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Promotion of local agri-food products through market knowledge: Consumption patterns and expectations of urban households towards local tomato purée in southern Benin

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Urban growth in sub-Saharan Africa is an opportunity for local agri-food businesses. However, local agri-food, including tomato purée in southern Benin, are struggling to emerge in urban markets. The main objective of this study was to identify avenues for increased market penetration for local tomato purée. A survey was conducted from September to October 2017 among 405 households randomly selected. Data were collected based on structured interviews. The questionnaire focused on consumers' knowledge on the product, their motivations and consumption patterns, and their expectations. As empirical finding, 23.95% of the consumers had no knowledge on the commercial production of tomato purée in Benin, while 5.93% of households were buying the product. Tomato purée is available in supermarkets and specialized outlets, which limits the proximity and visibility to most households. Consumer expectations towards local tomato purée includes the attributes of consistency, competitive price, expiry date on the label, bright red colour, non-acidic taste, and product traceability/certification. Capacity strengthening is needed for processing enterprises to upgrade product quality by incorporating the technical quality attributes sought by consumers. Moreover, an effective marketing action from value chain agents is required for increased consumers' knowledge and consumption of local tomato purée.

Keywords: market access, urban consumers, consumers' knowledge, consumers' expectations, consumption patterns, local tomato purée

Introduction

Market access constraints are major challenges to agricultural development in sub-Saharan Africa (Poulton, Kydd, and Dorward 2006). Indeed, policies aimed at increasing agricultural production without considering market access were not sustainable in terms of poverty reduction. Therefore, access to market through efficient value chains has become a key component of rural development and poverty reduction strategies in developing countries (Jama and Pizarro 2008; World Bank 2008). Market access strategies includes the processing of agricultural products, the promotion of agribusiness and entrepreneurship (Yumkella et al. 2011). Especially, the processing of agricultural products is crucial for sustainable and inclusive agricultural growth (AFD 2009). The importance of agri-food processing stems from its contribution to added-value and job creation (Bricas 2012), and its contribution to food availability, through reduced post-harvest losses (Broutin and Bricas 2006).

Most West African countries face a rapid growth of their urban population. This urban growth is an opportunity for local agri-food businesses (Jayne, Anriquez, and Collier 2013). However, local products are still struggling to take advantage of this urban market growth. One of the challenges for local agri-food producers is the difficulty to adapt their products to dynamic consumer needs. For instance, increased food imports for food security purposes in West African cities have brought changes in dietary habits and consumers' expectations in terms of regularity, quality and price (Broutin and Bricas 2006). In Benin, tomato purée illustrates well the impediments faced by local agri-food value chains, in capturing the potential of urban markets.

The tomato purée value chain emerged in Benin and other West African countries as an opportunity to promote the local production and reduce post-harvest losses (AFD 2009; Houssou et al. 2016; Montcho 2002). It is associated with employement opportunities and increased added-value in the tomato industry. However, so far, tomato purée value chain agents fail to take advantage of the potential of the urban market. Previous studies showed that most consumers prefer the imported double concentrate of tomatoes to the local purée because of key attributes, such as the bright red colour, the consistency and the taste (Danigue 2016; Dossou, Soulé, and Montcho 2007).

Increased processing is an upgrading vision in agricultural value chains in sub-Saharan Africa. To help producers and other value chain agents to take advantage of urban food demand, it is important to provide them with sound information on urban consumers' knowledge and their preferences. The development above calls for the following questions which are of interest to decision makers: how well do urban consumers know the existing supply of locally processed agri-food? How can the understanding of consumers' motivations and consumption patterns support the development of an effective market access strategy? What are the consumers' expectations? These questions are addressed in this manuscript, based on the case of local tomato purée in southern Benin. Therefore, the main objective of the study is to identify avenues for increased market penetration for the local tomato purée in southern Benin. The specific objectives are: (i) exploring the relation between consumers' knowledge and marketing aspects of local tomato purée; (ii) identifying which attributes are most important in the selection of tomato purée and (iii) understanding how such factors interact to influence decision-making related to the purchase behaviour of tomato purée products. These are crucial issues because the possibility for processors and other

value chain agents to improve their income depends on their ability to supply products that meet consumers' expectations (Fold and Gough 2008). Besides local tomato purée, the study deals with subtitute products, namely tomato double concentrate (imported and local). The rationale behind this is that the understanding of consumers' behaviour for substitutes could provide guidance for the promotion of the local tomato purée value chain. Although this study was conducted in southern Benin, the subject could enlighten policymakers in most sub-Saharan African countries, given the challenges of market access for locally processed agri-food products.

The analytical framework of this study is grounded on the new consumer theory (Lancaster 1966). Contrary to the traditional consumer theory, Lancaster's theory rejects the hypothesis of product homogeneity and perfect information in the market. The new consumer theory is based on product characteristics or attributes. This analytical approach considers that consumers' utility does not depend directly on the products consumed, but on the combination of its attributes or characteristics. Building on this orientation, this article – which is developed from a Master's dissertation at the University of Abomey-Calavi in Benin (Houessou 2018) – like previous consumer studies (e.g. Aoudji et al. 2017) uses an integrated framework (see next section) to address the research questions stated above.

Analytical framework

The analytical framework of this study focuses on the link between consumers' knowledge and their attitudes as well as their expectations regarding the local tomato purée. The literature reveals that consumer knowledge affects purchasing decisions (Vermeir and Verbeke 2006), and consequently is one of the main issues in running any business in the market (Kim et al. 2015). This information is essential in order for businesses, marketeers and entrepreneurs to understand how consumer knowledge and attitudes can be influenced to encourage sustainable consumption behaviour (Lam and Sol 2017). Therefore, most authors investigated the relationship between consumer knowledge and action in the consumption of local products (Aertsens et al. 2011; Gracia and De Magistris 2007). Likewise, lack of knowledge was reported as the main reason why some consumers did not buy local products (Conner et al. 2010; Marde and Vérité-Masserot 2015). Of note is that the literature also reports that there is sometimes a gap between the knowledge available on products and the actual action of consumers towards consumption (Thøgersen 2005).

Besides the level of information and knowledge available on the products, other factors account for the decision-making process of consumers about product choice. For instance, product characteristics (extrinsic and/or intrinsic), hygiene, commodity and price tend to be important factors influencing food choice (Jaeger and Rose 2008). Some authors have reported the influence of personality, lifestyle, health and environmental concerns (Kim et al. 2015; Thøgersen 2005) in consumers' decision-making, hence the importance of assessing consumers' motivations and their expectations.

To sum up, the analytical framework mobilized for the study encompasses an assessment of consumers' knowledge, motivations, and expectations in order to understand their behaviour patterns.

Methods

Data collection

A survey was carried out from September to October 2017, in the main districts of southern Benin, namely Abomey-Calavi, Cotonou, Porto-Novo, and Sèmè-Podji (Figure 1). These districts provide a suitable framework for the study because of the high growth rate of their population, leading to a growing demand for food products (INSAE 2015). Structured interviews were conducted at household level with the person in charge of food supply (usually the mothers). The sample included 405 households randomly selected across the four cities. Data were collected using a standardized questionnaire. Products samples were available to respondents during the interview, to ensure consistency of responses (Terra 2005).

At the beginning of the interviews, respondents were invited to give information on the tomato-based products known, and those effectively consumed in their households. The other sections of the questionnaire focused on behaviour patterns, purchasing motivations, and expectations regarding local tomato purée. For the motivations, respondents were asked to rank the reasons underlying the purchase of tomato-based products consumed. These reasons were identified from an exploratory survey. The behaviour patterns included information on forms of consumption, frequencies and expenditures. These data were collected by considering the seasonality of fresh tomato (period of scarcity and period of abundance). Indeed, the availability of fresh tomato might influence the purchase behaviour for processed products.

Regarding expectations, respondents were to assess various attributes sought in the local tomato purée. The relative importance of each attribute was assessed by using a 7-point Likert scale ranging from 1 (not at all important) to 7 (very important) (Bryhni et al. 2002; Kelley and Turley 2001). The Likert scale is used to evaluate the degree to which people agree or disagree with a statement (Kelley and Turley 2001). The assessment of expectations for local tomato purée was based on a list of nine attributes namely: competitive price, easily available, non-acidic taste, consistency, bright red colour, aroma, attractive packaging, expiry date on the label, and traceability/certification. These attributes were defined with consumers during the exploratory survey.

Data analysis

The statistical analyses included: (i) knowledge of processed tomato products, (ii) consumption patterns, and (iii) identification of expectations for local tomato purée.

Knowledge and consumption of local tomato purée and its substitutes

The percentage of respondents who knew each tomato-based product was calculated. The proportion of

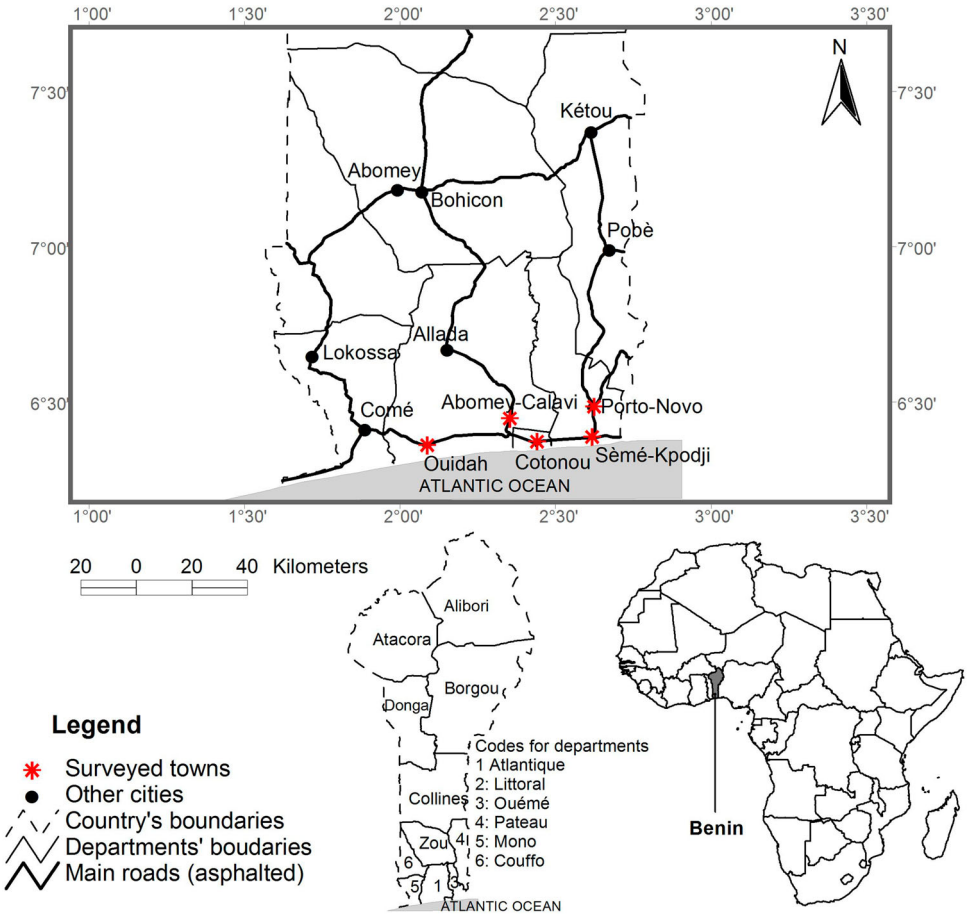

Figure 1: Map of the study area.

consumers – i.e., people who actually buy – was determined per product. Consumption patterns were analyzed based on purchase place, consumption frequencies, and monthly expenditures for tomato purée and its susbtitutes.

Assessment of consumers' motivations

The purchase motivations were classified in decreasing order based on the average rankings. Kendall's test of concordance (W) was performed (Lewis and Johnson 1971) to assess the level of agreement among respondents for motivation ranking. For this purpose, data are presented in a table where the respondents (judges) are in the first column, and the motivations in the first line. Therefore, each cell of the table contains the ranking of a motivation by a respondent.

Kendall's W was calculated by equation (1):

$$W = \frac{12S}{p^2(n^3 - n)} - p^T \quad (1)$$

where S is the sum-of-squares from row sums of ranks R_i (Equation 2), n is the number of motivations, p is the number of respondents and T is a correction factor for tied ranks (Equation 3; Siegel 1956).

$$S = \sum_{i=1}^{n} R_i^2 = SSR \quad (2)$$

$$T = \sum_{k=1}^{m} (t_k^3 = t_k) \quad (3)$$

where m is the number of groups and t_k is the number of tied ranks in each (k) of m groups (Siegel 1956).

Kendall's W coefficient ranges from 0 to 1. The level of agreement is high from $W = 0.7$ and acceptable from $W = 0.5$ (Schmidt 1997).

Identification of consumers' expectations for the purchase of tomato purée

The list of tomato purée attributes that are important to consumers was established. An attribute is important to consumers when its average score equals at least 4 (middle of the Likert scale used) (Kelley and Turley 2001). For this purpose, Wilcoxon's test for independent sample was performed for each attribute by using the software SPSS 16.0. Lastly, Chi square test of independence was performed (using SPSS software) to check on the relation between consumers' knowledge and their expectations.

Results

Consumers' knowledge of tomato purée and its main substitutes available on the market

Two main types of processed tomato were available on the market: tomato purée and tomato double concentrate. The 500 g package of tomato purée was mainly marketed, with

a retail price of US$1.2 to US$1.4.[1] Two main packagings of double concentrate were available: 70 and 140 g costing respectively US$0.2 and US$0.45. The proportion of respondents aware of the existence of processed tomato products ranged between 23.44% and 63.46% (Figure 2). Among the products, local tomato purée was the less known while the imported double concentrates were more known to consumers (Figure 2).

Overview of the consumption of tomato purée and substitute products

Types of products consumed

The consumption of processed tomato products varied according to the type of products. About 8% of respondents consumed only fresh tomatoes, while 92% mixed fresh tomatoes with canned tomato such as local tomato purée, local double concentrate and imported double concentrate (Figure 3). A high proportion of households (86.17%) consumed imported double concentrate. Purée and double concentrates locally produced were consumed by a low proportion of households: 0.25% and 5.68% respectively (Figure 3).

Besides commercial production, there was the domestic production of small quantities of tomato purée by some households (6.48%), usually during the period of abundance of fresh tomato. Two forms of canned tomatoes use were found: final consumption and intermediate consumption (Figure 4). Final consumption is the main form of consumption i.e. the use of canned tomatoes by households, as it was found among all consumers for a given product (Figures 3 and 4). Intermediate consumption (8.64% of consumers; Figure 4) refers to the use of canned tomatoes in restaurants (small street sellers, marquees, kiosks, etc.) in the cooking of various dishes. This consumption form was encountered only for the imported double concentrate (Figure 4).

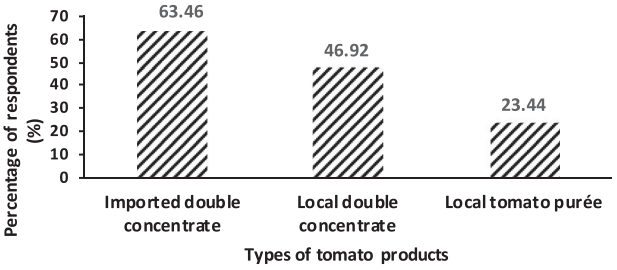

Figure 2: Consumers' knowledge of processed tomato products.

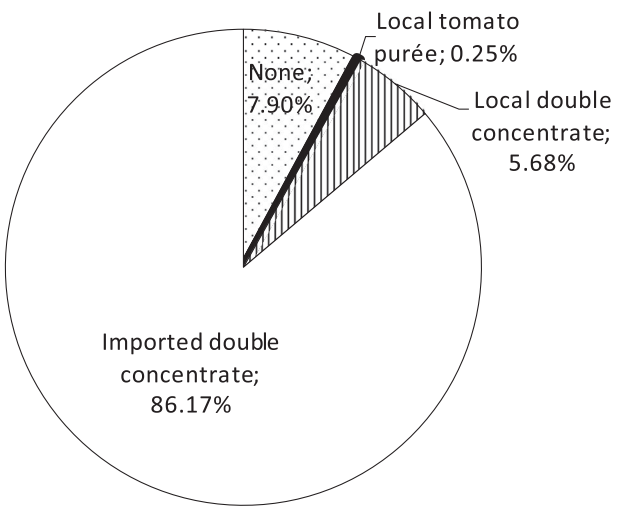

Figure 3: Consumption of local tomato purée and its substitutes.

Selection criteria for consumed products

Eight criteria guided consumers' choices when purchasing canned tomatoes. By decreasing order of importance, these were: consistency, bright red colour, expiry date on the label, brand reputation, product packaging, easily available, non-acidic taste, and competitive price (Table 1). The five top criteria were valued by 51.85% to 88.15% of respondents (Table 1).

Purchasing venues

The overwhelming majority of consumers bought processed tomato products in neighbouring shops (87%) and the local market (84%) (Figure 5). Therefore, proximity was the main factor supporting the choice of supply venues. Purchase from street sellers (5%) and supermarkets (14%) were poorly represented (Figure 5).

Frequency of purchasing local tomato purée and its substitutes

Regarding seasonality, tomato purée was bought by households year-round. Imported double concentrate was bought throughout the year by 25.19/ of the households, and this went up to 60.99/ during the period of scarcity of fresh tomatoes. (Figure 6). A similar trend was observed for the double concentrate locally produced, with 1.48% of households buying the product year-round, increasing to 4.2% during the scarcity of fresh tomato.

Regardless of the period, the frequencies of consumption were lower for local product consumers (purée and double concentrate) than buyers of imported double concentrate. Overall, the figures revealed a decrease of purchase frequencies during the abundance period of fresh tomato (Table 2).

Monthly expenditures for the purchase of local tomato purée and its substitutes

The average expenditure on local tomato purée was US $4.72 per month. For the imported double concentrate, this expenditure ranged between US$0.31 and US$4.36 in the abundance period of fresh tomato, and between US$0.18 and US$6.81 in the scarcity period. The average monthly expenditure for local double concentrate ranged between US$0 and US$1.09 in the abundance period of fresh tomato, and between US$0.14 and US $2.18 in the scarcity period (Table 3).

However, some households consuming double concentrates also bought fresh tomatoes in abundance periods, which explains the value zero in Table 3. The expenditure on the purchase of fresh tomatoes ranged from US$0.73 to US$14.53 per month (Table 3). Overall, the average monthly expenditure of households was higher in the scarcity period of fresh tomato than the abundance period except for expenditure on local tomato purée.

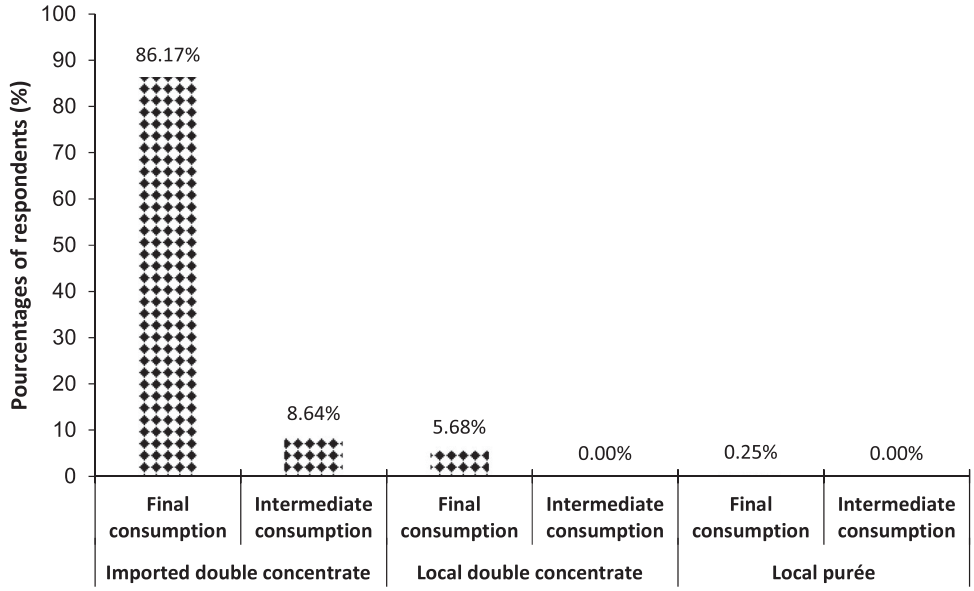

Figure 4: Percentage of households according to the consumption forms.

Table 1: Selection criteria.

Criteria	Relative frequencies (%)
Consistency	88.15
Bright red colour	58.77
Expiry date on the label	58.52
Brand reputation	57.04
Product packaging	51.85
Available easily	34.57
Non-acidic taste	34.16
Competitive price	25.93

Motivations

The reasons for purchasing processed tomatoes were presented only for the double concentrate (local and imported). In fact, the low proportion of buyers for the local tomato purée did not enable a consistent assessment of the consumers' motivations for this product.

Consumers' motivations for imported tomato double concentrate: Consistency of the product was the main motivation driving the purchase of imported tomato double concentrate, followed respectively by the competitive price and the bright red colour (Table 4). However, there was a high heterogeneity among consumers for motivation ranking. Despite the significance of the test ($p < 0.001$), Kendall's coefficient of concordance was lower than 0.5 (Table 4).

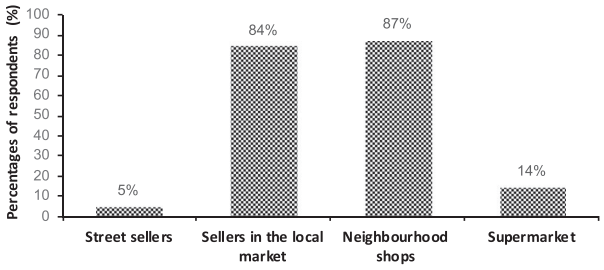

Figure 5: Percentage of households per purchase sources.

Consumers' motivations for local tomato double concentrate: Competitive price was the key driver of the purchase of local double tomato concentrate, followed by the willingness to pay for a local product (Table 5). Time savings when cooking was the third reason underlying the purchase of this product. The high value of Kendall's coefficient of concordance revealed high agreement in the ranking of motivations among consumers (Table 5).

Consumers' expectations

Six of the nine attributes were important to consumers (an expectations score significantly higher than 4). The expectations score was significantly below 4 for the following attributes: aroma, attractive packaging, and easy availability (Wilcoxon's test, $p > 0.05$), meaning that these attributes were not of interest to the majority of consumers (Table 6). The chi-square test showed the existence of a significant relationship between consumers' market knowledge of local tomato purée and their expectations of the brigth red colour attribute ($p < 0.05$) (Table 6).

Discussion

Consumer knowledge of tomato purée and its substitutes

Local tomato purée was less known by consumers than the local double concentrate, while imported doible concentrate was the most known by consumers (Figure 2). The better knowledge of the local double concentrate stems from the advertising actions undertaken for this product which is not the case for the local purée. This highlights the need for effective marketing actions by value chain stakeholders, especially the processing companies of local tomato purée. Effective communication by the stakeholders of the local tomato purée value chain is expected to foster consumers' knowledge of the product.

Consumption patterns

Imported tomato double concentrate was the most purchased product, followed by the local double concentrate,

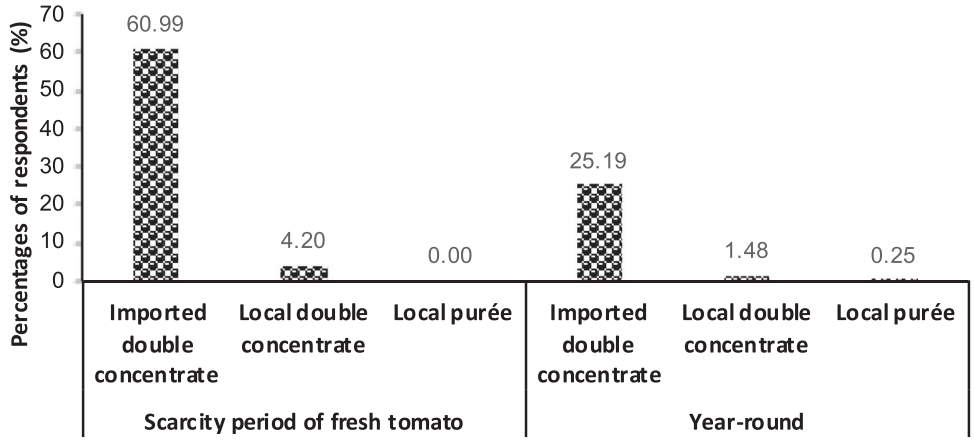

Figure 6: Consumption period of local tomato purée and its substitutes.

Table 2: Monthly consumption frequency of the different products according to the availability periods of fresh tomato.

Fresh tomato availability	Purchasing frequency	Imported double concentrate (%)	Local double concentrate (%)	Local purée (%)	Fresh tomato (%)
Abundance Period	8–12	2.78	–	–	36.05
	4	28.70	–	–	59.75
	2	21.30	16.67	–	4.20
	1	47.22	83.33	100	–
Scarcity period	8–12	6.30	–	–	6.17
	4	36.68	34.78	–	77.53
	2	23.78	17.39	–	16.30
	1	33.24	47.83	100	–

while the consumption of local tomato purée was very limited (Figure 3). Consumers' preference for imported tomato double concentrate could be explained by its affordable price and its technical quality attributes (bright red colour, consistency). These results highlight the stability in consumers' preferences for processed tomato in Benin. Indeed, the consumers' preference for imported double concentrate tomato had already been reported 10 years ago, for the same reasons (Dossou, Soulé, and Montcho 2007). A comparable result had also been reported in Senegal, where consumers were increasingly attracted to imported tomato concentrates because of their red colours (Danigue 2016). According to the respondents, the local products did not meet the main criteria valued by consumers in the choice of processed tomato products, i.e. bright red colour and consistency (Table 1).

For the local tomato purée, the price was considered to be high by the consumers. Besides, the consumers' poor knowledge of local tomato purée explains its low consumption, hence the need for effective communication. The low consumption of local tomato purée could be a result of the low development of the distribution system. The supply of proccessed food was mainly undertaken by neighbourhood retailers who were close to consumers. Meanwhile, local tomato purée was mainly marketed in supermarkets and other specialized shops in large cities, making it physically inaccessible to most households. The Centre for Research and Information of Consumer Organisations also reported that proximity is the main criterion in the choice of a food outlet (CRIOC 2011). The achievement of a distribution system compatible with the purchase behaviour of most consumers could improve their access to local tomato purée.

Table 3: Monthly expenditures for the purchase of local purée and its substitutes according to the availability periods of fresh tomato (in US$).

Fresh tomato availability	Parameters	Local purée ($n = 01$)	Imported double concentrate ($n = 355$)	Local double concentrate ($n = 23$)	Fresh tomato ($n = 405$)
Abundance Period	Minimum	4.72	0	0	0.73
	Maximum	4.72	4.36	1.09	7.26
	Mean	4.72	0.31	0.11	2.92
	Standard deviation	–	0.59	0.25	1.14
Scarcity period	Minimum	4.72	0.18	0.14	0.73
	Maximum	4.72	6.81	2.18	14.53
	Mean	4.72	1.56	0.88	3.38
	Standard deviation	–	0.98	0.40	1.83

Table 4: Motivations for the purchase of the imported double tomato concentrate.

Sources of motivation	Average rank	Order
Consistency	1.5	1
Competitive price	1.9	2
Brigh red colour	2.5	3

Kendall's test of concordance: number of observations = 355; $W = 0.260$; $p = 0.000$.

Table 5: Purchasing motivations for local double tomato concentrate.

Sources of motivation	Average rank	Order
Competitive price	1.1	1
Local consumption	2.0	2
Time savings	2.8	3

Kendall's test of concordance: number of observations = 23; $W = 0.731$; $p = 0.000$.

The consumption of imported tomato double concentrate by most households (Tables 2 and 3) reflects a potential market for local tomato purée, although for the time being this product has low consumption. The incorporation of the attributes sought by consumers and effective communication for improved consumer knowledge might result in increased purchase of the local tomato purée by urban consumers.

Motivations to purchase processed tomato products

The primary motivations for buying imported tomato double concentrate were the bright red colour and consistency (Table 4). This finding supports previous studies in Benin (Dossou, Soulé, and Montcho 2007), and in Senegal (Danigue 2016). However, the motivations for buying local double concentrate were the competitive price and the desire to 'consume local' (Table 5). The 'local consumption' as the second reason driving the purchase of the local double concentrate by consumers could infer that the knowledge of the origin of a product fosters its consumption. It has been demonstrated that knowledge of product origin was one of the main reasons for purchasing local products in United Kingdom (DEFRA 2008). An important reason for this is that knowledge of the origin has a significant effect on the perception of risk, which may increase the consumer confidence in the product (Mitchell 1998).

These results confirm the need for advertisements which have the potential to influence consumers' food choices and dietary behaviour (Smith and Foxcroft 2009) thanks to increased knowledge. Several authors have reported that appropriate communication can influence choices and consumers' behaviours and encourage them to purchase food products (Boussaid and Khelfaoui 2013; Masserot and Brée 2010). Any action and communication should consider the disparity among consumers regarding their knowledge of local tomato purée. Specifically, for consumers with little knowledge about tomato purée, advertisements should provide clear and concise information on how to engage in the consumption of a local product in order to improve their well-being. Regarding consumers who have more knowledge, such as those with previous experience, the adversiting needs to focus more on their positive motivation and their subjective standards. This differenciated communication pathways is also supported by the relation between consumers' level of knowledge and their expectations of the bright red colour attribute (Table 6).

Consumers' expectations of tomato purée

Consumers' expectations of tomato purée include the following attributes: competitive price, consistency, expiry date on the label, bright red colour, product traceability/certification, and non-acidic taste. Consequently, value chain agents should cooperate on these technical and functional attributes to take advantage of urban markets. Competitive price was the most important attribute sought by consumers. This is consistent with previous findings in Benin reporting the search for competitive price as a key concern for consumers (Aoudji et al. 2017; Dossou, Aoudji, and Adégbidi 2017). Similar findings were made elsewhere with regard to competitive price as a strong element in consumer purchasing behaviour (Cameron and Galloway 2005; Close and Kukar-Kinney 2010; Grunert, Hieke, and Wills 2014; Ryu and Han 2010;

Table 6: Consumers' expectations.

	All consumers ($N = 405$)	Consumers with knowledge of a market production ($N = 97$)	Consumers with no knowledge of a market production ($n = 308$)	Chi-square probability
Attributs	Average score			
Competitive price	6.65*	6.50*	6.50*	0.23
Non-acidic taste	4.67*	5.00*	4.50*	0.36
Bright red colour	5.55*	5.50*	5.50*	0.018
Consistency	6.62*	7.00*	7.00*	0.20
Aroma	2.82	2.50	3.00	0.07
Certification/ traceability	5.07*	5.00*	5.00*	0.15
Attractive packaging	4.13*	4.00*	4.00*	0.25
Expiry date on the label	5.64*	6.00*	6.00*	0.30
Easily available	3.23	3.00	3.00	0.26

*Significantly higher than 4 (Wilcoxon test, $p < 0.05$).

Tanneau 2013). Given the importance that consumers put on food prices, systemic competitiveness (Kaplinsky and Morris 2002) remains a crucial issue that could be addressed through the overall efficiency of the value chain (reduced transaction costs and improved methods of stakeholder coordination).

Besides price, the importance of product traceability for consumers is consistent with the findings of Giraud and Halawany (2006), which showed that consumers bound traceability to the attributes they deem important in food decision making. The traceability of local tomato purée is considered an important source of information for consumers and its implementation requires coordination between the stakeholders in the value chain. Certification under a collective label is a prospect that could benefit the value chain. Indeed, it was reported that the label influences purchasing decisions (Barbato 2015). Labelling is useful for access to market and the inclusion of marginalized groups, such as women in lucrative value chains (Blandon, Henson, and Cranfield 2009; Hellin, Lundy, and Meijer 2009; Maertens, Minten, and Swinnen 2012). Collective labelling represents an important sale asset that must be considered as a primary means of communication between producers and consumers (Falconnet and Guillon 2001; Giraud 2002). Certification and labelling, combined with effective communication, should contribute to the differentiation of the product and increase its final value (higher added value).

Though packaging was not considered as an important attribute by respondents, it requires careful attention. A comparable result was observed with urban consumers of non-timber forest products in Switzerland who claimed that packaging was not important to them (Kilchling, Hansmann, and Seeland 2009). However, in most consumers studies in Benin, the packaging or product presentation is generally important to consumers (Aoudji et al. 2017; Dossou, Aoudji, and Adégbidi 2017). Previous studies in marketing also demonstrate the influence of packaging attributes (colour, shape, and logo) on consumers' behaviour (Hermouche and Azkak 2015; Pantin-Sohier 2009; Underwood 2003). Therefore, tomato purée producers should ensure the use of suitable packaging, which is also a vector of communication for food products.

Conclusion

The purpose of this paper was to identify avenues for increased market penetration for local tomato purée in southern Benin. The findings highlight a significant gap between knowledge levels and effective purchasing behaviours towards local tomato purée. In general, consumers' expectations for local tomato purée were focused on competitive price and technical quality attributes. The results show that advertising actions towards different levels of household knowledges/experiences would be more effective in persuading consumers. Advertisements highlighting how their actions can benefit businesses and job creation should be prioritized. Specifically, for consumers with little knowledge about marketing of tomato purée, advertisements should provide clear and concise information on how to engage in the consumption of a local product in order to improve their well-being. Compared to consumers who have a high knowledge level, such as those with previous experience, the advertising needs to focus more on positive motivation and their subjective standards. Price competitiveness remains a crucial issue that could be addressed by improving the overall efficiency of the value chain. Coordination among stakeholders in the value chain will also ensure the quality and traceability of the products along the value chain. Capacity building is useful to enable local tomato purée processing companies to incorporate the technical quality attributes sought by consumers.

The leadership of these various actions to transform the local tomato purée value chain could be the responsibility of government institutions, including local authorities, through their efforts to improve the livelihood of the population. Organizations involved in empowering women should also be involved, as women are key stakeholders in the tomato purée value chain in Benin.

Disclosure statement

No potential conflict of interest was reported by the authors.

Note

1. Average exchange rate from 1 September to 31 October 2018 was XOF1 = USD0.002. Source: https://freecurrencyrates.com/fr/exchange-rate-history/USD-XOF/2017/yahoo (Accessed December 30, 2018).

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