sustainability

MDPI

Article

Geographical Indication to Build up Resilient Rural Economies: A Case Study from Ghana

Yari Vecchio [1,*], Abdul-Latif Iddrisu [2], Felice Adinolfi [1] and Marcello De Rosa [2]

[1] Department of Veterinary Medical Sciences, University of Bologna, Ozzano dell'Emilia, 40064 Bologna, Italy; felice.adinolfi@unibo.it

[2] Department of Economics and Law, University of Cassino and Southern Lazio, 03043 Cassino, Italy; yaalatif51@yahoo.com (A.-L.I.); mderosa@unicas.it (M.D.R.)

* Correspondence: yari.vecchio@unibo.it

Received: 31 January 2020; Accepted: 3 March 2020; Published: 6 March 2020

Abstract: This paper deals with Geographical Indications (GI) as a critical strategy aimed to boost agri-food local supply chain and rural development. The main concern of this work, therefore, is to verify how the identification of these products and establishment of GI systems can propel sustainable development in local areas in Africa. Two assumptions are at the basis of our paper: viable GI systems can be established in Africa, and the establishment of a GI system can stimulate rural development. In order to clarify the process of GI setting up and valorization, we will test GI virtuous circle and the rural web, with the purpose of exploring the multiple dimensions (endogeneity, social capital, sustainability, novelty, institutional arrangements, governance of markets) interfering in the process at both the agri-food supply chain and rural context levels of analysis. The analysis is applied to the shea butter production in Ghana and will employ primary data. Questionnaires and interviews were administered in the study area (Yendi Municipality of Ghana) to gather both qualitative and quantitative data. Our analysis confirms the potentialities of the shea butter as GI, by underlying its engine for the development of local rural communities.

Keywords: geographical indications; shea butter; Africa; rural web; GI virtuous circle

1. Introduction

This paper deals with the role of Geographical Indications (GIs) in building up processes of endogenous rural development in developing countries. Our hypothesis is that GIs may act as an engine to boost either resilient localized agri-food systems or wider processes of rural development.

The establishment of Geographical Indications systems in Africa is gradually becoming a topical issue in the agri-food literature with reputable institutions, such as the Food and Agriculture Organization (FAO) of the United Nations (UN) taking special interest in it. This development is partly due to the success of the European GI framework. The discussion is centered on how the European system can be adopted in Africa to enhance agriculture profitability and to boost rural development.

Nonetheless, risks of establishing and managing poorly chosen GIs have been widely recognized in literature [1]. As a matter of fact, Marie-Vivien and Biénabe [2] point out wide divergences across countries concerning GI institutionalization. On the other side, recent studies have demonstrated that a sound and rigorous GI system may bring about good economic, social, and environmental impacts in developing countries [3].

This paper is set against this background, with the purpose of assessing the potential for the initiative of GI recognition with reference to the shea butter production in Northern Ghana. More precisely, the aim of the paper is to verify the potential success of the GI recognition framed in a

wider perspective of sustainable rural development. The paper seeks to find empirical answers to the following research questions:

Is it possible to establish efficient GI system for the shea butter in Northern Ghana?
Is the GI system a sustainable way of increasing agricultural profitability?
Is there a wider impact on rural economy to be assessed?

The paper is articulated as follows: in Section 2, a brief literature review is presented. This is not an exhaustive literature review, but it provides a sound theoretical basis for setting up GIs in developing countries. Section 3 presents a methodological approach, inspired by two recent theoretical proposals carried out by Marsden and van der Ploeg [4] and Vandecandelaere et al. [5]. Results are described in Section 4, while Section 5 deals with discussion and policy implications.

2. Theoretical Background

In many developing countries, experiences of unconventional farming are becoming even more important. These experiences are drawn on multifunctional agriculture and are demonstrating good performance along the paths of sustainable rural development (see among others [6,7]).

Among unconventional agri-food networks, GIs are one of the most promising tools [8], which is built on unique local resources, skills, and expertise [9].

GI is not a generic, but a differentiated product, which is rooted in the microeconomic theory of monopolistic competition, leading some consumers to express a preference and a willingness to pay higher prices. More precisely, as pointed out by Moschini et al. [10], GIs are centered on the economics of product differentiation, where the value proposition depends on quality attributes (both natural and human) provided by the place of origin.

The potential for a GI-based strategy has been emphasized in various contributions, which have enlightened how "the protection of GIs will give African countries a natural competitive advantage as they apply mainly to agricultural and cultural products" [11]. In recent years, the European Union implemented strategies, grounded on GI valorization, to boost rural development, with the purpose of not only valorizing indigenous knowledge and traditional products, but also empowering farmers and acting as an engine for deeper processes of rural development [12].

As stated in the continental strategy for GIs in Africa [13], the development of GIs represents a strategic tool to foster agricultural and rural development in Africa. Consequently, many African countries, such as Ghana, have a legal system of protection for GIs.

These indications recall previous addresses launched by important international institutions, such as FAO [3,5] and the United Nations Conference on Trade and Development (UNCTAD) [14] and have brought about concrete actions of partnership with the institutions of the European Union. As reported in a dedicated website, "these actions include the preparation of a set of specific training and technical assistance programs to develop GIs in Africa, the establishment of an African GI website and the identification of a number of GI pilot products to be developed in different African countries". The case study presented in our paper aims at being qualified as a pilot GI product. In order to demonstrate its potentialities, a sound theoretical framework is developed based on two recent approaches. The first one refers to rural web developed by Marsden and van der Ploeg [4]; the second one regards the GIs virtuous circle developed by Vandecandelaere et al. [5]. In the analysis of the rural web, sustainable rural development is the exit of six interrelated domains:

(a) endogeneity—regarding the capability to build rural development on local resources. In order to successfully valorize local resources, the following dimension is required;
(b) social capital—that is the ability to secure resources by virtue of membership in social network or larger social structures [15]. As Kanemasu et al. [16] point out, social capital is "the capacity to get things done collectively". Therefore, relationships become a sound and indispensable basis for goal achievement. Under this perspective, rural development may take on the characteristic

of being sustainable. Under this perspective, rural development may take on the characteristic of being sustainable. Key elements of the social capital are trust, reciprocity, and shared behavioral norms. With the perspective of GI recognition, social capital is a pillar for a sustainable initiative;

(c) sustainability—territorially based development that redefines nature by re-emphasizing food production and agroecology, which re-asserts the socio-environmental role of agriculture as a major agent in sustaining rural economies and culture [17]. In this perspective, sustainability originates also from a renewed vision of food production that is from a novelty;

(d) novelty production—refers to the capacity, within the region, to continuously improve processes of production, products, patterns of cooperation, etc., along alternative [and unconventional] trajectories [18]. Functional repositioning of farming activity along the lines of novelty and nested markets represents a fundamental tool to empower farmers, by letting them retain added value at a farming level, as confirmed in the following dimension;

(e) market governance as the institutional capacity to control markets and to construct new ones. This is related to the way in which specific supply chains are organized, how the total realized value is shared, and how the potential benefits of collective action are delivered [9,19];

(f) institutional arrangements provide the supporting structure for regulating institutions, perceived as the "rules of the game", consisting of both formal legal rules and informal social norms that structure social interactions. In rural development processes, institutions can reduce coordination problems and support cooperation.

Starting from the model of rural web, in our paper novelty production—that is the launch of a GI in Ghana—becomes the entry door to analyze a wider model of rural development. Therefore, as posited by Belletti et al. [20], a "quality virtuous circle" emerges, with the purpose of "generating positive effects on farmer livelihoods, local communities, and the environment". The GI virtuous circle has been theorized by Vandecandelaere et al. [5] and is divided up into four main steps:

[a] identification—that is the recognition and the local awareness about the potential of the product;

[b] qualification, involving a collective action aiming at setting up the rules of production, creating value and preserving local resources;

[c] remuneration linked to GI marketing and to management of the GI local system;

[d] reproduction of local resources, boosting the sustainability of the system in a larger span of time.

Links between rural web and the virtuous circle are evident (Figure 1) in that the virtuous circle is a tool for boosting a sound process of rural development based on a novelty production grounded on local endogenous resources. This may happen thanks to collective action (that is social capital). As recently demonstrated by Quiñones-Ruiz et al. [21], (p. 12): "a supportive legal framework along with the support of public authorities can back up the community of producers not only in technical aspects, but also in a mediation role, when conflicts seem to be difficult to solve". On the other side, a reduced propensity for collective action may engender failure of GI initiatives [22]. The potential for collective action is also drawn on the emergence of new institutional arrangements (for instance, producers' organizations) able to empower farmers' capability of repositioning farming by creating and governing new markets (governance of markets). A suitable governance in value creation represents a key dimension for enabling valorization strategies which is grounded on the availability of proper resources [23].

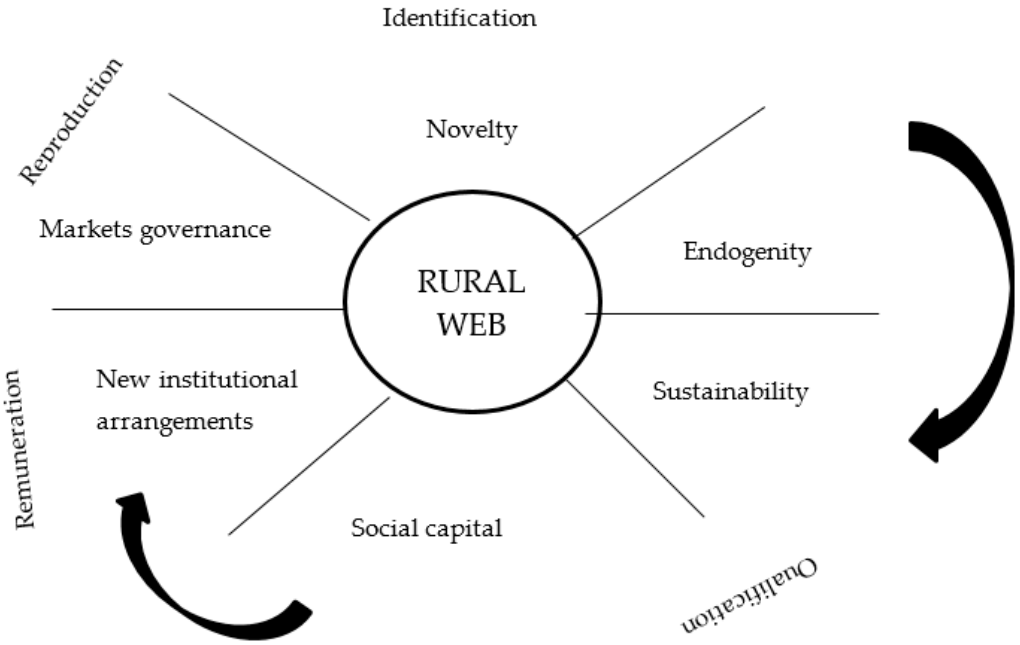

Figure 1. The overlap between two theoretical models: the rural web and the virtuous circle. Source: our processing from Marsden and van der Ploeg [4].

In this paper, the two theoretical models have been considered for the analysis of a potential GI initiative, applied to the shea butter in Yendi municipality of Ghana. Shea butter is prevailingly cultivated in the northern part of the country, in areas not adaptable for other cash crops [24]. Literature has thoroughly analyzed the relevance of this production and its economic benefits for farmers [25,26]. Moreover, recent researches have underlined the relevance of shea butter in alleviating poverty in rural Ghana [27].

As posited by Solomon [28], (p. 38): "The Shea butter value chain begins from the stage where the nuts are turned into kernels by women who have specialized in hand craft butter and have the ability to turn the kernels into butter before selling it to the companies which then turn the butter into secondary products like cooking oils, cosmetics, chocolate before it ends up with the final consumer".

In recent years, shea butter has known a huge increase in foreign demand, above all from Europe and from the United States. As pointed out by Adams et al. [29], the local and international shea markets started conflicting as demand for shea butter increased on the international market. Moreover, as underlined by Lovett [30], disorganization within the supply chain brings about possible negative consequences on the quality of product in the three main markets (exported and processed for confectionary and cosmetics markets, processed to butter for home consumption and local markets, shea butter into cosmetics for export and regional markets). Against this background, a collective approach aimed at codifying rules of production may grant the standardization of the production process under a shared quality standard. Consequently, the GI recognition could be a winning strategy for product differentiation meeting emerging consumers' preference [10]. As a matter of fact, literature regarding GIs has drawn attention to the positive benefits on local communities in developing countries [14] by strengthening people-centered processes of sustainable rural development [31].

3. Methodology

The paper provides a two-step analysis aimed at:

a. excavating a "potential virtuous circle" of the GI, bringing about a potential payoff for the shea butter producers;
b. assessing a possible wider impact on sustainable rural development processes.

As far as the first purpose is concerned, Vandecandelaere et al.'s [5] virtuous circle will be implemented. More precisely, our analysis will be limited to the first three steps, being a preliminary analysis concerning the potentialities of a GI recognition for the shea butter. In addition, to evaluate the repercussion of this initiative of endogenous rural development, Marsden and van der Ploeg's [4] rural web will be tested.

In order to carry out this analysis, this research employs primary data.

A survey was carried out in two rural communities in the Yendi municipality (Northern Ghana) involving 100 respondents. Relevant stakeholders were also interviewed to solicit their views and to provide ways they can facilitate the processes aimed at developing GI products. The sample has been chosen through non-probability sampling techniques, more precisely through purposive sampling methods [32]. The northern region is the food basket of Ghana, in account of its specialization in the food production. Yendi municipality is endowed with either several potential GI products, such as shea butter, and with already recognized GIs, such as Ghana cocoa and Kente cloth [33]. A relevant part of these products is mostly processed by women farmers. Therefore, empirical analysis has permitted to collect 100 valid questionnaires that have been processed through both qualitative and quantitative descriptive methods. Qualitative analysis applies the two selected approaches, while a multivariate analysis has been carried out with the purpose of extracting homogeneous groups of farms in relation to the six dimensions of the rural web. Consequently, a cluster analysis was performed. In particular, the use of "Two Step Cluster Analysis" was preferred, in which the measure of distance adopted to identify the groups is the Log-likelihood [34]. Moreover, the Akaike Information Criterion (AIC) [35], an automatic algorithm, was used for the extraction of the clusters. The AIC measures the deviation of our model by the probability distribution f compared to the "true" distribution g. The mathematical formulation of the criterion is the following:

$$AIC = 2k - 2ln(L) \quad (1)$$

In this formula, the number of parameters is represented by k, while the maximum value of the likelihood function of the estimate model is expressed by L. The variables used to run the cluster analysis represents the dimension of rural web, which are codified in Table 1:

Table 1. Variables extracted for cluster analysis.

Dimension	Related Variable
Endogeneity	Use of local natural resources, differences from other similar products attributable to the area of production
Social capital	Collective action, group membership, presence of other stakeholders (both local and external actors)
Sustainability	Biodiversity preservation, natural resources employed
novelty	Introduction of GI, specific quality of shea butter
Governance of markets	Expectation of higher prices
Institutional arrangements	Groups of producers

The cluster analysis was conducted using the SPSS software version 25 (Armonk, New York, NY, USA). GI = Geographical Indications.

4. Results

According to Ghana Statistical Service [36], Yendi Municipality (the study area) is a district in Northern Region of Ghana, with a total land area of approximately 535,000 ha. Among the activities with a market perspective, shea butter extraction is one of the most important. The sample under observation is made up of women farmers, the majority of which is higher than 35 years old (Table 2).

Table 2. Age of respondents [%].

<35 years	32
more than 35 years	68

Farmers present a prevailing low level of education, as shown in Figure 2. As a matter of fact, 63% of the sample has no formal education, while upper level absorbs less than 10% of the total.

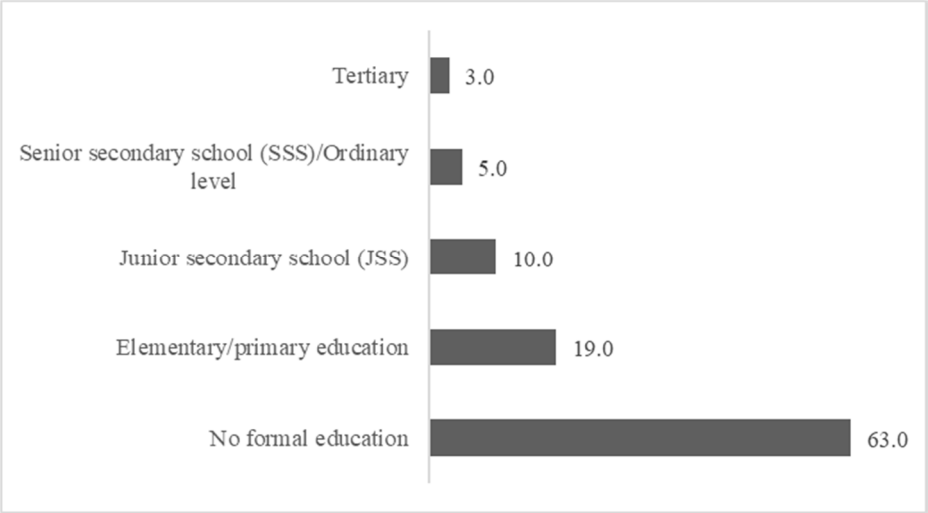

Figure 2. Level of education of farmers [%].

4.1. The Potential Virtuous Circle

The process of shea butter valorization through a GI should represents a novelty tied to endogenous local resources. As underlined in literature, shea butter is indigenous to ecosystems in semi-arid regions of Africa [37] and represents a "feminized subsidy from nature" [38], being prevailingly women farmers involved in the production process. Through the submitted questionnaire, farmers are requested to demonstrate:

- awareness about specific resources linked to shea butter (identification),
- the propensity to adhere collective action in promoting a shared code of practices (qualification) and
- to expect positive economic results linked to this initiative (remuneration).

4.1.1. Identification

A first interesting element for our analysis is the low awareness about the authentic meaning of Geographical Indication among the respondents. Therefore, the process of building up a geographical indication starts from the producers' awareness about the potentialities of their product.

This potential relies on three main dimensions pointed out by Vandecandelaere et al. [5]: the people, the place, and the product.

As far as the product is concerned, the geographical origin provides shea butter with special characteristics, well explained by interviewed farmers. More precisely:

- 30% of farmers mention that the product has "distinct color",
- 23% indicated it has "distinct scent",
- 25% said it has "distinct texture" and
- 22% said it is "much shiny on the skin".

Further attributes that may result in specific demand have been underlined by other interviewed farmers, such as the "yellowish color" (35%), "the smoothness" (51%), the "immense health benefits" (14%).

As far as the place is concerned, Yendi municipality is rich in natural and human resources. As far as natural resources are concerned, shea butter is provided with different characteristics from other similar products (for instance, fat content is relatively smaller); this offers this product unique taste and flavor. As far as human resources are concerned, local producers have inherited informal knowledge from local tradition: as a matter of fact, the majority of them, 94%, confirm that shea butter belongs to the local productive tradition, more precisely:

- 65% said "it is learnt from families since ages",
- 23% said "use of local tools like calabash", and
- 12% said "it was produced on subsistent bases in the past for family use".

Finally, as far as people are concerned, motivation for engaging in value creation and preservation of unique quality of the shea butter through collective action has been investigated. A relevant share of producers declared the membership to producers' group and the involvement of many other stakeholders to the eventual initiative. Nonetheless, another share of local producers is not involved in producers' groups. In this context, the role of both external local and external non-local actors is fundamental in affecting a collective perception of the potential benefits of GI recognition.

Other stakeholders potentially interested in promoting the shea butter GI are located within the supply chain and outside the supply chain. As far as the supply chain is concerned, 38% of the respondents mentioned "shea butter retailers", 39% mentioned "shea nut pickers", and 23% mentioned "grinding millers". Regarding other stakeholders not working in the supply chain, 33% of the respondents mentioned "the chief" (a traditional ruler, responsible for law and order in many towns and villages in Ghana), 27% mentioned the "religious leaders", and 40% mentioned the "assembly members".

4.1.2. Qualification

If, on the one side, a valorization strategy encounters the availability of local farmers, some constraints threaten the success of the initiative. As a matter of fact, qualification of the shea butter should be carried out through the recognition of a GI, even if awareness about the meaning of the brand is not well developed among local producers. Moreover, a percentage of 15% of respondents is not available to modify method of production if differently prescribed in the rule of production. Motivation for not complying with new rules are referred to the eventual higher costs of production and with the lack of skills to adequate. Furthermore, the code of practices of a GI system must comply with national and international food safety rules and regulations. Despite the possibility of changing the rules of production for complying with international standards, farmers posit that this will not affect the quality of the product: 96% of them said it is possible to apply such regulations without compromising the quality of the product while 4% said "No".

4.1.3. Remuneration

Remuneration is a critical step of the virtuous circle, which is linked to the benefits of the new strategy based on a GI. As a matter of fact, one of the advantages of a GI product is the high propensity to charge premium prices. Against this background, the respondents are quite sure about the willingness to spend more on behalf of potential consumers. Yendi shea butter, they posit, may get a higher price at both national and international level, in account of either its specific quality attributes (64%), or an increase in the production (18%), or in account of a better capability of product branding (18%). Nonetheless, a relatively high rate of producers is not convinced about this opportunity and is not sure about the possibility to fetch a higher price with the GI recognition.

4.2. A Wider Analysis under the Perspective of the Rural Web

As for many other case studies reported in recent literature, our empirical analysis evidences how this rural initiative integrates many aspects of rural development [39]. Through the application of the rural web, this paragraph puts forward an extended analysis on the potential of the GI Shea butter in a wider process of endogenous rural development.

The empirical analysis evidences how the process of valorization of the GI shea butter involves both national and international supply chains aimed at serving both food and non-food end-users. Moreover, actors potentially involved in this initiative are both internal and external to the supply chain, as shown in Figure 3.

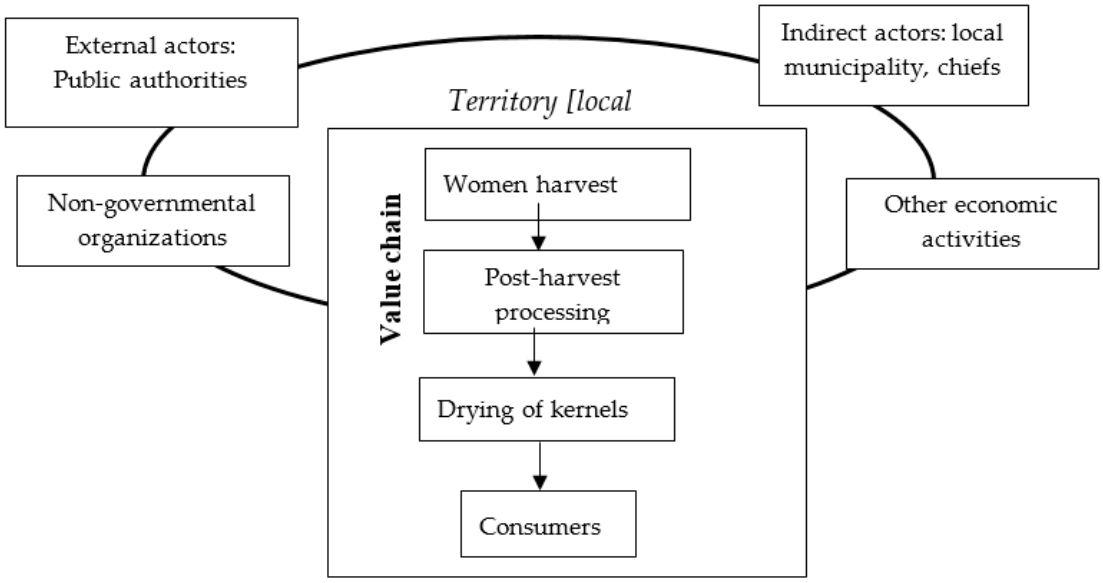

Figure 3. Actors potentially involved in the GI recognition. Source: our processing from Vandecandelaere et al. [5].

In the perspective of the rural web, farming activity may be considered as both structured and structuring element in rural development building [40], grounded on relational approaches able to reconnect farming, nature and the society [41]. This perspective of reflexive territorialization [42] may help to boost more resilient shea butter supply chain in the light of recent processes of globalization driven by the increasing demand from Europe and the United States.

The primary domains of rural web were identified in novelty production and governance of markets. The novelty has been defined as a break with existing rules [43]: in this case, it is linked to the qualification of the product through a GI, which differentiates shea butter as closely tied to both the place of production and the people producing it. Nonetheless, if, on the one side, a novelty is something new, "a new practice, a new insight, an unexpected but interesting result" [44], (p. 200), on the other side, "as harvests may fail, novelties might turn out to be failures as well" [45], (p. 2). The purpose of qualifying shea butter through a GI enables local producers to reposition themselves on different markets. The governance of markets is the other key dimension of the rural web, which can be defined as the institutional capacity to control and strengthen markets and to construct new ones [45], (p. 57). Against a new scenario of increasing demand at the international level, branding the shea butter implies a premium price strategy emphasizing unique quality of Ghanaian shea butter. Furthermore, the results reveal a trickle-down effect of the increase in income made by the shea butter producers. This is shown when the respondent answered to the question relating to the entire communal benefit of the increase in earnings. They posited "*it will help support their children education, it helps friends and*

family in need, some of the profit can be used to contribute to community projects, and the profits can be used to pay taxes to the government".

Our empirical analysis is in line with literature pointing out that the interaction between novelty and governance of markets has positive impacts in terms of sustainable endogenous rural development [46], (p. 179). In our case-study, endogeneity is related to the specification of local resources (both natural and human) belonging to the local tradition. Shea butter is traditionally linked to the territory of production. Answers to questionnaires indicate the existence of either material, such as local tools (for instance, calabash), and immaterial elements (tacit knowledge), that should be exploited to increase shea butter profitability, which will in turn lead to development. However, exploitation should be considered in the broader light of sustainability, another key dimension of the rural web. Set against this background, empirical analysis reveals the willingness of people to engage in an environmentally sustainable way of preserving shea nut trees, threatened by risks of overexploitation [47].

With the purpose of implementing an effective strategy of GI qualification, new institutional arrangements are required, in the form of producers' organizations, fostering collective action. Collective action is the key ingredient of another fundamental dimension of the rural web, social capital, leading to things done in a co-operative way. The findings of this work reveal a relatively high group co-operation, ability of individuals to engage in networks and employ social relations for a common purpose which is a prerequisite for a GI system to work. Nonetheless, a relevant share of local producers does not belong to a shea butter production group.

As shown in Figure 2, apart from local actors (such as shea nut pickers, grinding millers, and retailers) who have direct interest in the shea butter business, there are also external and local actors involved in building collective action, such as non-governmental organization (NGOs), government agencies, chiefs, religious leaders, and assembly representatives who are indirectly involved in the valorization and protection of the product.

4.3. A Synthesis of the Potentialities for a GI Recognition: A Cluster Analysis

The analysis has brought about three distinct clusters (Figure 4), with the maximum internal homogeneity and the maximum variance with respect to other clusters.

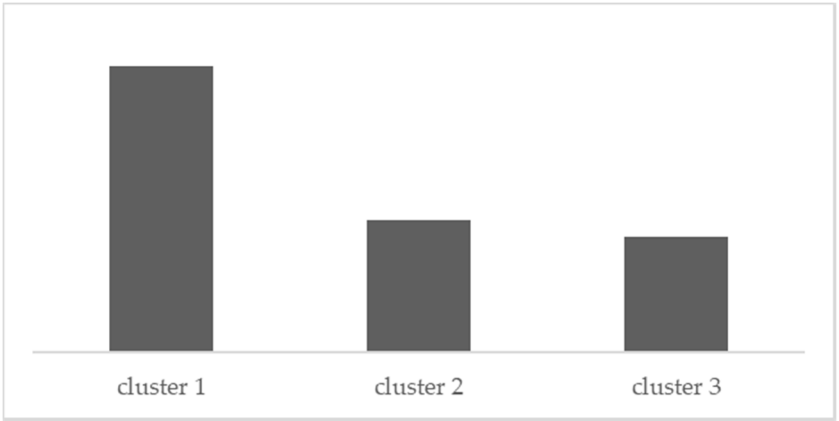

Figure 4. Cluster extracted.

Cluster 1 includes 53.6% of farms and may be identified as the virtuous cluster of farmers potentially ready for the GI activation. The cluster includes the highest share of young farmers, almost 50%. This create a sound basis for GI development.

All respondents confirm the specificity of the products and higher quality levels attributable to endogenous local natural resources. Consequently, novelty production brings about high opportunity of market governance, which is translated into the expectation of higher prices. The relatively lower level of education is balanced (only 20% of farms holds a junior secondary school diploma) by the

empowering action of social capital. Actually, social capital, a key dimension of the GI initiative, is enough developed, thanks to the presence of groups of women producers and to the sponsorship provided by both internal and external actors to the supply chain. Producers' groups are particularly developed in this cluster, which raises the potentialities for GI development. Local community supports the farmers, under the awareness of the wider process of rural development that may be drawn on the initiative. The uniqueness of employed resources and the high propensity to start up evidence a strong potential for these farmers to start up with the GI recognition.

Clusters 2 and 3, on the other side, evidence lesser propensity towards the GI recognition. The cluster is made up of rather mature and elderly farmers. The relatively higher level of education (above all in cluster 3) does not imply a successful action for GI recognition, by privileging individual and not collective action. Therefore, main barriers are related to the low potential for doing things done collectively, that is for collective action. Despite the fact that the farmers of the two clusters recognize the high specificity of the shea butter and its unique characteristics, they are not integrated into producers' groups, which strongly limit the potential for developing social capital and, consequently, collective action. This barrier seems definitively high in farms of the third cluster, with respect to the second cluster. Governance of market and remuneration represent a second barrier for farmers of the second cluster (they do not expect higher prices from GI recognition), while in the third one, farmers are sure of fetching good economic performance. Finally, the definition of a shared code of practices may encounter some obstacles on farmers of the second and third clusters, in that they evidence risks of exclusion for some local producers. As underlined in the literature [48], difficulties are mainly related to the relatively high costs of adjustment to comply with rules of production.

5. Discussion and Conclusions

In this paper, we aimed to evaluate two key elements: if a viable GI system can be established in Ghana and if the establishment of a GI system may boost wider processes of rural development. The GI initiative is not confined to the local production systems, but it seems to involve local institutions too, which demonstrate the purpose of contributing to build up a sound GI system and, therefore, to contribute to higher wellbeing by managing the tangible and intangible resources available in the territory [49], (p. 15).

The theoretical approach, which joins the virtuous circle of the GIs and the rural web, seems rigorous for appreciating the potentialities of shea butter recognition as both a supply chain and an extended territorial strategy [50]. As pointed out by Vandecandelaere et al. [5], (p. 141), "GIs, in this perspective, can represent a valid opportunity to enhance local development and generate a sustainable virtuous circle with positive benefits for the whole community". This was clearly demonstrated in our analysis, thanks to the reference to rural web to justify how GIs can serve as a strategic tool for boosting sustainable rural development.

As a consequence of all previous interrelated dimensions of the rural web, despite some limits, the recognition of GI may bring about a sustainable localized agri-food system. Sustainability may be evaluated under different perspectives:

- economic sustainability, in that a rise in the production and higher prices in the international markets are expected;
- social sustainability, in account of the prevailing participation of women farmers in these initiatives; this is a fundamental step to address the question of social exclusion and reduce barriers to women entrepreneurship in rural areas [51]. Our empirical analysis confirms recent literature that has underlined how the shea butter industry may provide a contribution to a gendered landscape [47], by empowering rural women and alleviating rural poverty [52];
- environmental sustainability, due to the willingness of people to engage in an environmentally sustainable way of preserving shea nut trees. The respondents stipulated their willingness to engage in ways to protect shea trees in the wild from bush fires, they also mention by-laws put in

place to prohibit the logging of shea trees. Again, the results reveal a trickle-down effect of the increase in income made by the shea butter producers.

The cluster analysis has evidenced this positive scenario for the majority of the farms included in the first cluster. Actually, the majority of farms may be considered as ready to start with the valorization strategy. The presence of a diversified set of actors, belonging either to the shea butter supply chain and/or to the local community, emphasizes a distinctive character of this initiative of valorization linked to a so-called community entrepreneurship [51,53]. Women are mainly involved in the shea butter supply chain, thanks to basic skills acquired generation by generation. Therefore, shea butter provides sound basis for women's social inclusion. Nonetheless, interviews emphasize either a direct (husband) or an indirect (chief) presence of men in affecting women's strategic decisions. This confirms the wider perspective on rural entrepreneurship, taking the form of community entrepreneurship [54,55]. Furthermore, the analysis of rural web demonstrates the relevance of the sustainability dimension, under the perspective of reconsidering economic, social, and environmental needs, by putting special attention to the requirements of economic growth, social justice, ecological protection, and intergenerational equity [44,56].

Nonetheless, if, on the one side, the majority of farms is ready to start with the GI initiative, on the other side, a relevant share of potential entrants presents some constraints that could vanish an effective valorization strategy. The main obstacles are related to the economic perceived benefits and to the low propensity to collective action. As far as remuneration of the novelty production is concerned, economic benefits are not fully perceived by potential beneficiaries. In this case, awareness about the real benefits may be drawn on similar experiences in Africa [3]. As far as social capital is concerned, the possibility of reaching a sound market governance relies on a deep collective action. From this point of view, a rural policy aiming at stimulating things done collectively is urgent. More precisely, our empirical analysis has evidenced the call for stimulating prevailingly bridging social capital [57], through linking women farmers belonging to the second and the third cluster with the other farmers [first cluster] and with the local community. This form of social capital should let these farmers to get ahead with the valorization strategy.

A final remark concerns the consequential institutional steps, as recent literature has demonstrated that GI initiatives may also be threatened by different failures at the supply chain and institutional level [58]. This is a particularly relevant barrier in cases of potential GIs open to international markets, where the risks of elite capture of the GI benefits may exclude the poorest producers in rural areas, as other experiences from Latina America have demonstrated [59]. Therefore, in order to make the initiative more resilient, then avoiding possible failures emerged in other similar cases [60], supportive elements are of paramount importance, in the form of GI legislation, state institutions, and local and international NGOs [61]. Moreover, the government of Ghana should review the laws governing the registration and operation of Geographical Indications in Ghana. This could permit a wider diffusion of the GIs as strategic tools for developing more resilient processes of rural development.

Author Contributions: The presented research was conjointly designed and elaborated. The discussion was realized conjointly by all authors and all authors contributed to the writing of this paper. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Conflicts of Interest: The authors declare no conflict of interest.

References

1. Giovannucci, D.; Josling, T.; Kerr, W.; O'Connor, B.; Yeung, M.T. *Guide to Geographical Indications Linking Products and Their Origins*; ITC: Geneva, Switzerland, 2009; p. 232.
2. Marie-Vivien, D.; Biénabe, E. The Multifaceted Role of the State in the Protection of Geographical Indications: A Worldwide Review. *World Dev.* **2017**, *98*, 1–11. [CrossRef]

3. Vandecandelaere, E.; Teyssier, C.; Barjolle, D.; Jeanneaux, P.; Fournier, S.; Beucherie, O. *Strengthening Sustainable Food Systems through Geographical Indications*; FAO: Rome, Italy, 2018.
4. Marsden, T.; Van Der Ploeg, J.D. *Unfolding Webs*; van Gorcum: Assen, The Netherlands, 2008.
5. Vandecandelaere, E.; Arfini, F.; Belletti, G.; Marescotti, A. (Eds.) *Linking People, Places and Products: A Guide for Promoting Quality Linked to Geographical Origin and Sustainable Geographical Indications*; FAO: Rome, Italy, 2009.
6. Mfune, O.; Ngongo Chisola, M.; Ziba, I. How Can Multifunctional Agriculture Support a Transition to a Green Economy in Africa? Lessons from the COMACO Model in Zambia. *Agriculture* **2016**, *6*, 48. [CrossRef]
7. Dasgupta, P.; Goswami, R.; Ali, M.N.; Chakraborty, S.; Saha, S.K. Multifunctional Role of Integrated Farming System in Developing Countries. *Int. J. Bio-Resour. Stress Manag.* **2015**, *6*, 424–432. [CrossRef]
8. Sautier, D.; Biénabe, E.; Cerdan, C. Geographical indications in developing countries. In *Labels of Origin for Food: Local Development, Global Recognition*; Barham, E., Sylvander, B., Eds.; CABI: Wallingford, UK, 2011; pp. 139–153.
9. Quiñones Ruiz, X.F.; Forster, H.; Penker, M.; Belletti, G.; Marescotti, A.; Scaramuzzi, S.; Broscha, K.; Braito, M.; Altenbuchner, C. How are food Geographical Indications evolving? An analysis of EU GI amendments. *Br. Food J.* **2018**, *120*, 1876–1887. [CrossRef]
10. Moschini, G.C.; Menapace, L.; Pick, D. Geographical Indications and the Competitive Provision of Quality in Agricultural Markets. *Am. J. Agric. Econ.* **2008**, *90*, 794–812. [CrossRef]
11. Appiah, M.E. Geographical Indications—State of play in Africa. In Proceedings of the International Workshop on Geographical Indications: Creating Value through Geographical Indications: The Power of Origin, Kampala, Uganda, 10–11 November 2011.
12. Fay, F. Geographical indications: Recent developments in the EU. In Proceedings of the Worlwide Symposium on GIs, Lisbon, Portugal, 2 July 2019.
13. African Union. *Continental Strategy for GIs in Africa*; Department of Rural Economy and Agriculture: Addis Ababa, Ethiopia, 2017.
14. UNCTAD. *Why Geographical Indications for Least Developed Countries (LDCs)?* United Nations: San Francisco, CA, USA, 2015.
15. Portes, A. Social Capital: Its origins and applications in modern sociology. *Annu. Rev. Sociol.* **1998**, *24*, l-24. [CrossRef]
16. Kanemasu, Y.; Sonnino, R.; Marsden, T. Rural development in Devon. Exploring the dynamics of an emerging web. In *Networking the Rural*; Milone, P., Ventura, F., Eds.; van Gorcum: Assen, The Netherlands, 2010; pp. 109–128.
17. Marsden, T. *The Condition of Rural Sustainability*; Van Gorcum: Assen, The Netherlands, 2003.
18. Oostinide, H.; van Broekhuizen, R. The dynamics of novelty production. In *Unfolding Webs*; Marsden, T., van der Ploeg, J.D., Eds.; van Gorcum: Assen, The Netherlands, 2008; pp. 68–86.
19. Vihinen, H.; Kroger, L. The governance of markets. In *Unfolding Webs*; Marsden, T., van der Ploeg, J.D., Eds.; van Gorcum: Assen, The Netherlands, 2008; pp. 129–148.
20. Belletti, G.; Casabianca, F.; Gabriellini, F. Formalization and legitimation in qualification processes based on Geographical indications. Evidences from the Charcuteries de Corse case. In Proceedings of the XXV ESRS (European Society of Rural Sociology) Congress: Rural Resilience and Vulnerability. The Rural as Locus of Solidarity and Conflicts in Times of Crisis, Florence, Italy, 29 July–1 August 2013.
21. Quiñones-Ruiz, X.F.; Penker, M.; Belletti, G.; Marescotti, A.; Scaramuzzi, S. Why early collective action pays off: Evidence from setting Protected Geographical Indications. *Renew. Agric. Food Syst.* **2016**, *32*, 179–192. [CrossRef]
22. De Rosa, M.; Adinolfi, F.; Vecchio, Y. Building up collective action to qualify GIs. *Land Use Policy* **2017**, *66*, 340–345. [CrossRef]
23. Perito, M.; De Rosa, M.; Bartoli, L.; Chiodo, E.; Martino, G. Heterogeneous Organizational Arrangements in Agrifood Chains: A Governance Value Analysis Perspective on the Sheep and Goat Meat Sector of Italy. *Agriculture* **2017**, *7*, 47. [CrossRef]
24. Okorley, E.L.; Forfoe, F.K.; Nashiru, S. Technological changes in shea butter production in Ghana: A case study of shea butter production in the Yendi District of the Northern Region of Ghana. *Ghana J. Agric. Sci.* **2008**, *41*, 59–67. [CrossRef]
25. Haruna, I.; Sarpong, D.B.; Al-Hassan, R. Evaluating the Viability of Shea Butter Production: A Comparative Analysis. *Res. J. Financ. Account.* **2012**, *3*, 44–52.

26. Haruna, I. Technical efficiency in the sheanut processing industry in Ghana. *Int. J. Pure Appl. Sci.* **2011**, *4*, 84–92.
27. Hatskevich, A.; Srnec, K.; Eminzang, E.J. Shea butter processing as an engine of poverty reduction in Northern Ghana: Case study of four communities in the Bolgatanga Municipality. *Afr. J. Agric. Res.* **2014**, *9*, 3185–3190. [CrossRef]
28. Solomon, A. *A Study on How the Creation of New Value Chains for Shea Butter Production Influences the Livelihood of Rural Women in a Climate Change Situation in Northern Ghana*; International Institute of Social Studies: The Hague, The Netherlands, 2017.
29. Adams, A.-M.; Abudulai, I.; Bashiru, M. The Shea Industry and Rural Livelihoods among Women in the Wa Municipality, Ghana. *J. Soc. Sci. Stud.* **2016**, *3*, 40–56. [CrossRef]
30. Lovett, P. *The shea butter value chain, USAID—WATH technical report*; United Nations: San Francisco, CA, USA, 2004.
31. Lütteken, A.; Hagedorn, K. *Concepts and Issues of Sustainability in Countries in Transition: An Institutional Concept of Sustainability as a Basis for the Network*; Humboldt University of Berlin: Berlin, Germany, 2006.
32. Etikan, I.; Musa, S.A.; Alkassim, R.S. Comparison of Convenience Sampling and Purposive Sampling. *Am. J. Theor. Appl. Stat.* **2016**, *5*, 1–4. [CrossRef]
33. Chinedu, O.; Manyise, T.; Moruzzo, R. Protected geographical indication in Sub-Saharian Africa: Issues and implications. *Afr. J. Intellect. Prop. Rights* **2017**, *1*, 79–98.
34. Arminger, G.; Clogg, C.; Sobel, M. *Handbook of Statistical Modeling for the Social and Behavioural Sciences*; Plenum Press: New York, NY, USA, 1995.
35. Brooks, D. Akaike Information Criterion Statistics. *Technometrics* **2012**, *31*, 270–271. [CrossRef]
36. Ghana Statistical Service. *District Analytical Report*; Ghana Statistical Service: Yendi, Yendi Municipality, 2014.
37. Jasaw, G.S.; Saito, O.; Takeuchi, K. Shea (*Vitellaria paradoxa*) Butter Production and Resource Use by Urban and Rural Processors in Northern Ghana. *Sustainability* **2015**, *2015*, 3592–3614. [CrossRef]
38. Elias, M.; Carney, J. African Shea Butter: A Feminized Subsidy from Nature. *Africa* **2007**, *77*, 37–62. [CrossRef]
39. Moschitz, H.; Feldmann, C. Communication in the rural web: A case study of the dairy in Andeer. In *Building Sustainable Rural Futures, Proceedings of the 9th European IFSA Symposium, Vienna, Austria, 4–7 July 2010*; Darnhofer, I., Grötzer, M., Eds.; University of Natural Resources and Applied Life: Vienna, Austria, 2010; ISBN 978-3-200-01908-9.
40. Ventura, F.; Brunori, G.; Milone, P.; Berti, G. The rural web: A synthesis. In *Unfolding Webs*; Marsden, T., van der Ploeg, J.D., Eds.; van Gorcum: Assen, The Netherlands, 2008; pp. 149–174.
41. Renting, H.; van der Ploeg, J.D. Reconnecting nature, farming and society: Environmental cooperatives in the Netherlands as institutional arrangements for creating coherence. *J. Environ. Policy Plan.* **2001**, *3*, 85–101. [CrossRef]
42. DuPuis, M.E.; Goodman, D. Should We Go 'Home' to Eat? Toward a Reflexive Politics of Localism. *J. Rural Stud.* **2005**, *21*, 359–371. [CrossRef]
43. Wiskerke, J.S.C.; van der Ploeg, J.D. *Seeds of Transition: Essays on Novelty production, Niches and Regimes in Agriculture*; Van Gorcum: Assen, The Netherlands, 2004.
44. Van der Ploeg, J.D.; Verschuren, P.; Verhoeven, F.; Pepels, J. Dealing with Novelties: A Grassland Experiment Reconsidered. *J. Environ. Policy Plan.* **2006**, *8*, 199–218. [CrossRef]
45. Milone, P.; Ventura, F.; Ye, J. (Eds.) *Constructing a New Framework for Rural Development*; Emerald: Bingley, UK, 2015.
46. Kanemasu, Y.; Sonnino, R.; Marsden, T.; Schneider, S. Testing the web: A comparative analysis. In *Unfolding Webs*; Marsden, T., van der Ploeg, J.D., Eds.; van Gorcum: Assen, The Netherlands, 2008; pp. 175–210.
47. Boffa, J.M. *Opportunities and Challenges in the Improvement of the Shea (Vitellaria paradoxa) Resource and Its Management*; Occasional Paper 24; World Agroforestry Centre: Nairobi, Kenya, 2015.
48. Cei, L.; De Francesco, E.; Stefani, G. From Geographical Indications to Rural Development: A Review of the Economic Effects of European Union Policy. *Sustainability* **2018**, *10*, 3745. [CrossRef]
49. Arfini, F.; Antonioli, F.; Donati, M.; Gorton, M.; Mancini, M.C.; Tocco, B.; Veneziani, M. *Sustainability of European Food Quality Schemes Conceptual framework*; Arfini, F., Bellassen, V., Eds.; Springer: Cham, Switzerland, 2019; pp. 3–21.

50. Belletti, G.; Marescotti, A. Monitoring and evaluating the effects of the protection of Geographical Indications. A methodological proposal. In *The Effects of Protecting Geographical Indications Ways and Means of their Evaluation*; Belletti, G., Marescotti, A., Paus, M., Reviron, S., Deppeler, A., Stamm, H., Thévenod-Mottet, E., Eds.; Swiss Federal Institute of Intellectual Property: Bern, Switzerland, 2011.
51. Ghouse, S.M.; McElwee, G.; Durrah, O. Entrepreneurial success of cottage-based women entrepreneurs in Oman. *IJBR* **2019**, *25*, 480–498. [CrossRef]
52. Laube, W. Global Shea Nut Commodity Chains and Poverty eradication in Northern Ghana: Myth or Reality? Center for Development Research (ZEF), University of Bonn, Germany. *UDS Int. J. Dev.* **2015**, *2*, 128–147.
53. Fortunato, M.; Alter, T. Community entrepreneurship development: An introduction. *Community Dev. J.* **2015**, *46*, 1–12. [CrossRef]
54. McElwee, G.; Smith, R.; Somerville, P. Conceptualising animation in rural communities: The Village SOS case. *Entrep. Reg. Dev.* **2017**, *30*, 173–198. [CrossRef]
55. Aggarwal, A.K. Rural Entrepreneurship Development Ecosystem—An Emerging Paradigm of Rural Socio-Economic Development. 2017. Available online: https://ssrn.com/abstract=3184127 or http://dx.doi.org/10.2139/ssrn.3184127 (accessed on 18 December 2019).
56. Kitchen, L.; Marsden, T. Creating sustainable rural development through stimulating the eco-economy. Beyond the eco-economy paradox? *Sociol. Rural.* **2009**, *49*, 273–293. [CrossRef]
57. Woolcock, M. The Place of Social Capital in Understanding Social and Economic Outcomes. *Can. J. Policy Res.* **2001**, *2*, 1–17.
58. Belletti, G.; Marescotti, A.; Touzard, J.M. Geographical indications, public goods, and sustainable development: The roles of actors' strategies and public policies. *World Dev.* **2017**, *98*, 45–57. [CrossRef]
59. Mancini, M.C. Geographical Indications in Latin America Value Chains: A "branding from below" strategy or a mechanism excluding the poorest? *J. Rural Stud.* **2013**, *32*, 295–306. [CrossRef]
60. Bowen, S. Development from Within? The Potential for Geographical Indications in the Global South. *J. World Intellect. Prop.* **2010**, *13*, 231–252. [CrossRef]
61. Besah-Adanu, C.; Bosselmann, A.S.; Hansted, L.; Kwapong, P.K. Food origin labels in Ghana. Finding inspirations in the European geographical indications system on honey. *J. World Intellect. Prop.* **2019**, *22*, 349–363. [CrossRef]