

# A value chain analysis for baobab (*Adansonia digitata*) in Senegal



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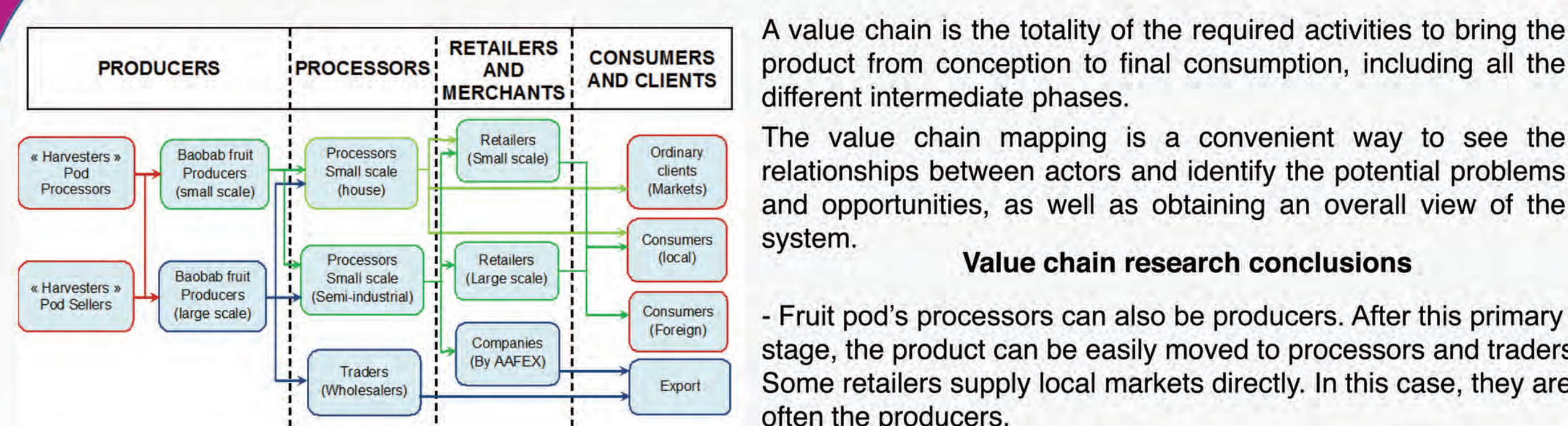
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**T**HE AFTER project, African Food Tradition Revisited by Research, involves seven African countries (Benin, Cameroon, Egypt, Madagascar, Senegal, Ghana and South Africa) and four EU countries (France, Portugal, Italy and the UK). The aim of this project is to identify and characterize the African food technology know-how of ten traditional products, and share this information in developing countries and particularly with the EU; in order to help local products and technologies to become competitive on national and international markets. The baobab value chain analysis we set up is a part of the WP5, which the aim is to study the current and future markets, products and consumers in Africa and EU.



## Value chain map



## Market Gap

A market gap is an opportunity in a market where no supplier provides a product that buyers could need. The value chain team identified six possible markets and six possible products that could be promoted from baobab. The results showed that re-engineered products could have good places in the market, and that street and export markets have very high potentials to receive new products.

Table 2: Gap strategy of baobab products (traditional and re-engineering process)

	Traditional products		Re-engineered products			
	Pulp	Juice	Baobab instant pulp	Baobab ice cream	Baobab juice new design	Baobab syrup new design
<b>Traditional market</b>	3	2	0	2	0	0
<b>Street market (small scale)</b>	2	1	0	1	0	0
<b>Mini-market</b>	5	4	0	0	0	4
<b>Super-market</b>	4	5	0	0	1	2
<b>Big restaurants and hotels</b>	6	3	0	3	2	3
<b>Export market</b>	1	0	0	0	0	1

The classification occurs from 1 to 6, which means the first place where the product is sold to the sixth place (in terms of quantity). 0 means not classified, then not sold. The competing products are blended juices, natural cloudy juices, drink powders (flavoring and coloring), and instant powders.

## Method

The key actors and processes of baobab products have been identified by a survey. The value chain information has been used to build SWOT and GAP analyses for existing and re-engineered AFTER products, as well as a marketing mix. The work builds upon the AFTER surveys and the literature search (Cisse & Ndiaye, 2010). The main results were obtained thanks to follow-up interviews with key value chain actors.

Value chain analysis was chosen for its good ability to locate possible upgrading opportunities for baobab products in local and European markets.

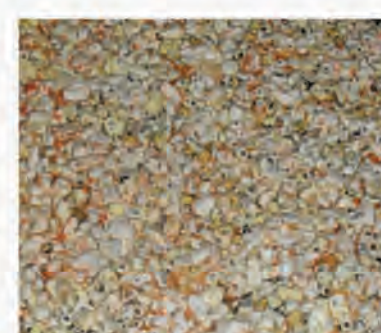
## Product description

The Baobab (*Adansonia digitata* L.) is a tree that grows wild in Senegal. Its fruit, locally called "monkey bread", is consumed in various forms. It is a fruit rich in dietary fibers, minerals, vitamin C and total polyphenols.



Baobab powder, produced and sold in Senegal, packaged in France

Baobab pulp is a semi processed food. The pulp is ground and sieved to obtain a powder, which is sun dried. It is used to develop other food by-products, such as icecream or beverages.



Baobab pulp after breaking the pods

The baobab pulp is sold into plastic sachets (powder) to avoid water rehydration.

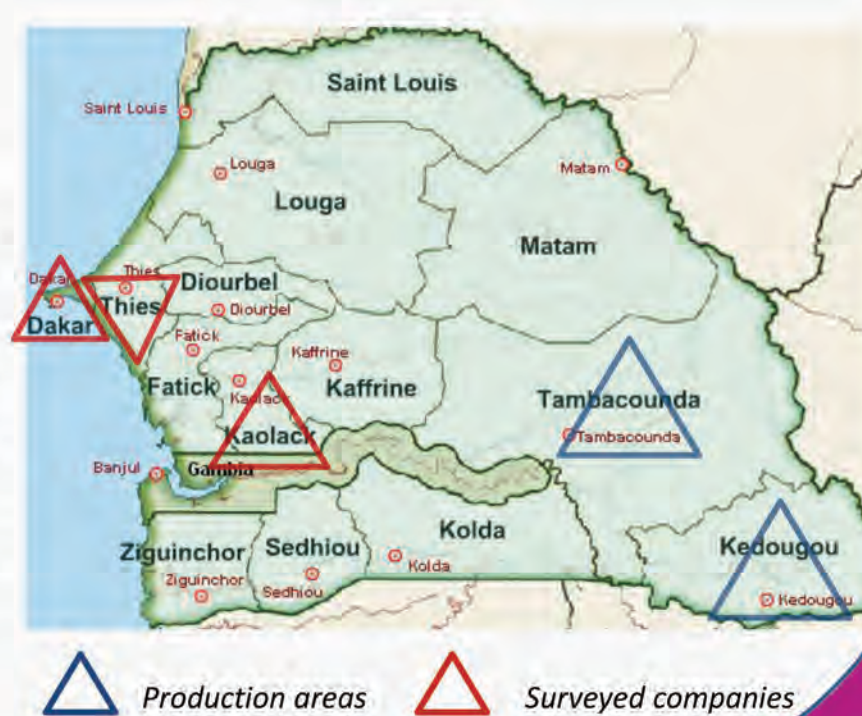


To obtain baobab syrup, the main difference with juice is the addition of sugar until 65°Brix and the cooking up to 105 °C, which allows a longer conservation. Moreover, no other product is added. Baobab syrup is sold into plastic or glass bottles.



Baobab juice products sold in Senegal

Tambacounda, Kedougou, Thies and Kaolack provide the major part of the baobab production. But three regions are considered to be the largest consumption areas of products from baobab fruit: Dakar, Thies and Kaolack. Four companies were chosen in those areas to study the baobab fruits market.



- Baobab producers can also be processors; in this case they have to connect with retailers and companies for exportation. Else, the fruit producers work with the processors or provide directly the products to the retailers for exportation (Italian and Spanish processors). The mostly encountered processors group is women producing juices in small plastic bags for low income consumers.

- After processing, retailers bring products to the consumers. The enterprise levels' processors (FWS, ESTEVAL, FRUTALES...) work with organizations such as AAFEX or ASEPEX, promoting the products export. They can also work with the retailers to facilitate the export after supplying local markets.

### Obstacles to the market's entering of products

The lack of knowledge about the owners of the baobab trees, the volume trade of juices and syrups, or the informal distribution of baobab products is a limit to the improvement of market's entering.

Mainly due to an artisanal processing, many problems concerning the food safety and working speed are encountered:

- > The influence of the height of baobab trees on pod harvesting
- > The traditional ways of breaking the baobab's pods, extracting the pulp, and filtration
- > The time needed to fill up the bottles and the plastic sachets
- > The bad packaging and storage conditions, as well as the lack of HACCP system and quality control, which lead to a short shelf-life.

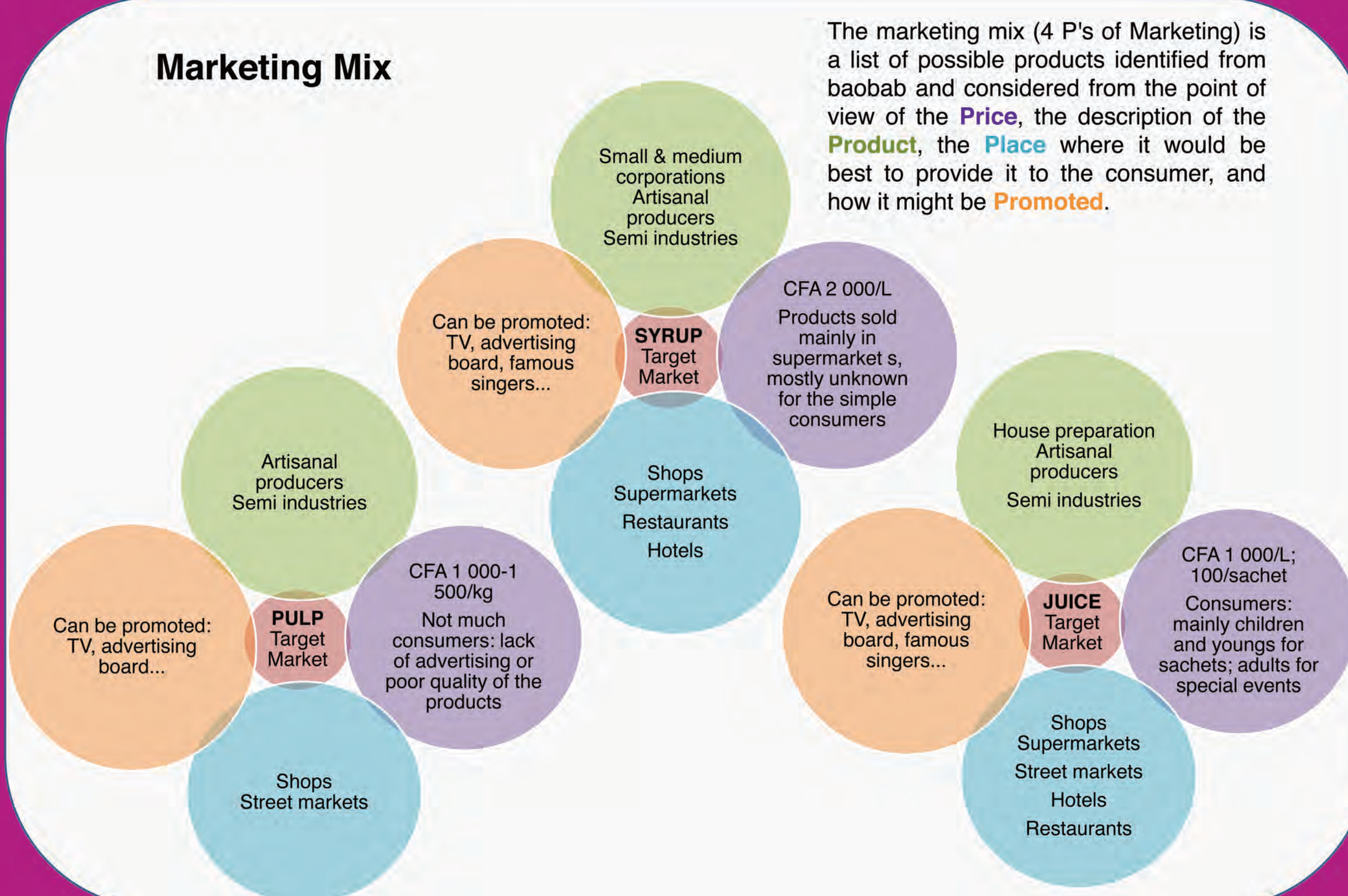
### Prices

It is important to know the prices of the different existing baobab products, in order to precisely locate the target markets of potential new products, and to obtain the best competitiveness.

Table 1: prices of different baobab by-products

Raw matter (fruit)	Broken pod (before processing)	Pulp	Juice	Syrup
350 CFA/kg	400 - 500 CFA/kg	1 000 - 1 500 CFA/kg	1 000 - 1 300 CFA/L	2 000 CFA/L

## Marketing Mix



## Conclusion

- The baobab fruit by-products have opportunities to be well represented in the different market places.
- There is a need of re-engineering to get competitive and high quality products, especially to improve the shelf-life and packaging.
- There is real potential for increased domestic sale of baobab products in Senegal.
- The small scale beverage sector looks the most interesting.
- Traditional markets do not fit to respect the value chain conditions such as the storage and the targeted consumers.

## Acknowledgments

We thank the seventh Framework Programmes for Research and Technological Development (FP7) of the European Union for which our work is related to.

## References

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