 10-ton truck per day was charged.
f) Selling to Cereals and Produce Board attracted a cess of 1% of the value of maize.
g) Traders relied on agents to collect maize at the buying centres and paid a fee of Ksh 30 per bag. The traders spent a further Ksh 200 per day on telephone communication with agents.
h) At the weigh bridges, traders paid Ksh 700 per truck.
i) Loading/offloading cost was Ksh 30 per 90-kg bag.

j) Market levies cost Ksh 40 per day for open air markets and Ksh 40 per bag on landing (only in the municipal markets). Those who sold from their stores paid no market levies. However, they had to pay for business license of Ksh 13,000 annually.

This showed that cess, transportation and parking fee (for those selling in Nairobi and Mombasa) were some of the most burdensome charges, impacting maize trade. While rate of cess may appear less burdensome, levying at multiple levels made the total charge heavy on the trader. For example, the traders who procured maize from outside their Counties and sold elsewhere could incur three or even more levels of cess levying.

Transport cost constituted the bulk of the distribution cost of maize. For example, for maize trade between Trans-Nzoia and Nairobi, transport accounted for about 40% of the total distribution cost. Other costs were Cess (16%), bagging (14%), storage (10%), market levies (8%), loading and offloading (6%) and brokerage (6%). Transportation of maize is complicated further by the fact that a truck could take three or more days before offloading at the mills. Thus, the transporter charges waiting fee in addition to high parking fees charged by the Counties of Nairobi and Mombasa. Other challenges in the maize trade included high cost of drying maize to meet the desirable moisture content, especially during the rainy periods; unavailability or poor access to real time market information; and delays at cess collection points.

4.1.2 Trade in Milk
Milk traders in Trans Nzoia, Uasin-Gishu and Kiambu mainly got and sold their supplies within their respective Counties. Purchase price was estimated at Ksh 42 per litre in Kiambu, and Ksh 30-40 in Trans Nzoia and Uasin-Gishu, depending on the season. The sale price was estimated at Ksh 50 per litre in Kiambu and between Ksh 45 and Ksh 60 in Uasin-Gishu and Trans Nzoia, depending on the season. Additional supplies in Uasin-Gishu came from Nandi and Elgeyo-Marakwet. Kiambu got additional supplies from Nyandarua.

Milk supplies were found to be high during the wet periods (March-May and October-December). The milk traders incurred between Ksh 100 and Ksh 200 per day on transport; between Ksh 3000 and Ksh 4500 per year on fee to Kenya Dairy Board; 40 cents per litre on market levies; Ksh 4500 on trade license per year; and Ksh 1120 on public health license per year. Transport accounted for the single largest component of the distribution cost (26%) followed by storage costs (22%). Cess constituted 7% of the total cost of distribution just like other market levies and packaging. Other costs were wages (18%), unofficial levies (8%), loading and offloading charges (4%), and brokerage (1%). Irregular supplies, storage and poor transport infrastructure were highlighted as the main challenges that the milk traders had to contend with, raising cost of production and distribution.

4.1.3 Trade in Cattle
The main costs incurred by livestock traders broadly include; Transport, Storage, Stock auction fees, Movement permit, fee to brokers, Produce cess, loading/offloading fee and unofficial levies along the roads. For the traders targeting Nairobi market, transport makes up the largest share of distribution cost component for both cattle and goats/sheep, at 45% and 32%, respectively. In
cattle trade, other important cost components were brokerage (15%), wages (15%) and Cess (10%). Brokers are important players in the livestock distribution chain, particularly in secondary and terminal markets where they link potential buyers and sellers. In the terminal market, newcomers would find it very difficult to sell their animals without going through a broker.

4.1.4 Trade in Vegetables
Vegetables traded in Nairobi were sourced from Nyeri (onions), Narok (tomatoes) and Kiambu (kales). Other sources of onions included Kajiado and Tanzania. More tomatoes were sourced from Kajiado and Kirinyaga. In Kiambu, onions traded originated from Nairobi, Nakuru, Nyandarua and Nyeri. Most traders, however, sourced their supplies from Nyeri. About half of the traders sourced their tomatoes from Kirinyaga although a few others got their supplies from Kajiado, Narok, Nairobi and Nakuru. Kale supplies mainly originated from within the county.

In Mombasa, over 70% of the traders got their onion supplies from Tanzania. Others got from Taita-Taveta and Nyeri. About 40% of the traders got their tomato supplies from Kajiado while 23% got supplies from Taita-Taveta. Other tomato supplies came from Nakuru (17%), Nyeri (7%), and Makueni (3%). For kales supplies, 95% of traders relied on Kiambu. The rest got supplies from Nyandarua. In Kisii, the main sources of onions were Bungoma and Narok. Tomato supplies came from Nakuru (46%), Narok (45%) and Trans Nzoia (9%). For kales supplies, 64% of traders got supplies from within the county while 36% got their supplies from the neighbouring Nyamira County.

Vegetable prices varied widely. For example, during the peak seasons, a crate of tomatoes could cost as low as Ksh 500 while in off peak seasons, the same crate could cost as high as Ksh 3500. Selling price could be as low as Ksh 1500 per crate in peak seasons and as high as Ksh 6000 per crate in off peak seasons. For onions, purchase price ranged between Ksh 500 and Ksh 2000 for 14-kg bag (net) while the selling price ranged between Ksh 1500 and Ksh 3000 for the same size of net, dependent on season. Purchase price of 90-kg bag of kales was reported to vary widely, from as low as Ksh 200 to as high as Ksh 2500. The sale price was reported to range from Ksh 2000 to Ksh 3500. Notably, Cess was quite high in onions trade, accounting for about 30% of the total cost of distribution.

4.1.5 Trade in fish
Fish traders got their supplies mainly from L. Victoria, either from the Kenyan beaches or Uganda through Busia. Uganda was cited as the most important source except for omena, whose main source was Migori County. Other sources were Kisumu, Homa-Bay, Siaya and Turkana. Seasonality was only reported for omena whose main source would switch to Siaya between May and August.

Fish traders used agents to collect fish from the beaches. This helped them to save on cost and time of travel. Although substantial market existed within the counties of Kisumu, Homa-Bay and Migori, Nairobi and Mombasa were reported as the most important markets especially for traders who had large volumes. Among the costs that fish traders paid were:

a) Trader’s and movement permit fee of Ksh 350 per year.

b) Public health permit fee of Ksh 1000 per year.
c) Stall charges (only for those selling within the Municipal market in Kisumu) of Ksh 2000 per month and trade license fee of Ksh 7525 per year.

d) Usual market levies charged by quantity, but ranging from Ksh 30 to Ksh 200.

e) Cess based on quantity but ranging from as low as Ksh 30 per 50-kg sack of *omena* in Mbita to Ksh 50 for the same in Mfangano island (in Homa-Bay) and Siaya. Notably, Homa-Bay had two cess points (Mfangano and Mbita), each charging cess independently.

The traders observed that, although the market levies may not have been high, the ultimate amount paid was high if one took a longer time to clear the stock. Notice that one sack of *omena* would attract a market levy of about Ksh 30 per day. On a good day, the whole sack may be sold. However, there were instances when the same quantity could take up to 7 days to clear. This made the levies burdensome.

4.2 Agricultural Produce cess and other market charges and levies

This section presents the findings from data analysis obtained from interviews with the traders on the produce cess, market levies and charges that they face. A number of findings emerged:

a) Produce cess and other market charges and levies constitute a smaller proportion of the total distribution costs compared to transport which accounted for over 50% of the total annual distribution cost for maize and kales, and over 40% for cattle and onions. On the other hand, produce cess accounted for 15% of distribution cost in maize and onions; 13% in milk and kales; 11% in cattle, 8% in goats and sheep, and 7% in fish and tomatoes, respectively. Agent and brokerage fees were substantial for some commodities. They ranged from about 25% in fish trade to about 0.1% in milk trade.

b) Cess as a proportion of total distribution cost varied by commodity. Cess burden (cess as a percentage of profit) was highest for maize and onions. The burden was 16% for maize and 15% for onions. For fish and tomato, cess burden was 7%.

c) Average market charges and levies were lower than produce cess for all commodities except livestock (Figure 3.1).
d) Cess burden varied by commodity and county. Traders in urban counties located away from the major production areas faced higher cess burden. This indicated existence of multiple taxation along the trading routes. The highest cess burden was on Onions in Mombasa at 4.7% (Figure 3.2). This is attributable to the high taxation rate of onions in Mombasa and multiple cess charges along the trade route.

Figure 3.1: Comparison between Cess and other market charges and levies as a percent of distribution cost
Produce cess significantly increased the average cost of distribution. A one percent increase in cess was associated with a 0.8% rise in the average cost of distribution (Table 3.1). This implied that average cost of distribution increases with increase in rate of cess but less proportionately. This is consistent with information from key informants and the focus group discussions which indicated that the rate of cess charged was not too heavy, except for traders who moved their merchandise across counties and encountered multiple cess levying points.

Table 3.1: Impact of Cess on average cost of distribution

<table>
<thead>
<tr>
<th>Variable</th>
<th>Average cost of distribution</th>
<th>Coefficient</th>
<th>t-statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount of output sold</td>
<td>-0.3***</td>
<td>-13.69</td>
<td></td>
</tr>
<tr>
<td>Cess</td>
<td>0.8***</td>
<td>17.96</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>0.01***</td>
<td>2.71</td>
<td></td>
</tr>
<tr>
<td>Years of schooling</td>
<td>-0.01</td>
<td>-0.92</td>
<td></td>
</tr>
<tr>
<td>Family size</td>
<td>0.02</td>
<td>1.36</td>
<td></td>
</tr>
<tr>
<td>Male gender</td>
<td>0.05</td>
<td>0.52</td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>3.1***</td>
<td>8.01</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Observations</td>
<td>741</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R-squared</td>
<td>38%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: *** Significant at 1%
Disaggregated results showed that 1% increase in rate of cess was associated with 0.8%, 0.76%, 0.52%, 0.41% and 0.9% increase in average cost of distributing maize, milk, livestock, fish and vegetables, respectively. This shows that different products have different sensitivity levels to changes in the rate of cess.

f) Produce cess increased the average cost of production. A 1% increase in cess was associated with a 0.2% rise in average cost of production (Table 3.2). The low sensitivity of cost of production to changes in cess could most probably be attributable to the fact that only fewer agricultural inputs attracted cess, and in many cases the cess charged was low. For example, cess per ton of hay or manure was only Ksh 300. Maize seed which attracted cess at different levels only forms a small component of production cost. It is, thus, not surprising that impact of cess on the average cost of production was low.

**Table 3.2: Factors influencing cost of production**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Average cost of production</th>
<th>Coefficient</th>
<th>t-statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Farm Output</td>
<td></td>
<td>-0.5***</td>
<td>-18.38</td>
</tr>
<tr>
<td>Cess</td>
<td></td>
<td>0.2***</td>
<td>2.98</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td>0.001</td>
<td>0.31</td>
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<tr>
<td>Years of schooling</td>
<td></td>
<td>0.001</td>
<td>0.27</td>
</tr>
<tr>
<td>Family size</td>
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<td>0.01</td>
<td>0.32</td>
</tr>
<tr>
<td>Male gender</td>
<td></td>
<td>0.07</td>
<td>0.67</td>
</tr>
<tr>
<td>Constant</td>
<td></td>
<td>6.12***</td>
<td>9.38</td>
</tr>
<tr>
<td>Observation</td>
<td></td>
<td>388</td>
<td></td>
</tr>
<tr>
<td>R-squared</td>
<td></td>
<td>53%</td>
<td></td>
</tr>
</tbody>
</table>

Note: *** Significant at 1%

The observation that agricultural produce Cess increases the cost of production and distribution of agricultural produce implies that the tax has distortionary effects which may lead to negative impacts on production and inter-County distribution of agricultural produce, and incomes of traders in the same produce. This is consistent with the findings of Bahiigwa et al (2004) and Nyange et al (2014).

5. **Conclusions and Policy Implications**

The overall purpose of this study was to examine the cost structure in the production and distribution of selected food staples in Kenya. Specifically, it sought to determine the impact of agricultural produce cess on the production and distribution of the food staples under consideration. The study found that cess significantly increased the cost of production and distribution of the food staples, and may thus reduce production and/or inhibit their distribution from areas of production to areas of deficit. The ramification of this is that cess could be an impediment in the fight against food and nutritional security, especially in areas that rely on markets for the supply of food staples. It may also hamper the fight against poverty by restricting incomes of rural households which rely heavily on agricultural produce and the small scale traders in food staples.
The policy implication is that reliance of County Governments on agricultural produce cess may need to be reviewed. Charging it at multiple points could be burdensome to both producers and traders. Thus, Counties should ensure that, once Cess is charged at the point of exit of the County of product origin, it is not charged again on the same product either in the transit or the recipient Counties. Preferably, like other agricultural trade taxes, Cess should be kept low as recommended by Emran and Stiglitz (2005) and Goode(1993).

References


