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Tanzanian Food Origins and Protected Geographical Indications

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Abstract

As the world's population is constantly growing, food security will remain on the policy Agenda, particularly in Africa. At the same time, global food systems experience a new wave focusing on local foods and food sovereignty featuring high quality food products of verifiable geographical origin. This article argues that Geographical Indications (GI's) hold the potential to help transform the Tanzanian agriculture-dependent economy through the tapping of value from unique products, attributing taste and colour to place or regional geography. This study aims to identify the existence and characteristics of food origin products in Tanzania that have potential for GI certification. The hypothesis was that there are origin products in Tanzania whose unique characteristics are linked to the area of production. Geographical indications can be useful policy instruments contributing to food security and sovereignty and quality within an efficient marketing system with the availability of government support, hence the need to identify key candidates for GI certification. Five Tanzanian origin products were selected from 14 candidate agricultural products through a scoping study. Rice from Kyela, Aloe vera, Coffee and Sugar from Kilimanjaro and Cloves from Zanzibar are some of the product cases investigated and provides for in-depth case study, as 'landscape' products incorporating 'taste of place'. Interviews were conducted to collect quantitative and qualitative data. Data was collected on the production area, product quality perceived by the consumer in terms of taste, flavour, texture, aroma, appearance (colour, size) and perceptions of links between geography related factors (soil, land weather characteristics) and product qualities. A qualitative case study analysis was done for each of the (five) selected Tanzanian origin products investigated with plausible prospects for Tanzania to leapfrog into exports of Geographical Indications products. Framework conditions for producers creating or capturing market value as stewards of cultural and landscape values, environments, and institutional requirements for such creation or capturing to happen, including presence of export opportunities, are discussed. Geographical indication is believed to allow smallholders to create employment and build monetary value, while stewarding local food cultures and natural environments and resources, and increasing the diversity of supply of natural and unique quality products and so contribute to enhanced food security.

Introduction

An increasing number of agricultural local products, worldwide, are registered as Geographical Indications (GIs). Consumers worldwide demand products with more unique origin, which are connected to the land use systems producing particular qualities. GIs support the

achievement of food security by increasing the ability of traditional farming communities to acquire income that supports exchange entitlements through trade policies (Blakeney, 2009).

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Figure 1 : The regions are Kilimanjaro (North), Mbeya (south) and Zanzibar (on the left of the map) both Unguja and Pemba
 Source: Primary Education Support Project (PESP) Dar es Salaam, Tanzania <http://www.pesptz.org/images/map1.jpg>

In the current trade regime, GIs are confronted in quality forums with new social concerns and values, from biodiversity to food security. As per the FAO (2009) it explains how GIs determine and influence food security by providing better income for producers and creating better economic access to food. GIs generate local economic benefits through greater market access and equity in international trade, thereby improving conditions for small and local farmers to sell their products and buy their necessities (Dagne, 2012). GIs “contribute to food security in rural areas, as far as they are considered and implemented as a rural development tool, and not only a commercial or legal one (Petrics and Eberlin, 2009). GIs have the potential as an economic policy instrument in helping to transform the Tanzania agriculture-dependent economy through exploiting the unique attributes of their quality products namely aroma, taste and colour. Tanzania has already demonstrated the capacity to tap into the organic world market. Therefore protecting Tanzania’s unique agricultural products using GI could lead to higher value-added products through product differentiation based on quality, providing consumers with certified information regarding product

attributes, and enhance and preserve the identity and cultural heritage of the specific region, where a product is produced (Blakeney et.al, 2012 and Dagne, 2014).

The objective is to identify the existence and characteristics of food origin products in Tanzania that have the potential for GI certification. The hypothesis is that there are origin products in Tanzania whose unique characteristics are linked to the area of production. The paper presents preliminary results from VALOR (Valorizing African Agriculture), a research project investigating conditions under which Africa and in this case, Tanzania food producers can add value by incorporating territory specific cultural, environmental and social qualities into marketing, production and processing of unique local, niche and specialty products.

Methods

Field studies were undertaken between June and August 2014, which is the harvest period for most of the crops. The study used different methods to collect data addressing the main objective. Five agricultural products namely, coffee (*Coffea Arabica*), aloe vera (*Aloe*

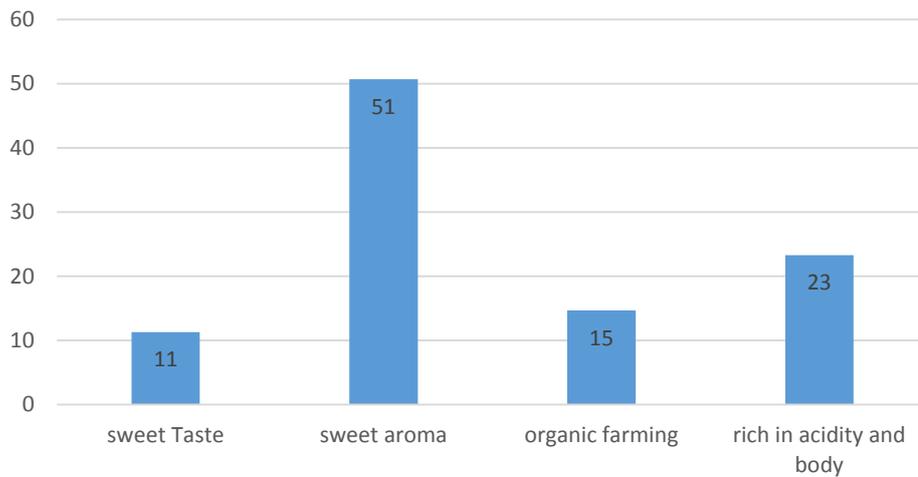


Figure 2: Sources of specific qualities of the products

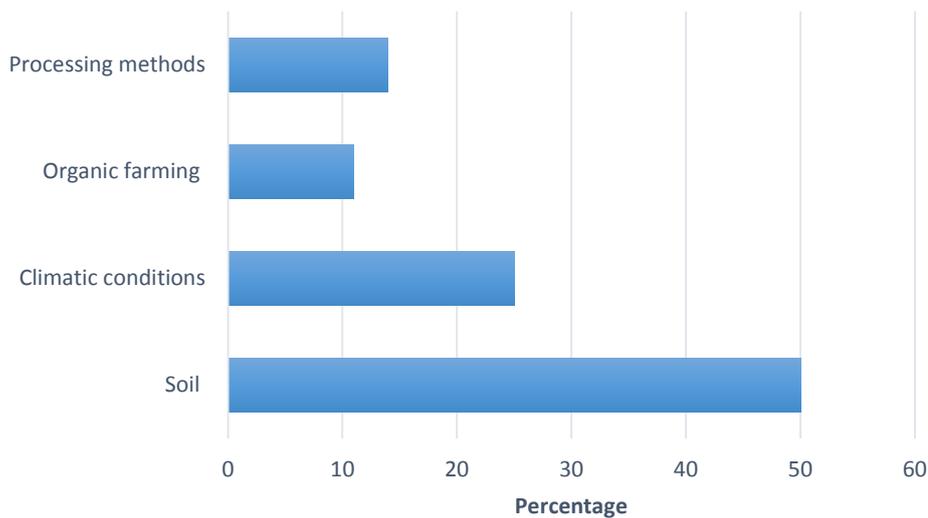


Figure 3: Kilimanjaro Coffee Specific origin related attributes

barbadensis miller), rice (*Oryza sativa*), cloves (*Syzygium aromaticum*), and sugar cane (*Saccharum officinarum*), were selected from 14 candidate agricultural products through a scoping study. The selection was based on the following criteria: a) clear delimitation of production area, b) origin reputation of a product, c) quality perceived by consumer in terms of taste, flavour, texture, aroma, appearance (colour, size). Further, selection criterion includes market potential (prices comparing with similar products), geographical link (soil, land weather characteristics), agricultural system (organic, traditional methods) and collective actions (formal or informal producer organisation).

Fifteen key informant interviews from the ministry, Business Registration and Licensing Agency (BRELA) and district level were carried out in three study regions namely

Mbeya, Moshi and Zanzibar (**Figure 1**)

To address the study objective, a semi-structured questionnaire to producers and processors was used to collect quantitative data. In addition, qualitative data was collected from five focus group discussions with producer associations, while direct observation was used for observing the cultivation methods and processing of the food products. In order to gather information about the product characteristics /attributes of the potential food origins in Tanzania (in three regions), an in-depth single case study methodology developed by Yin (2003) was used.

In accordance with FAO (2009), the special attributes investigated the included product unique characteristics, common rules for the production and handling of the



product, marketing strategies, and geographical characteristics of the area. Complemented with short in-depth interviews with consumers on the awareness of the unique quality of the product, the price difference for the product they buy was compared with others in the same category, product seasonality and its demands and the availability of niche markets.

Results and Discussion

Mainland Tanzania doesn't have a legal framework on GIs, instead it has already recognised the potential of protecting its clove industry and has incorporated the GI law in its industrial act. The Business Registration and Licensing Agency (BRELA) and Ministry of Industry, Trade and Marketing are making efforts to have a comprehensive Intellectual Property Rights (IPRs) legislation along Trade-Related Aspects of Intellectual Property Rights (TRIPS) lines for mainland Tanzania.

For such a law to be feasible, there is a need to analyse the unique characteristics of the potential food origin GIs in the country. The products unique qualities are attributed to the area, in which these products are produced, see **Figure 2**, where interviews were conducted for respondents to identify the different quality-geography links. More than 50% of the respondents in the regions, where the products were produced claimed that most of the product quality was from the soil of the area, which is a geographical link to the product attribute.

GI awareness

Producers' awareness of the concept of GI was explored by asking them if they are aware of such a concept. The survey results showed that only 20% of the respondents knew the meaning or have heard of the term GI and 80% of respondents had no idea on GIs. When asked if they had ever seen any of the EU logos used to identify a GI product, only 2% of the interviewees said that they had seen such logo and the rest 98% had never seen the EU logos. Majority of the respondents were not aware of the concept of GI and were not aware of any attribution or link between product quality, reputation and characteristics of their territory. However, 95% of the respondents in Kilimanjaro and Kyela-Mbeya and 90% of the respondents in Zanzibar were aware of the unique quality attributes that products had.

Origin product cases

Kilimanjaro Coffee

Coffee from the Kilimanjaro region is distinguishable from other coffees (by aroma and taste) and easily recognizable for experts. Its particular quality is much attributed to the volcanic soil on which it is grown, at the slopes of mountain Kilimanjaro.

The soil type is associated with a particular degree of acidity, which has been identified as one of the main contributors to the coffee quality. **Figure 3** results further showed that 51% of the respondents said coffee has a unique distinctive aroma and 23% said it was rich in acidity and body that distinguished Kilimanjaro coffee from other coffees produced in the country. Apart from the volcanic soil, other factors mentioned during the interviews contributing to the quality of the coffee is processing and de facto organic farming which is a widespread production method in the area. (United Republic of Tanzania (URT), 2012).

Kilimanjaro Sugar (TPC)

Sugar from the Kilimanjaro region is a well-known product in Tanzania and regarded as having excellent quality. The difference between TPC sugar and any other sugar produced in Tanzania results from quality control, according to one of TPC agronomists who was interviewed during the fieldwork.

The quality control process for the sugar starts from the planting sugarcanes, the crop requires low temperatures, low rainfall and low use of fertilizer such as nitrogen. The TPC agronomist during the interview, clearly stated that because of the high level of potassium in the soil due to the volcanic soil, sugarcane in Kilimanjaro requires little manure. The water for irrigation is rich in minerals that keeps the crops healthier and less susceptible to disease. The soil (volcanic) structure in the region is very favourable for production. The agro-climate conditions make the sugarcanes produced in the region of excellent quality that is highly controlled during processing. The sugar has specific unique characteristics, the colour is light brown and crystal size is smaller (Agriculture, 2014).

Cloves Zanzibar

Zanzibar's economy is based primarily on the production of cloves where export earning accounts up to 70 % of the country's Gross Domestic Product (GDP). The State Trading Corporation (ZSTC) acquires all of the cloves produced in Unguja and Pemba under legislation (Blakeney et.al, 2012).

Protection of the origin of Zanzibar cloves, can be based on a number of unique features identified during fieldwork by the researcher through interviews with respondents namely distinctive aroma, unique flavour, bitter sweet taste, brown reddish colour, distinctive size, slenderness, and oil content (low).

Kyela Rice

Among many other products, rice in Tanzania is one of the agricultural foods used in checking the level of food security in the country. There are many rice producing



regions, however rice grown in the south of Tanzania, in Kyela district of Mbeya region, is quite different compared to other rice. Results suggest that the unique attributes of Kyela rice are its distinctive aroma and appealing taste. It was identified that the rice is grown in a highly fertile soil on the flood plains of Rungwe Mountain. This rice is mostly sold in the local market and very little exported (MOF, 2013).

Kyela rice has gained a very high reputation over the years in and outside the country. While it is the main staple food and main source of income to the Kyela people (Gideon, 2013), there has been misuse of the name as traders within the country are using the name Kyela to sell rice that is not Kyela rice, hence a need for the country to protect and enforce such products through GI.

Kilimanjaro Aloe Vera

Aloe vera in Tanzania is grown in Kilimanjaro and Tanga, it belongs to the family Asphodelaceae (Liliaceae) and is mainly cultivated for its thick fleshy leaves (Ogendo et.al, 2013). The Kilimanjaro Aloe vera plantation is based in the Kilimanjaro region, not far from the town of Moshi and on the hot plains below Africa's highest mountain; the snow-capped Kilimanjaro. There are 500 acres of rich fertile land on the hot plains below Mount Kilimanjaro, being the first plantation producing top quality juice for Africa at an affordable price with over five million Aloe *barbadensis* var. *chinensis* plants.

One company, Kibo Irrigation, cultivate Aloe vera in the Kilimanjaro area. The unique attributes are the plants genuine medicinal properties, with quality of the product being due to the volcanic soil in the region and the waters flowing the mountain Kilimanjaro. The Aloe vera juice is thick with a sweet bitter taste. Comparing it with imported Aloe vera products, it is of high quality with 99.7 pure aloe vera and with an affordable price to the consumers.

Organically produced, Kilimanjaro Aloe vera is processed using traditional production and harvesting methods that have positive effect on quality. Aloe vera contains numerous vitamins and minerals, enzymes, amino acids, natural sugars and agents that may be anti-inflammatory and anti-microbial. The combination and balance of the plant's ingredients are what purportedly gives it its healing properties.

GI and Food security

Food security does not relate only to quantity and volume but also to quality and consumers preferences, economic (price and income) and physical access (proximity) of food products (ARIPO and EU, 2012). Food security includes not only availability, but also accessibility

of culturally appropriate food. Creating better economic access to food, can determine and influence food security (FAO, 2008) Geographical indication can enhance food security in a policy framework of food sovereignty, which focuses on three major priority areas: ensuring access to productive resources; mainstreaming agro-ecological production, and encouraging participation in trade and local markets. Geographical indication may be relevant to the guarantee of food sovereignty through measures that address each priority area (Teshager W Dagne, 2014).

In Tanzania, the government made a number of campaigns, programmes and reforms with the objective of attaining food security, some of the policies and programmes formed are the 1978 Public Works for food security, 1991 National Food and Nutrition Policy, 1991 National Food Security Programme, 2011 National Food Strategy and National Agriculture Policy of 2013.

Such policies and programmes are coordinated between agriculture and nutrition related ministries, namely the Ministry of Agriculture, Food Security and Cooperatives; Ministry of Livestock and Fisheries; Ministry of Industry, Trade and Marketing; Ministry of Health and Social Welfare; Tanzania Food and Nutrition Centre; and the Prime Minister's Office Regional Administration and Local Government.

Kavishe (Kavishe, 1993) points out how the implementation of the agricultural policy and the strategy have not made a significant impact on food security. With the current absence of a national policy for GI products, the policy level clearly represent one barrier for pursuing food sovereignty security through valorisation of origin products. Hence, access to new markets in niche areas and a reinforcement of the national market is a key to the successful commercialization of GI/origin products. Our hypothesis is that GI's can be useful policy instruments contributing to food security and quality within an efficient marketing system and availability of government support. Food security not only relates to quantity and volume but also to quality, economic aspects (price and income) of food products. Considering this, by providing a better income for producers and creating a better economic access to food, can determine and influence food security (FAO, 2009).

Conclusion

Based on key informant interviews with origin food producers, the study revealed a potential for value addition by recognition of territory specific cultural, environmental and social Tanzanian origin product qualities into marketing, production and processing of unique local,



niche and specialty products in the Mount Kilimanjaro and Mbeya regions of Tanzania. The origin product cases investigated indicated prospects for Tanzania to advance in exports of geographical indications products as well as in domestic markets. Price premiums on origin products registered with a GI may allow smallholders create further employment and build further monetary value, while stewarding local food cultures and natural environments and increase the diversity of natural and unique quality products.

Several origin products in Tanzania have potential for GI protection. Tanzania may potentially gain using GIs to market even some of its larger crops such as, bananas, and cashew nuts, as well as new non-traditional crops such as spices and oilseeds. Tanzania also has an option of using a GI approach for its handcraft and products made in specific regions, especially those made around the safari destination areas. This marketing tool is of use in South Africa for wines, where tourists get to visit the sites of manufacture as well as buy products such as "rooibos tea".

GIs could be used as economic agricultural policy instruments for the Tanzanian regional association producers to protect products and enable alliances of farmers of such products to earn a higher price for their products and thus more income to sustain their lives.

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Conflict of Interests

The authors hereby declare that there are no conflicts of interest.

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