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The effectiveness of contemporary Geographical Indications (GIs) schemes in enhancing the quality of Chinese agrifoods — Experiences from the field

Abstract: Food quality problems have frequently been in the news in China leading to growing concerns amongst consumers. Within this context, Geographical Indications (GIs), as an indicator of quality, are becoming increasingly important in the Chinese agrifood market. However, in the face of a number of GI agrifood scandals reported in the last decade, the effectiveness of contemporary Chinese GI schemes in terms of enhancing agrifood quality is becoming questionable. To discover the underlying reasons for this, the paper first provides an overview of Chinese GI schemes and conceptualises ‘agrifood quality’ using ideas drawn from socio-economic theory and network approaches, with a particular focus on the role of power relationships. It then applies the conceptual framework to case studies examining quality forming processes in three GI networks in Jiangxi Province. The research indicates that the development of Chinese GI networks is driven primarily by the government’s intention to increase farmers’ and rural incomes, and that the GI schemes examined in this study are characterised by low or basic standards, inappropriate GI issuing procedures and weak government quality inspection programmes. Therefore, the overall conclusion is that the quality of Chinese agrifood products may not be enhanced by GI schemes as currently implemented.

Key words: Geographical Indications (GIs); Chinese GI schemes; agrifood quality; power relationships; network approaches.

1. Introduction

The Shanghai Institute for Food and Drug Safety (2012) reported that more than 70% of Shanghai residents worry about domestically produced food, with the quality of meat and dairy products of most concern. Fears and scares are also common with many Chinese cases receiving attention in the Western press. Among the most notable examples include the industrial chemical melamine in powdered milk in 2008, illegal additives in some soft drinks in 2011 and, more recently, concerns

over genetically modified rice products. In short, the perceived quality of a wide portfolio of Chinese agrifood products has warranted a great degree of comment both in China and in many developed countries, especially those where Chinese agrifood products are exported to.

These recent incidents concerning agrifood safety have generated a wider interest in the overall quality of agrifoods in China and particularly in mechanisms for assuring traceability in food chains. In fact, it is the government's responsibility to define the legally acceptable composition of agrifood products to protect the public from poor quality and diseased foodstuffs (Barling, 2004). However, the effectiveness of the Chinese food regulatory system has been criticised for a number of reasons, such as lax standards, unclear responsibility between different regulatory departments and a lack of an effective tracing and recalling system (Brogaard and Zhao, 2002; Tam and Yang 2005; Calvin et al., 2006; Roberts and Engardio, 2006; Roth et al., 2008). Within this context, the question of how to enhance the quality of Chinese agrifoods is becoming not only a topic of significant political debate but also an area requiring increasing research focus and analysis.

Chinese history and custom may offer a potential solution. Dating back as early as 2000 B.C., the Chinese have developed specific ways to judge agrifood quality (Liu, 2006). They believe that agrifood products planted in certain places possess unique natural qualities which shape the foundations of self-medication, personal health and disease prevention (Reid et al., 2001). Many particular foods thus form an essential element of Chinese food 'therapy'. Drawing upon this traditional Chinese approach, the symbolism associated with a geographic location has caught the imagination and interest of contemporary consumers. Consequently Geographical Indications (GIs) may convey assumed 'local' (traceability) and 'natural' (nutritiousness and safety) characteristics thereby acting as proxies for quality especially given that the accreditation process follows a defined code of practice (see also Parrott et al., 2002).

But, is this pathway an effective method to enhance agrifood quality within the Chinese food regulatory system? Unfortunately, many sub-standard GI agrifood products have been reported in the media over the last decade. Pesticide poisoned Jinhua ham, illegally dyed Baiyangdian duck

eggs, and concerns over the level of residue from pesticide-lined bags used on young Yantai apples to shield the fruit from blemishes from pollution and pests are three high profile examples. To discover the underlying reasons for these problems and thus to evaluate the ability of contemporary Chinese GI schemes to enhance agrifood quality, this paper first examines the Chinese GI system and explores the meaning of agrifood quality. Then, following a discussion of the research methodology, the paper draws upon three cases studies which assess the effectiveness of GIs with respect to agrifood quality for oranges, mandarins, and green tea before concluding with its results.

2. The GI system and the Chinese Context

GIs, according to Article 22.1 in the ‘Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS)’, are defined as, *‘indications which identify a good as originating in the territory of a member, or a region or locality in that territory, where a given quality, reputation or other characteristic of the good is essentially attributable to its geographical origin’*. In theory, producers are expected to club or co-operate together to apply for GI recognition from the government based on pre-agreed GI certification criteria. Anybody located in the specific area and making products conforming to the requirements of the certification process, has the right to apply to use GI labels on their products. To ensure specific characteristics further, not only has a product to meet all the specified GI criteria before being permitted to use a GI, but also a government department and/or independent third party should inspect production processes and thus guarantee the conformity of actors to official norms (O’Reilly and Hains, 2004; Hayes et al., 2004, 2005; The Parma Ham Consortium, 2007). Under such structures, GIs can be used as tangible signals of specified quality characteristics by producing groups or organisations (Allaire, 2004).

However, this system may contain two main flaws in securing ‘high’ quality. Firstly, the process of establishing codes of practice for GIs involves different individuals and groups, and the actual setting of the minimum acceptable GI standard may thus itself be the outcome of a bargaining process and the emergence of a compromise solution where ‘low’ or ‘basic’ GI criteria are adopted

(Anania and Nisticò, 2004). Membership heterogeneity may negatively affect GI standards for that very reason (Dentoni et al., 2012). Secondly, GIs are owned by groups or organisations (Hayes et al., 2005). Comparable to some quasi-public products, there is a reduced incentive for individual producers to invest in improving the collective reputation of GIs if the reward is shared by every GI user irrespective of their initial investment of time or resource. When the higher quality GI producers realise they cannot acquire additional rewards for their extra costs and efforts, the effect may be that higher quality producers may exit the market with the result that average or low quality GI products may then dominate, a scenario that may emerge especially with lax market supervision (Akerlof, 1970). These two weaknesses demonstrate that the modern GI system *per se* is not a necessary and sufficient precondition for enhancing the quality of GI agrifood products. The effectiveness of GI schemes upon quality will vary according to the specific context.

Geographical names have been used for thousands of years to distinguish similar products in China. However, the Chinese did not establish any regulations to protect and promote geographical origins until the 1980s when China became, somewhat belatedly, one of the signatories to the Paris Convention for the Protection of Industrial Property (1883) in 1985. Today, three parallel legislative frameworks have been established to manage the Chinese GI system. Firstly, the State Administration for Industry and Commerce (SAIC) is tasked with defining GIs¹ and managing the GI system under the Trademark Law. Secondly, based on the ‘*Provisions on Protection of GI Products*’ issued in 2005, the Administration of Quality Supervision Inspection and Quarantine (AQSIQ) is able to confirm GI recognitions and to monitor and supervise production processes of GI products. The third and final GI legislation system is administered by the Ministry of Agriculture (MoA) since 2007 which holds the right to register GIs and to supervise and examine the usage of GIs through ‘*Measures for the Administration of Geographical Indications of Agricultural Products*’.

These three government departments established three parallel GI frameworks and this generated

¹ GIs are defined as collective and certification marks under Trademark Law.

potential for conflict to arise not just from different GI standards² but also from the overlapping areas of government inspection. Such ambiguities and confusion created the conditions for unscrupulous producers to produce sub-standard GI agrifood products or agrifood products with fake GI certifications (Tam and Yang, 2005). In the wake of many Chinese GI agrifood products with an ‘unacceptable’ level of quality, the quality influence of GIs which theoretically appear to ‘*guarantee*’ that certified agrifood products have met published GI standards and may make ‘*food supply chains legible, traceable, and perhaps less risky*’ (Guthman, 2004, p.512), is questionable in China presently. Considering the complicated nature of Chinese GI schemes, and given that little similar research has been undertaken, the effectiveness of Chinese GIs is thus becoming an important area for research.

3. Conceptualising agrifood quality

In order to explore the effectiveness of contemporary Chinese GI schemes in ensuring agrifood quality, it is necessary to discuss the definition of agrifood quality. Whilst it is clear that food safety is a necessary pre-requisite for food quality, the latter is in many ways a more fluid, subjective and contested concept than the former. Indeed, providing an all-inclusive definition of agrifood quality is challenging.

Firstly, agrifood quality has different meanings in different agrifood systems/networks. For example, in the industrial agrifood system, characterised by growing globalisation, agrifood quality is primarily shaped by giant agrifood companies and large-scale retailers through measurement standards/grades and definitional norms, as ‘standardisation’ is central to large-scale industrial production and economic effectiveness (Goodman and Watts, 1997; Heffernan et al., 1999; Murdoch and Miele, 1999; Renard, 2005). Farmers and most processors have little choice but to accept and conform with these specific quality metrics in order to get shelf positions in the market (Renard, 2005). Nevertheless, from the late 1980s, Alternative Agrifood Networks (AAFNs) began to attract more attention in the world agriculture sector stimulated by food crises (such as BSE, Salmonella, chemical contamination and concern over genetically modified

² Different GI frameworks may adopt different GI standards for a GI product.

agrifoods), rising consumer incomes (Morgan and Murdoch, 2000), the ‘squeeze’ on farmers’ and processors’ incomes (Fine, 1994; Mitchell et al., 1997; Van der Ploeg et al., 2000), and the willingness of many governments to improve incomes in ‘lagging’ rural areas (Ilbery and Kneafsey, 1998; Murdoch and Miele, 1999; Marsden et al., 2000; Miele and Murdoch, 2002; Marsden and Smith, 2005; Dogan and Gokovali, 2012). To compete with the more standardised, industrial approach, the quality meaning in AAFNs is more consumer orientated with its emphasis on attributes such as health (e.g. organic products and GMO free products), locality of origin (e.g. products with GI labels), animal welfare (e.g. ‘free range’ products), and ecologically friendly farming practices (Nygard and Storstad, 1998; Winter, 2003a; 2003b). The emerging GI system could thus be viewed as a branch of AAFNs offering possible market entry for ‘localised’ quality (see also Storper, 1997; Ilbery and Kneafsey, 1999; Whatmore et al., 2003; DuPuis and Goodman, 2005). However, this ‘localised’ nature also prevents the establishment of a uniform definition of agrifood quality and so a range of specific quality meanings emerge under the umbrella of GI products. For example, the quality of Cassis wine is linked to “terroir” and restricted quantity whilst that of Florida citrus is related to natural environment and modern technology.

Secondly, quality perspectives are not static for different actors in the agrifood network (e.g. farmers, processors, sellers and consumers) and they are also shaped further by the role of government, the vagaries of the natural environment, the levels of technology and a variety of social-cultural factors. For example, a consumer’s definition of agrifood quality may be linked to perceived safety concerns or subjectively to taste whilst in contrast, based on measurable characteristics, producers may interpret agrifood quality as primarily the means to develop a market or a marketing opportunity to increase sales or set premium prices (Morris and Young, 2000; Sepúlveda et al., 2010). However, both perspectives are conditional upon the need to conform to the government’s quality standards with respect to biological, chemical, and physical criteria (i.e. safety) or suffer the risk of being declared ineligible for sale in the market. Many agrifood researchers (e.g. Nygard and Storstad, 1998; Henson, 2000; Parrott et al., 2002; Harvey et al., 2004; Jumba, 2012; Klockner et al. 2013) have recognised there is a division in agrifood quality between producers and consumers, and different factors may provide contrasting prisms

through which agrifood quality can be evaluated. Ilbery and Kneafsey (2000, p.219) thus argue that agrifood quality *'is indeed a social construction and thus dependent on the socio-cultural, political and economic contexts within which production-consumption relations exist'*. Similarly, Harvey et al. (2004) and Mansfield (2003a; 2003b) propose that agrifood quality is *'about judgement in contexts'* where contexts are characterised by government and its associated regulations, the socio-cultural environment, the economic context as well as producer and consumer organisations. As such, actors and contexts collaboratively influence the debate on agrifood quality.

In the face of different agrifood quality interpretations accentuated by the nature of different systems/networks and given the influences of multiple actors and factors, agrifood quality can only be analysed and evaluated within context (see also Parrott et al., 2002). For this reason, this research adopts a 'network' approach to aid the understanding of how agrifood quality is enhanced in the Chinese GI context. Network approaches have been adopted by many scholars (e.g. Hughes, 2000; Ilbery and Maye, 2005; Tregear et al., 2007) to analyse agricultural activities as well as agrifood quality since the 1990s. In contrast to the 'chain' approach with its tendency to concentrate on economic exchange and treat consumption as an 'outcome' of production (Fine, 1994; Busch and Juska, 1997), network approaches examine ways in which all factors, human and non-human entities, are bound together and consequently shape and are shaped by their alliances (Atkins and Bowler, 2001). The idea is to explore *'how different kinds of nodes (people, firms, states, places and organization) are connected to one another in complex and multi-stranded ways'* (Hughes, 2000, p.178) to obtain a more comprehensive understanding of the various activities within the agricultural sector.

Based on a network perspective, agrifood quality can be analysed through examining *'how relations amongst people and things might be imagined, assembled and translated to effect co-ordination at a distance'* (Larner and Le Heron, 2002, p.417). Developing durable quality in the network relies upon *'strong fabrics of social organisation at all points in the network, making the patterning of social and environmental practices in particular times and places integral to the*

business of network enrolment' (Whatmore and Thorne, 1997, p.294). Law (1994, p.40) and Whatmore and Thorne (1997, p.293-294) use the notion of '*modes of ordering*' to describe the relationships that link producers, various organisations and consumers into a network, and indicate that '*modes of ordering*' are both narrative, namely '*ways of telling about the world ... what used to be, or what ought to happen*', and material, '*acted out and embodied in a concrete, non-verbal, manner in a network*'. Latour (1987), Morgan and Murdoch (2000) and Morgan et al. (2006) stress the importance of '*power*' in describing such relationships and how actors co-operate or otherwise with each other. They define power as a relationship performed through mobilising, stabilising and combining people, actions or events to fulfill certain functions in a stable network.

It should be noted that power is '*a relational effect of social interaction*' (Allen, 2003, p.2). It is a consequence rather than a cause of action (Latour, 1987) and should not be considered to reside solely in the hands of any one actor (Lockie and Kitto, 2000; Dicken et al., 2001; Csurgó et al., 2008). Inevitably, actors with certain resources such as knowledge, information and capacities, may be in a stronger strategic position to shape power relationships according to their own preference. For example, large-scale retailers, holding huge economic buying capacity, may set their own quality standards and so shape the whole supply system to conform to those standards. But, the distribution of resources alone does not necessarily correspond to the distribution of power, nor does it mean that the structure within certain networks can never be changed or that actors with an unequal position and with fewer resources and capacities will never have a chance to compete for their power (Dahl, 1989). It is because resources and capacities '*may be modified, displaced or disrupted depending upon the relationships that come into play*' (Allen, 2003, p.97). As Juska and Busch (1994) and Juska et al. (2000) point out, power is negotiable and is modified through time in the network. It is not structurally determined based simply on resources or abilities or capacities but remains unstable and conditional upon the interaction and interplay of the set of various actors (Lockie, 2002).

Therefore, based on previous research, agrifood quality can only be analysed as the outcome of unstable and changing power relationships between various actors within a certain political,

economic and social context. Figure 1 below illustrates this point.

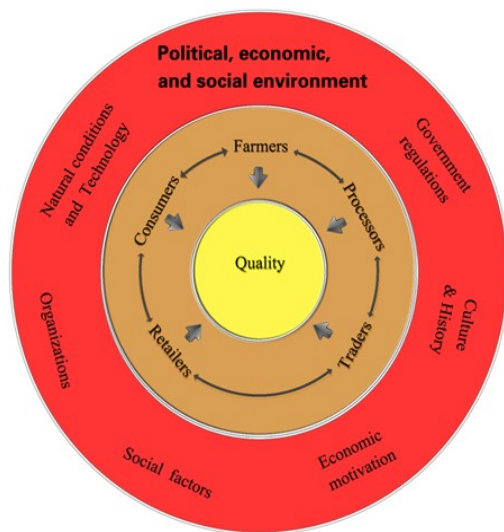


Figure 1: The conceptual framework of agrifood quality

Consequently, the focus of this research seeks to understand how power relationships unfold and interact between key actors³ within a given context and their final impact upon Chinese GI agrifood quality. The next section summarises the methodology adopted in this research, which aimed to identify not only the key actors but also the power relationships between them. Only then can the effectiveness or otherwise of the Chinese GI system be assessed.

4. Methodology: three case studies

More than 1,800 GI agrifood products were registered in China by the end of 2010 (Beijing Zhongjunshiji GIs Research Team, 2011). The focus of this research is on Jiangxi Province, which has 67 registered GI products, a figure slightly higher than the average of 64 GIs per province. The region was chosen primarily on practical grounds, being the location of the lead author's home institution. Nevertheless, the case meets the condition stressed by Stake (2005) that whatever cases are chosen should offer the opportunity to maximise what can be learned.

³ Key actors involved in GI networks may vary under different research purposes and contexts. For example, according to Murdoch (2000), not only the agriculture sector but also the non-agriculture sphere, such as the tourist industry and more general economic aspects, should be addressed when focusing on European rural development to analyse GI networks. As this paper concentrates on Chinese GI agrifood quality, only power relationships between the key agrifood actors involved in quality forming processes are examined.

To choose suitable sample cases from the 67 GI products within Jiangxi Province, a scoping study involving 4 agricultural researchers from Jiangxi University of Finance and Economics and Jiangxi Agricultural University and 12 GI consumers was undertaken in early 2010. All the respondents were interviewed to develop criteria for selecting case studies: firstly, the sample cases should be ‘valuable’ containing a relatively high output value; secondly, they should be ‘accessible’ with many potential interviewees and large amounts of available secondary data; thirdly, they should be ‘typical’ i.e. should represent small-scale farmers; fourthly, they should enable exploration of the key elements proposed within the conceptual framework; and, finally they should each be different in terms of their respective market quality reputations (see Table 1 below). Based on these criteria, three GI products were selected for study, namely the ‘Gannan navel orange’, ‘Nanfeng mandarin’ and ‘Wuyuan green tea’⁴ (Figure 2).

	Gannan navel orange	Nanfeng mandarin	Wuyuan green tea
History	Short planting history	Long planting history	Long planting and processing history
Legislation systems involved	Registered with the SAIC and the AQSIQ	Registered with the SAIC, the AQSIQ, and the MoA	Registered with the SAIC, the AQSIQ, and the MoA
The existence of processors	No	No	Yes
Quality reputation	Stable	Decreasing	Increasing

Table 1: The key case study characteristics

⁴ Due to the different socio-economic environments in national and international markets and the very limited export quantity of the three products (only around 2.29% of Gannan navel oranges and 7.45% of Nanfeng mandarins were exported to international markets in 2009, and 12% of the annual output value of Wuyuan green tea was exported to international markets in 2010), the three case studies only focused on their respective national markets.

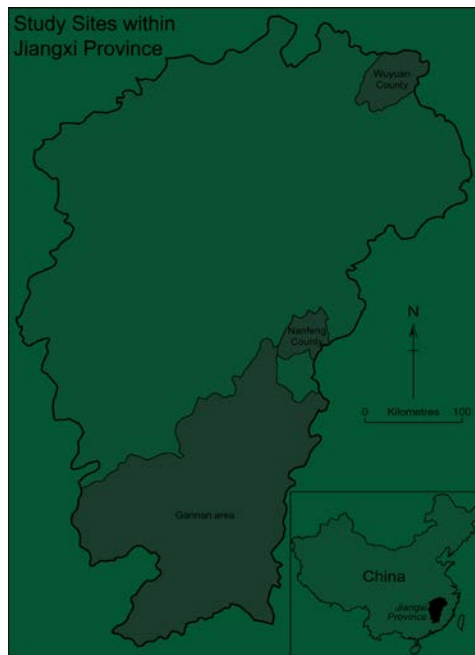


Figure 2: The study sites in Jiangxi province, China

Empirical data was obtained through documentary research and semi-structured interviews. The secondary data was collected to prepare a picture of who the key actors involved in quality forming processes were within each GI network and also to build a context for each of the three case studies through publications, internet searching and preliminary research conducted with local government officers in Nanchang county in January 2010, in the Ganzhou area in July 2010, and in Wuyuan county in October 2010. Based on the documentary research, face to face interviews with government officers, drafters of GI standards, managers of GI holders, farmers, processors and intermediaries, as well as managers of the contract farming system⁵, were organised between October and December, 2010. Forty-three interviewees (14-15 interviewees in each case), selected in accordance with the snowball sampling method⁶, were asked to respond to a list of twenty semi-structured questions relating to GI regulations, quality standards in practice and the social, political and economic influences upon production activities. All data collected was

⁵ Individual consumers were not investigated as actors as they usually do not have a significant influence on producers' production activities (Mulgan, 1989) and a representative consumer survey was beyond the scope of this research. Instead, middlemen were interviewed because of their knowledge of the consumer market.

⁶ The snowball sampling method was used as many respondents are difficult to have a meeting with, such as processing firms' managers and drafters of the GI standard. Initially, at least three government officers within each GI network were recommended mainly by four scholars at the two aforementioned Universities in Jiangxi province. Then, these government officers were contacted by telephone and asked whether they would like to participate in this research and whether they were able to contact other actors, such as technicians, farmers and middlemen. After obtaining positive answers, the investigation was conducted. In fact, not only government officers but every respondent was required to introduce more possible participants.

processed in three phases, namely transcription, classification, and connection utilising NVivo 8 to ensure reliability and ‘*to be more explicit and reflective about the process of analysis*’ (Bryman, 2008, p.567).

5. An examination of GIs influences in enhancing quality – three case studies

5.1. Gannan navel orange

Navel orange trees were first farmed commercially in the Gannan area in 1971. Since then, the local natural environment has proved to be ideal for producing navel oranges. In 2009, the annual production of navel oranges in the Gannan area reached 1.2 million tonnes, a figure only slightly less than outputs harvested in Brazil and Florida. In order to protect and promote navel oranges from the Gannan area and to increase local producers’ incomes, the AQSIQ issued Notice No. 136 in 2004 to confirm that the Gannan navel orange would be protected as a GI product. In 2007, the trademark office of the SAIC also granted a certification mark to the Gannan navel orange with the support of the local government. Both AQSIQ and SAIC frameworks adopt ‘The National Standard: Product of geographical indication — Gannan navel orange’ (GB/T 20355-2006)⁷, to define quality characteristics and regulate the production activities of Gannan navel oranges in the network.

Reflecting contemporary Chinese consumers’ preference for shape and taste, more than 95% of Gannan navel oranges belong to the Newhall variant which is better for eating rather than for juicing. Most Gannan navel oranges are sold fresh at the market and their quality is greatly determined by farming activities within the context of locally specific natural environmental conditions. In principle, local farmers should cultivate their navel orange trees according to the national GI standard and only those navel oranges that meet the listed quality criteria should be sold as GI products. However, through examining the power relationships operating between various actors involved in the Gannan orange network, it became apparent that farmers’ production decisions are greatly influenced by the quality criteria proposed by the middlemen,

⁷ It is not proposed by producers’ co-operatives but different government departments with a government funded expert association.

rather than the national GI standard. In other words, the GI scheme has only a very limited impact on the actual farming activities and thus on the quality of Gannan navel oranges.

Firstly, the GI holder of both GI frameworks, the Gannan Navel Orange Association (GNOA) has almost no impact on farmers' activities. A government officer confirmed that the GNOA is formed by "*government officers, farmers, and sellers*" with the proclaimed aim being to manage the Gannan navel orange network through issuing GI labels, collecting information to help the local government adjust its policies, offering technical, legal, and marketing support for producers, and mediating disputes in the network (see also Gannan Navel Orange Association, 2005). However, as Chinese farmers were not encouraged to co-operate until 2006 when the 'Law on Specialised Farmers Cooperatives' was first issued, the knowledge as to how to co-operate is limited in this specific network. Also, as the GNOA is funded by and operates under local government requirements, the GNOA can only deal with issues described by a government officer, as '*issues not suitable for government departments, such as applying for GIs*'. The authority to issue GIs was transferred from the GNOA to the local Fruit Industry Bureau. Consequently, the GNOA is effectively rendered as powerless in the network and few participants could confirm its impact upon regulating production activities to ensure the specific quality characteristics of Gannan navel oranges.

A second limiting issue is related to the GI issuing processes. In the national GI standard, the farming requirements and quality criteria⁸ of Gannan navel oranges are listed. The methods of choosing samples from a certain batch and checking appearance, physical contents, pollution level and net weight of samples are also specified. However, the production activities and final products are not effectively inspected to reflect "pre-set" GI standards in the network because the national GI standard is believed to be un-enforceable by the local government. As a government officer reported:

'...the national standard is only a guideline'

⁸ The quality of Gannan navel oranges can be evaluated officially with reference to four aspects: appearance, physical contents (related to the taste aspect), pollution-free (related to the safety aspect), and net weight.

Accordingly, there is a potential disconnect between the GI issuing stage and the quality checking stage based on the national GI standard. Indeed, when questioned further, it became apparent that GI applicants are simply asked to fill out an application form, hand it into the local Fruit Industry Bureau and then buy⁹ GI labels from the GNOA for one year. Inappropriate GI issuing procedures combined with the absence of an inspection programme was recognised quickly by farmers as a signal that producing navel oranges according to the national GI standard was not strictly enforced; rather they could sell their products with a GI label but without having to adhere consistently to the pre-set standards.

Without effective co-operative behaviour within the GNOA and an appropriate government inspection programme, middlemen inevitably play a critical role in this network especially when more than 80% of local farmers¹⁰ sell their navel oranges into the market through middlemen in order to reduce the selling cost. In contrast to GI schemes controlled by the local government, middlemen's 'purchasing power' has shown a significant influence on farming activities through proposed quality criteria which concentrate on the appearance rather than taste or undetectable safety aspects. For example, good taste is believed to be a definite quality characteristic of Gannan navel oranges and thus a minimum expected criteria for middlemen. One commented that:

'...the taste of Gannan navel oranges is always better than navel oranges from other areas due to the natural local environment and so consumers prefer to buy and pay a higher price for the 'Gannan navel orange'. For me, all navel oranges I purchase from the Gannan area can be sold in the market because of its good taste and so taste is given and not a critical purchasing standard for me'

In such circumstance, the quality paradox commences. Even though farmers announced that taste is critical to evaluate the quality of navel oranges and everybody likes tasty oranges, farmers focus on decreasing inputs on taste as taste alone cannot bring any extra income to them. A farmer

⁹ '... 0.006 RMB for an orange label and 0.1 RMB for a package label' according to a government officer.

¹⁰ Their farm size is usually less than 0.7 ha.

explained,

'If you mention taste, I would like to say, I do not have any incentive to improve quality at all because only a few buyers pay a higher price for better taste. ... Even though some buyers pay a higher price for better taste, compared with the associated extra inputs, such as using organic fertilisers instead of chemical ones ... I cannot get a fair profit at all'

Clearly, under limited organisational effectiveness and weak government enforcement, the quality of Gannan navel oranges is presented into the market reflecting economic rationality rather than the national GI standard, although quality developing processes are not just impacted by middlemen's preferences alone but also by many other factors such as the natural environment, the farm's size and the cultivation experience. The significant 'purchasing power' of middlemen makes them 'powerful' actors in the network where a decreasing emphasis upon taste and product safety are common choices for local farmers. Consequently, although all interviewees believed GI labels have the potential to help producers and sellers obtain a high economic reward due to Chinese consumers' traditional preferences for GI products, consumers' willingness to pay for Gannan navel oranges is actually decreasing as the market price slipped from 2.7 RMB per KG in 2005 to less than 2 RMB per KG in 2009. Consequently, the middlemen interviewed preferred to establish their own trademarks. Moreover, some counties in the Gannan area, which can produce navel oranges with a better taste than other counties under excellent natural conditions, have started to register and promoted their own collective/certification marks, such as Sanbaishan, Xinfeng navel orange and Anyuan navel orange, in order to help local farmers obtain relatively high economic rewards in the market.

5.2. Nanfeng mandarins

The second case, the Nanfeng mandarin case, illustrates a completely different socio-economic environment compared to the Gannan navel orange network. Firstly, culture and tradition have a strong influence as Nanfeng mandarin trees have been farmed for more than 1,300 years and the

associated traditions continue with local farmers preferring to sell their products individually rather than through middlemen. Secondly, the government of Fuzhou City within which Nanfeng County resides, has permitted the expansion of mandarin cultivation to unprotected counties since 2007, unlike the Ganzhou government which limited the growing area of Gannan navel oranges to the specified GI protection area. An explanation for this is the third major difference, notably the importance of the product to the local economy. The Gannan navel orange network contributed less than 1% to local government income in 2010 but more than a third of Nanfeng County's GDP is generated by the Nanfeng mandarin network. However, based on the data collected, despite the clear contextual differences between the Gannan navel orange and the Nanfeng mandarin network, the power relationships involved in the quality construction process of Nanfeng mandarins were not dissimilar to those in the Gannan navel orange case. Again, in the face of inappropriate GI issuing processes and weak government inspection programmes, local farmers¹¹ preferred to make their production decisions based upon economic rationality within the context of local natural and culture conditions.

Firstly, the specific influence of co-operatives upon farming activities and thus quality cannot be observed in this network. The Nanfeng mandarin has been registered with each of the three Chinese GI frameworks in 1998, 2003 and 2010 through the application of different co-operatives with the support of the local government. However, these co-operatives have little impact on regulating production activities for many reasons. For instance, the Nanfeng Mandarin Association (NMA), comprising of technical officers, suppliers (pesticide, fertiliser, machine and plantlets sellers), farmers, and middlemen, was formed with the support of the local government to apply the GI with the MoA. But in the face of local specific culture that most local farmers prefer to produce and sell their products individually, without the authority to issue GI labels and *'with little financial funds available from the government and few officers'* (a government officer), the responsibilities of the NMA are little more than *'sending two notices to each village per year to help farmers cultivate their mandarin trees in a more scientific way'* and trying to co-ordinate Association members to *'investigate different villages twice per year normally relating to*

¹¹ The farmer is still the sole producer in this network as Nanfeng mandarins are unsuitable for making juice due to their small size and lack of sweetness.

technique issues' (a technician). The NMA was thus described by the interviewees as little more than a *'government branch'* with little influence upon quality.

Secondly, inappropriate GI issuing procedures decrease the incentive for farmers to regulate their own production activities and ensure the quality of their products reflects the national GI standard. Within the network, all GI frameworks adopt 'The National Standard: Product of geographic indication — Nanfeng mandarin' (GB/T 19051-2008)¹² to define the quality characteristics of Nanfeng mandarins, identify the quality standards and specify the production codes. However, farmers interviewed showed little knowledge of the national standard and indicated that they can get GI labels for free¹³ without application or being subject to any prior quality checking stages. Government officers and technicians explained that this occurs because the quality characteristics are defined too flexibly in the national standard as part of their rural development projects, natural factors rather than production codes have a greater impact upon certain quality characteristics such as taste and appearance, and the financial input which the national standard requires to enhance quality is unaffordable for most small-scale farmers. As one government officer said, *'in the face of the rapid expansion of the planting area and the quickly changing genetic properties of plantlets, the local government had little choice but to define the quality characteristics of the Nanfeng mandarin very flexibly so as to ensure that all local mandarins producers are able to benefit from the GI system'*.

Thirdly, the national standard is again believed to be unenforceable because of an inappropriate government policy. Whilst the cultivation area of the Nanfeng mandarin is theoretically limited *'to the protected area (i.e Nanfeng County)'* in the national standard, as mentioned earlier, the Fuzhou government allows all ten counties governed by Fuzhou city to produce Nanfeng mandarins to enhance farmers' income levels. A technician noted the creativity of the Fuzhou government who *'announced that the Nanfeng mandarin was a variety rather than a GI product'* thereby negating the possibility of the national standard being fully adopted.

¹² This national GI standard was written by several government officers who come from the Jiangxi Provincial Bureau of Quality and Technical Supervision, the Fuzhou City Bureau of Quality and Technical Supervision, the Nanfeng County Bureau of Quality and Technical Supervision and the Nanfeng Mandarin Industrial Bureau.

¹³ The government officers send GI labels to different villages and farmers can use as many as they like.

Under creatively interpreted GI standards and weak government inspection programmes, farmers prefer to make their production decisions based on economic rationality with respect to their inputs and anticipated future incomes. Products are thus presented to the market with varying quality characteristics reflecting the ‘purchasing power’ of different mandarin buyers.

More than 70% of the annual mandarin output is sold to final consumers by small-scale farmers individually reflecting the long standing prevailing culture with a further 20% sold to 54 trading companies and with a further 5% of output sold to contract farming companies. The rise of contract farming is perceived as a means of enhancing quality because farmers now adjust their farming activities to the requirements of the contracting company with the incentive of benefitting from a price which is 20-30% higher than the average market price. However, the effectiveness of these contracted companies in enhancing the overall quality of ‘Nanfeng mandarins’ remains minimal because only a small proportion of farmers benefit directly and contracted companies prefer to sell their products under their own brand labels to avoid the reputational risk associated with using GI labels.

Given the expansion in production since 2007 stimulated by the Fuzhou government’s policy, it is little surprise to note that the market price decreased from 3.2 RMB per KG in 2006 to 1.8 RMB per KG in 2009. Consequently, farmers from the less traditional growing area¹⁴ have refused to change their production activities. As a farmer indicated,

‘I never water my mandarin trees ... no matter what I do, the quality of my mandarins is always not as good as mandarins from certain areas...quality can be partly improved by increasing the input, but, I do not know whether the increased cost can be covered by my future income’

Only farmers located in the traditional growing area have the incentive to improve the taste level

¹⁴ The ideal cultivation region of Nanfeng mandarin is around the town (the traditional growing area). The expansion of the cultivation area not only increases the quantity supplied but also changes the unique quality characteristics such as the taste and the appearance of Nanfeng mandarins.

of their products through increasing inputs based on predictable specific consumers' preferences¹⁵.

A farmer explained,

'I prefer to improve the taste of my products, such as by using organic fertilisers. There are a lot of local consumers who prefer to pay a high price for my products because they know the taste of my products is great. Even if my price was double or triple the average market price, all of my mandarins would be sold very quickly each year'

With ineffective co-operatives, 'low' quality criteria, inappropriate GI issuing procedures and creative interpretations of the national standard, GI schemes are perceived as unable to change farming activities and thus enhance quality in the network. Such problems further reduce the appeal of GI labels to the extent that some farmers refuse to apply GI labels onto their products because in the word of one farmer '*...everybody can use them to show their mandarins are Nanfeng mandarins even for those mandarins from other counties. It is totally meaningless!*' Local farmers thus prefer to make their production decisions primarily under financial rather than GI standards based considerations. Combined with various local natural conditions, individual selling culture and specific policies issued by the Fuzhou government, Nanfeng mandarins with varying quality characteristics are finally presented into the market.

5.3. Wuyuan green tea

The previous two case studies demonstrated how ineffective GI schemes were in enhancing agrifood quality primarily because GI holders and inspectors were too weak in the existing power relationships to effect meaningful change. It is always the 'powerful' buyers who determine quality characteristics through the adjustment of producers' production activities. However, this research also demonstrates that context has a strong impact upon the quality construction process and that not all GI networks are the same. A third case study, Wuyuan green tea, thus casts further light on the importance of context and network structure.

¹⁵ It is difficult for individual consumers to judge the safety level of mandarins and the preference of consumers on the appearance is always changing; the only predictable consumer preference here refers to the taste.

Given that fresh tea shoots and leaves have to be processed before selling, processors are critical actors in the quality forming processes in this network unlike the other two cases of oranges and mandarins, although some farmers still process tea products by hand¹⁶ or by hiring processing machines. Also, unlike the other two networks, a long co-operative culture between producers and sellers in the Wuyuan green tea network may enhance the influence of co-operation upon quality. With these differentiations in the context and network structure, following an examination of the power relationships involved in the quality forming processes, however, the findings again indicate that the impact of the GI scheme on quality is quite limited.

Firstly, with the support from the local government, Wuyuan green tea was registered as a GI product with all the three GI frameworks in 2005, 2008 and 2010 although a national standard for Wuyuan green tea was not issued until 2012 partly due to a lack of scientific research data. As a government officer noted,

‘Only certain aspects, such as water and ash content levels, can be checked in the county’s laboratories. But important quality characteristics used to grade Wuyuan green tea products still can be only judged by personal experience. It is even impossible to distinguish the green tea products produced in Wuyuan county or neighbouring counties by laboratory tests’

A lack of national GI standards has encouraged all GI applicators - the Wuyuan County Tea Association (WCTA), the Tea Industry Centre, and the Wuyuan County Tea Technology Promotion Center - which are funded and managed by the local government with the purpose of increasing local farmers’ incomes, to propose different but ‘basic’ GI standards. For instance, the WCTA, originally made up of twenty-one members - three government officers, sixteen processing or trading company managers, one technician, and one teacher from the local tea school - was established to apply for the certification mark of ‘Wuyuan green tea’ in 2005.

¹⁶ According to Xun et al. (2010), only 2% farmers still process green tea products by hand in a village located in Wuyuan county.

Managed by the local tea bureau¹⁷, it issued “*The Measurements of the Certification Trademark of Wuyuan Green Tea*” to operate the GI issuing procedure. According to *The Measurements*, the WCTA is authorised to check 15 green tea indices such as the moisture, ash, power, lead, copper, DDT and methamidophos content of the GI applicant’s samples. If the samples can pass the examinations, have been processed through “*fixation*”, “*rolling*” and “*drying*”, the three processing steps, and contain “*no other contents, no strange smell, no visible red branch, have a good taste and smell, soft green leaves and a fresh green colour*”, then the applicant can obtain the certification trademark on their package for a period of three years after paying a management fee. However, whilst all 15 indices are similar to the national mandatory standards for green tea products¹⁸ and many words, such as smell and taste are poorly defined, it is not difficult for an applicant to obtain GI labels from the WCTA especially when the samples are provided by the applicants themselves. The specific impact of GI standards and the WCTA on production activities and quality was thus difficult to find from respondents’ comments.

Secondly, within the Chinese GI schemes, the SAIC, the AQSIQ and the MoA are responsible for ensuring the adoption of GI standards in the network. They are quality inspectors but the conflict between different standards and the difficulty in inspecting farmers’ production activities due to ‘*a lack of officers*’ and ‘*small quantity production*’ reduce their impact. As a government officer explained,

‘... for individual farmers, I have to admit that these laws and standards are not very useful, especially for farmers who process green tea products by themselves. It is easy for government to regulate companies’ activities rather than individual farmers. No punishment is available for farmers, even if they break the law such as using forbidden pesticides, the government can do nothing. ... Normally, they are very poor and the government thus cannot take their property. Also, according to the laws, the government cannot put them into jail due to the small production quantity’

¹⁷ The government officers who are members of the association manage the association for the bureau. Thus, the WCTA is in reality a ‘*sub-organisation of the local tea bureau*’ (a government officer).

¹⁸ Ash level content is 7%, 0.5% less than the national mandatory standards; everything else is the same.

Therefore, local farmers prefer to make their production decisions mainly based on economic rationality rather than GI standards. The local government (through offering subsidies), processors (the fresh tea shoots and leaves buyer) and middlemen (the processed green tea product buyer) are becoming the dominant players in the quality forming processes. For instance, local government offers various free tea plantlets and encourages farmers to upgrade their tea farms through the use of subsidies. One processor commented,

'... upgrading tea farms focuses on using organic fertilisers and controlling the planting density. Both are critical to produce organic green tea products which can be sold with a high price in the market. Stimulated by the government subsidies and future high incomes, farmers prefer to upgrade their farms'

When some farmers began to sell their fresh tea shoots and leaves to contracted processors, these farmers agreed to produce their products according to the processors' specified production and quality criteria, in order to obtain the promised higher income. As a government officer described,

'The contract regulates farmers' activities and indicates the quality standards that fresh tea shoots and leaves have to meet. If a farmer's products can pass all the examinations and be certified as organic shoots or leaves, the processor will pay an extra 30%-50% premium to the farmer. The contract not only protects processors' right to have a quality input but also brings high economic reward for farmers'

As farmers' production activities are greatly influenced by financial returns, the farmers who sell processed green tea products to middlemen accordingly shift their quality focus to the detectable characteristics such as taste and appearance rather than unobservable attributes associated with safety and hygiene. For example, a middleman specified that many farmers grade tea shoots accordingly *'shoots, shoots with one leaf, shoots with two leaves, and shoots with three leaves'* as these reflect the preferences of the buyer and the prices paid by them.

Compared to farmers who make production decisions solely under financial consideration, processors' production decisions are more complex and are co-impacted by both local government and large-scale buyers. A processor commented that government inspection programmes run 'two or three times per year' and, in the words of one government officer, "processors ... have to ensure their products meet relevant requirements or they will be punished" with "the payment of a fine" or "cease running for a while". Processors thus have to observe the compulsory laws, national regulations and standards (rather than the GI standards due to the conflict between different standards issued by different GI frameworks). In addition, as processors deal with large-scale buyers, they are forced to concentrate on key attributes such as taste, appearance and the safety aspect to produce green tea products. As a processor announced,

"[M]y consumers have special requirements for green tea products. I have to meet their requirements ... The taste, smell, appearance, contents and safety aspects all have to be examined"

To summarise, the quality development process is more complex in the Wuyuan green tea network compared to the other two cases because additional actors are involved. However, the findings are not dissimilar to the other cases in the sense that GI schemes have not achieved the expected regulatory impact and it is economic rationality which primarily governs the quality construction process in this network. In the face of inappropriate GI issuing processes, most interviewees believe that the GI is a type of promotion or marketing technique rather than a quality certification mark and that the increasing market price of Wuyuan green tea is the combined result of local government promotion and their associated tea programmes through offering free plantlets and subsidies and not the results of GI schemes.

6. Conclusions

The paper set out to evaluate the effectiveness of GI schemes in terms of enhancing agrifood quality with a focus on Jiangxi province, China. The results indicate that the quality of agrifood

products is not being enhanced by GI schemes as currently implemented in these cases.

Through examining power relationships involved in quality construction processes within three GI networks, the problems existing at national and local scales are highlighted in this research. At the national scale, the co-existence of three parallel GI frameworks is problematic because the overlapping responsibility for inspection and the inherent conflicts limit the ability ('power') of the government to regulate production activities based on GI standards. In addition, research from the United States and the European Union (e.g. Hayes et al., 2004; O'Reilly and Haines, 2004) has indicated that the quality of GI products can be enhanced by three independent elements in the regulatory chain - the 'legislator' with its emphasis upon GI standards, the 'executor' with its GI issuing procedures, and the 'judiciary' through its inspection programmes. For example, the Cassis Syndicate and the Parma Ham Consortium ensure product quality through strict GI production codes (developed by producer co-operatives) and specific control systems (the INOA in the Cassis wine network and the IPQ in the Parma ham network). The reality is rather different in China, however, as all these functions are embedded within government or government supported organisations without the necessary independence associated with European and American GI systems. Motivated primarily by a concern to improve farming incomes, the government or its agencies propose 'basic' GI standards, adopt lax GI issuing procedures, and manage weak inspection programmes to ensure all local producers can take advantage of the GI system but with the result that GIs do not stimulate product quality improvements currently. Developing appropriate governance mechanisms thus must be addressed as a pre-condition for enhancing agrifood quality within the GI system.

At the local or provincial level, the case studies demonstrate that the most relevant influence upon current quality forming processes is the nature of the economic relationships between different actors within various contexts. In other words, it is the commercial financial aspect that mostly determines producers' production activities and thus their quality choice decisions. In each case studied, under lax market supervision, producers prefer to respond to actors who are able to exert influence on specific quality characteristics based on their buying power. As a consequence, the

quality characteristics of the examined GI products are not very stable. This is different from many western GI agrifood products, where the quality characteristics are defined by strict GI codes and relate mainly to criteria such as taste, heritage, production conditions and processes, all of which in turn are linked to defined geographical locations. If the GI labels are not able to guarantee specific quality characteristics, the consumer will refuse to pay a high price for such GI labeled products, as witnessed by the Gannan navel orange and the Nanfeng mandarin cases. This emerging 'lemon market' is completely different from the original perspective of the Chinese government and demonstrates that believing GI schemes alone can encourage or establish quality agrifood products for consumers and thus bring higher economic rewards to local producers is far too simplistic and arbitrary, as some European investigations (e.g. Dimara et al., 2004; Sepúlveda et al. 2010; Adinolfi et al., 2011; Teuber, 2011) have also proved. Compared to other countries' rural development experience (Ilbery and Kneafsey, 1999; van der Ploeg et al., 2000; Tregear et al., 2007; Overton and Heitger, 2008), the Chinese government needs to be aware of the danger of bureaucracy and yet at the same time must not be too narrow in their approach towards simplifying GI standards and the GI issuing procedure as part of its rural development projects.

Undoubtedly, given the existence of a dearth of research presently in China, further in-depth investigation is still required in order to reach a more detailed understanding of the constraints upon the effectiveness of Chinese GI schemes. Inevitably, further studies on different GI products such as chicken, fish or wine from different provinces and a representative consumer survey will generate additional streams of useful research (see also Goodman, 2003; Zhao, 2007; Kneafsey et al., 2008). It would also be interesting to contrast the quality development processes of GI agrifood products destined for the national and the international markets to see whether there are significant differences in assuring quality under different government policies and inspection programmes. This paper is one contribution to this ongoing debate.

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References

- Adinolfi, F., Rosa, M. and Trabalzi, F., 2011. Dedicated and generic marketing strategies: The disconnection between geographical indications and consumer behavior in Italy. *British Food Journal* 113(3), pp. 419-435
- Allaire, G., 2004. Quality in economics: a cognitive perspective. In: Harvey, M., McMeekin, A., and Warde, A., Editors, 2004. *Qualities of Food*, Manchester University Press, Manchester.
- Akerlof, G., 1970. The market for 'lemons': quality uncertainty and the market mechanism. *Quarterly Journal of Economics* 84 (August), pp. 488-500.
- Allen, J., 2003. *Lost Geographies of Power.*, Blackwell Publishing, Oxford.
- Anania, G. and Nisticò, R., 2004. Public regulation as a substitute for trust in quality food markets: what if the trust substitute cannot be fully trusted? *Journal of Institutional and Theoretical Economics (JITE)* 160 (4), pp. 681-701.
- Atkins, P. and Bowler, I., 2001. *Food in Society: Economy, Culture, Geography.*, Arnold, London.
- Barling, B., 2004. Food agencies as an institutional response to policy failure by the UK and the EU. In: Harvey, M., McMeekin, A., and Warde, A. Editors, 2004. *Qualities of Food*, Manchester University Press, Manchester.
- Beijing Zhongjunshiji GIs Research Team, 2011. The Second Investigation Report of the GIs in China. http://district.ce.cn/zg/201101/15/t20110115_22143582.shtml (accessed 20, Dec. 2012).
- Brogaard, S. and Zhao, X., 2002. Rural reforms and changes in land management and attitudes: a case study from inner Mongolia, China. *Ambio* 31, pp. 219-225.
- Bryman, A., 2008. *Social Research Method.*, Oxford University Press, Oxford.
- Busch, L. and Juska, A., 1997. Beyond political economy: actor-networks and the globalisation of Agriculture. *Review of International Political Economy* 4 (4), pp. 688-708.
- Calvin, L., Gale, F., Hu, D. and Lohmar, B., 2006. Food safety: improvements underway in China. *Amber Waves* 4 (5), pp. 16-21.
- Csurgó, B., Kovách, I. and Kučerov, E., 2008. Knowledge, power and sustainability in contemporary rural Europe. *Sociologia Ruralis* 48, pp. 292-312.

- Dahl, R., 1989. *Democracy and its Critics.*, Yale University Press, New Haven, CT.
- Dentoni, D., Menozzi, D. and Capelli, M., 2012. Group heterogeneity and cooperation on the geographical indication regulation: The case of the 'Prosciutto di Parma' Consortium. *Food Policy* (37), pp. 207-216.
- Dicken, P., Kelly, P., Olds, K. and Yeung, H., 2001. Chains and networks, territories and scales: towards a relational framework for analysing the global economy. *Global Networks* 1 (2), pp. 89-112.
- Dimara, E., Petrou, A. and Skuras, D., 2004. Agricultural policy for quality and producers' evaluations of quality marketing indicators: a Greek case study. *Food Policy* 29, pp. 485–506.
- Dogan, B. and Gokovali, U., 2012. Geographical indications: the aspects of rural development and marketing through the traditional products. *Procedia - Social and Behavioral Sciences* 62, pp. 761 – 765.
- DuPuis, E. and Goodman, D., 2005. Should we go 'home to eat? ': toward a reflexive politics of localism. *Journal of Rural Study* 21, pp. 359-371.
- Fine, B., 1994. Towards a political economy of food. *Review of International Political Economy* 1 (3), pp. 519-545.
- Gannan Navel Orange Association, 2005. The Regulations of Gannan Navel Orange Association. <http://www.gnorange.com/orangexh/index.htm+%E8%B5%A3%E5%8D%97%E8%84%90%E6%A9%99%E5%8D%8F%E4%BC%9A&ct=clnk> (accessed 05, March 2011).
- Goodman, D., 2003. The quality 'turn' and alternative food practices: reflections and agenda. *Journal of Rural Studies* 19 (1), pp. 1-7.
- Goodman, D. and Watts, M., 1997. *Globalising Food: Global Questions and Global Restructuring.*, Routledge, London.
- Guthman, J., 2004. Back to the land: the paradox of organic food standards. *Environment and Planning* 36 (3), pp. 511-528.
- Heffernan, W., Hendrickson, M. and Gronski, B., 1999. *Consolidation in the Food and Agriculture System.*, National Farmers Union, Washington, D.C.
- Harvey, M., McMeekin, M. and Warde, A., 2004. Introduction: food and quality. In: Harvey, M., McMeekin, M., and Warde, A., Editors, 2004. *Qualities of Food*, Manchester University, Manchester.
- Hayes, D., Lence, S. and Babcock, B., 2005. Geographic indications and farmer-owned brands: why do the U.S. and E.U. disagree? *EuroChoices* 4 (2), pp. 28-35.

- Hayes, D., Lence, S. and Stoppa, A., 2004. Farm-owned brands. *Agribusiness* 20 (3), pp. 269-285.
- Henson, S., 2000. The process of food quality belief formation from a consumer perspective. In: Becker, T., Editor, 2000. *Quality Policy and Consumer Behaviour in the European Union*, University of Kiel, Kiel.
- Hughes, A., 2000. Retailers, knowledges and changing commodity networks: the case of the cut flower trade. *Geoforum* 31 (2), pp.175-190.
- Ilbery, B. and Maye, D., 2005. Food supply chains and sustainability: evidence from specialist food producers in the Scottish/English borders. *Land use Policy* 22 (4), pp. 331-344.
- Ilbery, B. and Kneafsey, M., 2000. Producers constructions of quality in regional speciality food production: a case study from south west England. *Journal of Rural Studies* 16 (2), pp. 217-230.
- Ilbery, B. and Kneafsey, M., 1999. Niche markets and regional speciality food products in Europe: towards a research agenda. *Environment & Planning A* 31 (12), pp. 2207-2222.
- Ilbery, B. and Kneafsey, M., 1998. Product and place: promoting quality products and services in the lagging rural regions of the European Union. *European Urban & Regional Studies* 5 (4), pp. 329-341.
- Jumba, F., Freyer, B., Mwine, J. and Dietrich, P., 2012. Understanding Organic Foods Qualities in the Global South: An East African Perspective. *Journal of Agricultural Science* 4(11), pp.86-101
- Juska, A., Lourdes, G., Gabriel, J. and Koneck, S., 2000. Negotiating bacteriological meat contamination standards: the case of E. Coli O157:H7. *Sociologia Ruralis* 40 (2), pp. 249-271.
- Juska, A. and Busch, L., 1994. The production of knowledge and production of commodities: the case of rapeseed technoscience. *Rural Sociology* 59 (4), pp.581-597.
- Klockner, H., Langen, N. and Hartmann, 2013. M. COO labeling as a tool for pepper differentiation in Germany: Insights into the taste perception of organic food shoppers. *British Food Journal* 115(8), pp.1149-1168
- Kneafsey, M., Holloway, L., Venn, L., Cox, R., Dowler, E. and Tuomainen, H., 2008. *Reconnecting Consumers, Producers and Food.*, Berg, Oxford.
- Larner, W. and Le Heron, R., 2002. From economic globalisation to globalising economic processes: towards post-structural political economies. *Geoforum* 33 (4), pp. 415-419.
- Latour, B., 1987. *Science in Action: How to Follow Scientists and Engineers through Society.*, Harvard University Press, Cambridge, MA.

- Law, J., 1994. *Organising Modernity.*, Basil Blackwell, Oxford.
- Liu, L., 2006. Quality of life as a social representation in China: a qualitative study. *Social Indicators Research* 75, pp. 217-240.
- Lockie, S., 2002. 'The invisible mouth': mobilizing 'the consumer' in food production–consumption networks. *Sociologia Ruralis* 42 (4), pp. 278-294.
- Lockie, S. and Kitto, S., 2000. Beyond the farm gate: production-consumption networks and agri-food research. *Sociologia Ruralis* 40 (1), pp. 3-19.
- Mansfield, B., 2003b. Fish, factory trawlers, and limitation crab: the nature of quality in the seafood industry. *Journal of Rural Studies* 19 (1), pp. 9-21.
- Mansfield, B., 2003a. Spatializing globalization: a 'geography of quality' in the seafood industry. *Economic Geography* 79 (1), pp. 1-16.
- Marsden, T., Banks, J. and Bristow, G., 2000. Food supply chain approaches: exploring their role in rural development. *Sociologia Ruralis* 40 (4), pp. 424-438.
- Marsden, T. and Smith, E., 2005. Ecological entrepreneurship: sustainable development in local communities through quality food production and local branding. *Geoforum* 36 (4), pp. 440-445.
- Miele, M. and Murdoch, J., 2002. The practical aesthetics of traditional cuisines: slow food in Tuscany. *Sociologia Ruralis* 42 (4), pp. 312-329.
- Mitchell, D., Ingco, M. and Duncan, R., 1997. *The World Food Outlook.*, Cambridge University Press, Cambridge.
- Morgan, K., Marsden, T. and Murdoch, J., 2006. Localized quality in Tuscany. In: Morgan, K., Marsden, T., and Murdoch, J., Editors, 2006. *Worlds of Food: Place Power, and Provenance in the Food Chain*, Oxford University Press, Oxford.
- Morgan, K. and Murdoch, J., 2000. Organic Vs. conventional agriculture: knowledge, power and innovation in the food chain. *Geoforum* 31 (2), pp. 159-173.
- Morris, C. and Young, C., 2000. 'Seed to shelf', 'teat to table', 'barley to beer' and 'womb to tomb': discourses of food quality and quality assurance schemes in the U.K. *Journal of Rural Studies* 16 (1), pp.103-115.
- Mulgan, G., 1989. The power of the weak. In Hall, S. and Jacques, M. Editors, 1989. *New Times: The Changing Face of Politics in the 1990s*, Lawrence and Wishart, London.
- Murdoch, J., 2000. Networks - a new paradigm of rural development? *Journal of Rural Studies* 16 (4), pp. 407-419.

- Murdoch, J. and Miele, M., 1999. Back to nature: changing 'worlds of production' in the food sector. *Sociologia Ruralis* 39 (4), pp. 465-483.
- Nygaard, B. and Storstad, O., 1998. De-globalisation of food markets? consumer perception of safe food: the case of Norway. *Sociologia Ruralis* 38 (1), pp. 35-53.
- O'Reilly, S. and Haines, M., 2004. Marketing quality food products - a comparison of two SME marketing networks. *Food Economics* 1, pp. 137-150.
- Overton, J. and Heitger, J., 2008. Maps, markets and merlot: the making of an antipodean wine appellation. *Journal of Rural Studies* 24 (4), pp. 440-449.
- Parrott, N., Wilson, N. and Murdoch, J., 2002. Spatializing quality: regional protection and the alternative geography of food. *European Urban & Regional Studies* 9 (3), pp. 241-261.
- Reid, M., Li, E., Bruwer, J., and Grunert, K., 2001. Food-related lifestyles in a crosscultural context: comparing Australia with Singapore, Britain, France and Denmark. *Journal of Food Products Marketing* 7 (4), pp. 57-75.
- Renard, M., 2005. Quality certification, regulation and power in fair trade. *Journal of Rural Studies* 21 (4), pp. 419-431.
- Roberts, D. and Engardio, P., 2006. Secrets, lies, and sweatshops. *Business Week* November (27), pp. 50-58.
- Roth, A., Tsay, A., Pullman, M. and Gray, J., 2008. Unraveling the food supply chain: strategic insights from China and the 2007 recalls. *Journal of Supply Chain Management* 44 (1), pp. 22-39.
- Sepúlveda, W., Maza, M., Pardos, L., Fantova, E. and Mantecón, A., 2010. Farmers' attitudes towards lamb meat production under a Protected Geographical Indication. *Small Ruminant Research* 94, pp. 90-97.
- Stake, R., 2005. Qualitative case study. In: Denzin, N. and Lincoln, Y., Editors, 2005. *The Sage Handbook of Qualitative Research*, Sage, London.
- Storper, M., 1997. *The Regional World: Territorial Development in a Global Economy.*, The Guildford Press, London.
- Tam, W. and Yang, D., 2005. Food safety and the development of regulatory institutions in China. *Asian Perspective* 29 (4), pp. 5-36.
- Teuber, R., 2011. Consumers' and producers' expectations towards geographical indications: Empirical evidence for a German case study. *British Food Journal* 113 (7), pp. 900-918.

- The Shanghai Institute for Food and Drug Safety, 2012. Report for Food and Drug Safety and Regulatory Policies 2012., Social Science Academic Press, Beijing.
- The Parma Ham Consortium, 2007. 'Parma Ham' Designation of Origin Specifications and Dossier. <http://www.prosciuttodiparma.com/ned/download/guarantee-specifications.pdf> (accessed 05, May 2011)
- Tregear, A., Arfini, F., Belletti, G. and Maressotti, A., 2007. Regional foods and rural development: the role of product qualification. *Journal of Rural Studies* 23 (1), pp. 12-22.
- Van der Ploeg, J., Renting, H., Brunori, G., Knickel, K., Mannion, J., Marsden, T., de Roest, K. and Sevilla-Guzmán, E. V., F., 2000. Rural development: from practices and policies towards theory. *Sociologia Ruralis* 40 (4), pp. 391-408.
- Whatmore, S., Stassart, P. and Renting, H., 2003. What's alternative about alternative food networks? *Environment & Planning A* 35 (3), pp. 389-391.
- Whatmore, S. and Thorne, L., 1997. Nourishing networks: alternative geographies of food. In: Goodman, D. and Watts, M. J., Editors, 1997. *Globalising Food: Agrarian Questions and Global Restructuring*, Routledge, London.
- Winter, M., 2003b. Geographies of food: agro-food geographies - making reconnections. *Progress in Human Geography* 27 (4), pp. 505-513.
- Winter, M., 2003a. Embeddedness, the new food economy and defensive localism. *Journal of Rural Studies* 19 (1), pp. 23-32.
- Xun, G., Lin, Y., Li, Z., Yang, C. and Chao, Z., 2010. An investigation of non-material culture in Shangxiaqi village in Wuyuan County. *Agricultural Archaeology* 2, pp. 265-270.
- Zhao, X., 2007. How country of origin influence Chinese urban consumer's food choices. *HeBei Academic Journal* 27(6), pp. 177-180.