



## Market information voice messages increase revenues for Guinea-Bissau's cashew producers

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### Key messages

- Voice messages that share price developments and market trends can increase sales and incomes for cashew producers in Guinea-Bissau.
- Providing this information for free through the *n'kalô* market information system is effective.
- Public-private/independent partnerships are likely to be able to ensure the reliability and sustainability of the service.

### Quality and reliable cashew market information needed in Guinea-Bissau

Cashew nut production and commercialization is the main income source for a large portion of Guinea-Bissau's population and represents more than 90% of the country's annual exports. However, for many producers, access to reliable price information is scarce. This is due to their high geographical dispersion, the distance to markets and competing commercial interests of the actors in the sector.

Aiming to address this problem, the government sets a reference price for the producer at the start of the annual cashew trading season. There are two main issues with this policy:

1. This price is usually only announced once, yet the actual market price evolves according to the dynamics of the international market.
2. Sometimes, the reference price does not reflect the levels of supply and demand in the market, distorting how actors in the sectors operate.

These problems prevent producers from knowing the best time to sell their cashew nuts. Producers tend to sell their cashews only once during the trading season and without information on the right price or the best time to sell, they may unwittingly forgo the opportunity to earn a higher revenue.

These conditions indicate that improving market information dissemination to cashew producers could increase their revenue, improving the socioeconomic prospects of a large proportion of the country's rural population at a very low cost.



### Policy options

A team of local PEP researchers—the authors of this brief—scoped various policy options to improve transparency in Guinea-Bissau's cashew market. They initially identified **three policy options**:

1. Market information broadcasts on national radio
  - Radio is the most widespread means of communication in the country, especially in rural areas. It is also the least costly for producers and does not require literacy skills.
  - However, the significant conflicts of interest in the sector are likely to result in the communication of inaccurate and conflicting information, affecting the credibility of any objective information campaigns.

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2. Expanding and training producer cooperatives
  - A promising prospect with great potential for improving transparency in the cashew sector.
  - However, organizing them requires a highly complex process, with a much higher cost than communicating information (via radio or mobile phone), based on the team's review of available cost data.
3. A mobile phone-based market information service
  - As it would be the unique source of information of this nature in the country, the problem of existing conflicts of interest is expected to be easier to manage than with national radio broadcasts.
  - However, low levels of literacy may reduce the impact of text-based communications.

The project team thus identified implementing a market information system, such as *n'kalô*, as a viable option to implement to increase transparency in a cost-efficient manner. *N'kalô* is a reliable market information system already working in other West-African countries. This service provides users with agricultural price ranges and marketing advice based on likely market trends. Adapting to the low levels of literacy among cashew producers in the country, the *n'kalô* service sends information via voice messages and through an interactive voice response system (IVR), unlike previous text-based services of this kind.



## Kunsi preço di kucu di cadju liga 255 pa tené nobas

**N'kalo**, líder internacional di informasons sobri prês de **Kuku di caju**.

### The experiment

To test the impact of the *n'kalô* market information system in Guinea-Bissau, the project team of local PEP researchers implemented a two-level Clustered Randomized Controlled Trial.

- The team randomly selected 1988 cashew farmers in 290 villages spread over seven of the country's eight regions and surveyed them across multiple rounds of interviews.
  - The team designed the randomization methodology to minimize information sharing between the 108 randomly chosen control villages and the 182 treated ones, while allowing for the estimation of potential spillover effects within each treated village.
- During the 2020 cashew trading season, within the treated villages, a randomly selected group of cashew producers received an introductory training about the service and free, weekly market information communications through voice-based and text messages.
  - Producers in the control villages did not have access to the training nor the service until the beginning of the 2021 cashew trading season.

To find out more about the research methods and findings, read the full research paper, soon to be published as part of the [PEP working paper series](#).

### What are agricultural market information systems (MIS)?

An agricultural market information system collects, analyses, processes and communicates prices and other relevant information to producers, traders, processors, and other stakeholders of agricultural products.

The system collects data from various reliable sources, analyses it determining time trends and regional variations, and explores the causes of these variations. It then communicates this information to users in a format they can understand and use, for example, as an SMS or a short voice message on their mobile phone.

## Key findings

### Providing free weekly market information to cashew producers can significantly increase their revenues.

- Producers who received training and weekly market information sold their nuts more frequently compared to the control group.
- However, there was not a large increase in the average farmgate price that the producers earned.
- Even so, these effects translated into a significant increase in their revenue (about 21 percent) from the commercialization of cashew nuts.
  - The untreated producers in the “treated” villages also benefitted from these increases.

The surveys conducted as part of the experiment show several characteristics of the national cashew market that highlight the relevance of providing quality Information to producers

- Cashew nut sales are the main source of income for 80% of the producers in the sample.
- Cashew prices are volatile across the marketing season and most producers sell their stock in one single transaction.
- Around 98% of sales take place in the villages, far from regional markets.



## Conclusions and policy implications

As the *n'kalô* service increased producers' revenue in Guinea-Bissau—vital for improving the socioeconomic prospects of rural areas—the project team recommends **wide promotion of this service, to improve market transparency and efficiency in the national cashew sector.**

The right promotion would allow the service to reach a large number of families so that it can become financially self-sustainable.

Based on experience from other countries where the *n'kalo* service operates, messages should be delivered throughout the year to keep producers informed about price trends in the international market and increase their engagement with the service.

Taking these aspects into account the project team recommends a public-private/independent partnership to ensure the reliability and sustainability of the service and its benefits for the country.

Specifically, the service could be managed by a partnership between the National Cashew Agency (ANCA) and some independent or private institutions, such as the NGO Nitidae and/or the research center BELAB, which have supported the roll-out of the service during this evaluation.

- This partnership would help combine political support and information independence.
- The ANCA would provide the national information, with BELAB and/or Nitidae contributing the international context.
- The MTN telecommunication network would remain responsible for managing the messaging platform and deliver the weekly content to the users.
- A Memorandum of Understanding would assert the roles and responsibilities of all the parties involved in the expansion of the service.

This brief summarises policy analysis outcomes from the project **PIERI-20367**. To find out more about the scientific research methods and findings, read the full research paper, soon to be published as part of the **PEP working paper series**.

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*The views and opinions expressed in this publication are those of the authors and do not necessarily reflect those of PEP.*

