VALUE CHAIN RISK ANALYSIS FOR SMALLHOLDER FARMERS IN KIAMBU COUNTY, KENYA

• Gladys Musuva¹*, Peter Lewa¹, George Achoki¹, Albino Luciani²

¹Chandaria School of Business-United States International University
²School of Public Health and Community Development-Maseno University

* Corresponding author: Gladys M. Musuva
Telephone: 0722-769634
Email Address: gladys.musuva@gmail.com

Key words Small holder farmer, value chain, value chain financing.
Background information

• Small holder farming is characterized by a high variability and unpredictability of many factors.

• Such risks could be caused by factors like weather variability, natural disasters, uncertainties in yields and prices, imperfect markets of financial services, institutional market forces and individual uncertainties.

• Financial products and services offered towards smallholder agricultural production by financial institutions still remain insufficient

• The risks that arise in the agricultural sector are mainly from sudden price changes and unpredictable weather patterns that can happen in a whole region, thus making loan repayments at that time uncertain.
Methodology

1. Study population, site and design

• Small holder tea farmers from Kiambu County

• Cross-sectional study design in Kiambu County

• Kiambu County lies between latitudes 00 25’ and 10 20’ South of the Equator and Longitude 360 31’and 370 15‘East

• Borders Nairobi & Kajiado-South; Machakos-East, Murang’a-North & North East, Nyandarua-North West, and Nakuru-West

• Average rainfall is 1,200 mm p.a with mean temperatures of 26°C
2. Sampling Design

• Systematic random sampling approach used
• 6 tea factories listed and systematically sampled the 10th farmer.
• In cases where the 10th farmer did not meet the inclusion criteria or declined to participate, the next respondent meeting the inclusion criteria was selected and the 10th respondent interval restored.
• An average 25 respondents per factory were sampled (range of 23 to 27) to generate a sample size of 301 respondents

<table>
<thead>
<tr>
<th>KTDA Factories</th>
<th>Number of Respondents</th>
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<tbody>
<tr>
<td>Kambaa</td>
<td>51</td>
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<td>Kagwe</td>
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<td>Theta</td>
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<td>Gachege</td>
<td>54</td>
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<td>Mataara</td>
<td>52</td>
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3. Data Collection

• Primary data was collected from Kiambu smallholder tea farmers at the KTDA factories through semi structured questionnaires.

4. Data Analysis

• Descriptive analysis for farmer profiling on value chain risk.
KEY RESULTS

• 276 individuals interviewed: 183 (66%) males and 93 (34%) females.

• Mean number of years the respondents had been planting tea was 12.5 years (SD 6.3 years)

• 61% had planted tea for more than 10 years, 14% for less than 5 years and 25% for between 5-10 years.

• The mean acreage per farmer was 2 acres (SD 0.66 acres).

• 88% of the respondents cited tea as their main source of income while 11% and 1% listed formal employment and coffee as their main sources of income
Key results cont.

• 82% owned the land in which they were farming, 18% had either leased it or were temporarily
• 77% said that they had taken a loan for farming purposes while 23% had never taken a loan.
• The median amount of loan taken was KES 50,000 (IQR KES 20,000 – KES 100,000).
• The most preferred lenders by the respondents were SACCOs (64%) and banks (57%) followed by chamas (45%).
• 33% cited friends and relatives as their preferred source of seeking financial support, 5% had received financial support from NGOs while 7% shylocks
Factors limiting access to value chain financing

• 79% cited high interest rates as constraining factor to loan access, 64% lack of collateral, 63% lack of information on credit facilities and 62% said the scale of their farming operations limited their access to credit facilities.

• The factor that least deterred farmers from accessing credit facilities was high transaction costs and risk of defaulting-both cited by 59% of the respondents.
Business risk management and mitigation

• 85% of the farmers rated sudden changes and prolonged decline in output price as the highest operational risks to their operations, 80% changes in weather patterns, 80% foreign market conditions.

• The least threats to operations were transport failures (33%), pests and diseases (41%) and distribution failures (43%).

• 76% reported lack of information about available insurance services and products as the biggest impediment to accessing insurance, 72% high costs of insuring, 72% complicated insurance contracts, 69% felt small scale of their farming operations, 66% inappropriate insurance services.

• Only 37% and 47% of the respondents felt that unwillingness of insurance companies to insure farmers and high operation risks were factors that hindered them from accessing insurance services and products.
Business risk management

Rating of operational risks

- Changes in output price: 85%
- Changes in input prices: 75%
- Changes in the operation of...: 85%
- Changes in finance conditions: 79%
- Changes in weather patterns: 80%
- Pests and diseases: 64%
- Transport failures: 41%
- Distribution failures: 33%
- Changes in govt policies: 43%
- Changes in foreign market: 63%
- Changes in exchange rates: 80%
- Changes in oil prices: 74%
- Changes in oil prices: 70%
Factors limiting access to insurance services

- High cost: 72%
- Lack of information: 76%
- Complicated contracts: 72%
- Inappropriate insurance products: 66%
- Unwillingness to insure: 37%
- High operation risks: 47%
- Scale of operation: 69%
DISCUSSION

• Farming is a risky venture.
• Small holder farmers in tea industry are faced with many informal and formal risks.
• Generally farmers respond to these risks through informal (local arrangements between individuals or households, or groups as communities or villages) and
• formal (market-based activities and/or government provided) mitigating mechanisms.
Cont.

• Lekprichakul (2009) describes 2 coping mechanisms: *ex ante* (measures taken to avoid, transfer or reduce or exposure) risk management and *ex post* (measures taken after the shocks to mitigate or insulate the welfare impacts of the shocks) risk coping. The former is a long-term coping mechanism while the latter is a short-term survival adjustment.

• In their study Lekprichakul (2009), the most preferred lenders were SACCOs (64%) then banks and chamas (45%) and friends/relatives and did not prefer illegal money lenders (shylocks).

• They cited that the most critical factor the lending institutions considered during the loan application review process was the farmer’s ability to repay the loans especially the stability of the primary source of income.
Respondents in Ekasiba *et al’s* study voluntarily cited fear of not repaying their loans as the reason for not applying for loans/credit facilities.

In this study, 6 of every 10 respondents (59%) also cited inability to repay loan installments as a big reason for not accessing credit facilities.

Wangui (2013) in her study aimed at reviewing the factors influencing smallholder dairy farmers’ choice of agricultural credit in Githunguri Constituency determined that most small holder farmers still prefer the “semi-formal” sacco option due to its flexible payment methods and quick loan processing times (Wangui, 2013).
Cont.

• Bucher *et al* (2007) and Lamberte *et al* (2007), also agree that the sacco credit option is popular amongst smallholder farmers because:
  • they processed their loans quickly,
  • were not stringent about collateral and
  • were open to rescheduling their loan repayments to suit farmer incomes.

• These findings also concur with those of Mbugua (2012) who in his review of factors that determine credit access in Cherangany Constituency of Trans Nzoia County found that banks gave special attention to guarantee of loan repayment and collateral to secure the same.
Cont.

• Small holder farmers did not have access to insurance services and products due to:
  • limited access to insurance information,
  • high costs of insuring and complicated insurance contracts and
  • non-flexible insurance products/services that did not explicitly address their needs.

• This environment is not suitable for credit from the formal lending sector as most financial institutions tend to lend to market segments with a stable and assured ability to repay loans (Koppardhi & Kagabo, 2012).

• As a result, despite numerous government interventions to increase smallholder access to affordable credit, the formal lending sector has not met the credit demands.
CONCLUSIONS

• Access to adequate, cost-effective, and timely insurance services for smallholder farmers remains a challenge.

• More access to insurance should be prioritized to help smallholder farmers to manage risk, enhance investment, and foster the growth in farm productivity.

• Small holder farmers do not have access to insurance services and products due to limited access to information, high costs of insuring and complicated insurance contracts as well as non-flexible insurance products/services that did not explicitly address their needs.

• All stakeholders including the government and insurance companies should develop customized insurance services and products that are specific to small holder farmer needs like effective and comprehensive insurance coverage as well as efficient reimbursements during farmer claims.
RECOMMENDATIONS

• More access to insurance services and products for smallholder farmers should be prioritized to help them manage risk, enhance investment, and foster the growth in farm productivity

• Smallholder farmers should be equipped with information and expertise on insurance through a coordinated training and/or sensitization plan by government and key stakeholders
Author’s Contributions

• Mrs. Musuva conceptualized and designed the study, conducted literature review, did data cleaning and drafted the manuscript.
• Prof. Lewa and Prof. Achoki provided guidance on study design, reviewed the analysis and manuscript and provided key comments on manuscript revision.
• Luciani conducted data analysis and reviewed my final manuscript.
• All authors read and approved the final manuscript.
• **Acknowledgements**

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Any questions???
Thank You