

A review of the socio-economic impact of geographical indications: considerations for the developing world

By Cerkia Bramley¹

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1. Introduction

The introduction of geographical indications (GIs) into the WTO TRIPS agreement has resulted in unprecedented recognition of the intellectual property (IP) right internationally. Its protection has however been controversial in many respects and the means and scope of protection strongly contested. Within the broader debate on whether TRIPS has the ability to bring about balanced and equitable economic benefits (see for example Chon, 2006; Correa, 2000) a large body of literature has developed on the justification for and rationale behind GIs. While the EU has come out strongly in WTO fora on the point that GI protection can bring about benefits worldwide, particularly in developing countries, consensus has yet to be reached on the actual impact of GIs and the extent to which the potential benefits can be harnessed in a developing country context.

In this context, the paper provides a review of the potential socio-economic benefits as discussed in the international literature. The paper then proceeds in the second part with some guidelines in interpreting the theoretical dimension in section 1. It explores in this respect difficulties in empirically measuring the impact of GIs. It also highlights some challenges that GIs in developing countries are likely to face and which could impede their ability to harness the proposed benefits. It is expected that the discussion will contribute to the understanding of the potential but also the challenges of GIs in the developing world.

2. The socio-economic impact of GIs: A review of the international literature

Quality signalling in support of consumer and producer welfare

GIs in its simplest form are signs that recognise the link between a product's reputation, quality or some other characteristic and its geographical origin. Environmental attributes and/or local knowledge used in the production of these products give rise to unique product characteristics that are signalled through the GI. The justification for protecting these distinctive signs results, as in the case of trademarks, from the economics of information and reputation. These theories highlight the impact of information asymmetry on product quality and the role of reputation in preventing the negative consequences of this for both producers and consumers. Nelson (1970) has identified three categories of goods, depending on the ease with which consumers can access information on the product's quality:

¹University of Pretoria.
cerkia.bramley@up.ac.za

Table 1: Classification of goods based on access to information

Search goods	Consumers can determine quality before purchase by means of inspection and/or research.
Experience goods	Consumers can determine quality only after purchase through use and experience.
Credence goods	Neither inspection nor use enables an assessment of quality.

Source: Nelson (1970)

From this it is clear that consumers can in many instances not fully assess product quality and can only identify product attributes after search or experience. The producer conversely has full information on the product qualities, an imbalance which gives rise to the problem of asymmetrical information (OECD, 2000). This information asymmetry negatively impacts on the market in that certain producers may be inclined to lower the quality supplied. The producers that continue to supply the high quality goods are exposed to unfair competition and free riding from those that have lowered their quality but continue to sell their goods at the same price.

As pointed out by Stiglitz (1989) and Tirole (1988), reputation can assist in addressing the market failure that results from asymmetry of information. In his model on reputation, Shapiro (1982 and 1983) explains a firm's choices regarding the quality level of its production with a view to maximizing profits in a situation where it is assumed that markets are perfectly competitive but information is imperfect (OECD, 2000). He explains that in these instances producers will be tempted to reduce quality as the lack of tools by which to identify them creates no incentive to maintain higher quality levels. In this respect, reputation provides a socially transmitted device that allows producers to signal certain quality levels to consumers. Shapiro's analysis thus highlights the dynamics between the following three elements: the seller's choice of product quality, consumer learning and business reputation (OECD, 2000). Both producers and consumers harness reputation as a coping device in the presence of asymmetry of information. Consumers revert to the making of repeat purchases, developing a strong sense of brand loyalty and a willingness to pay a premium for reputation. In response, producers adopt strategies for creating reputation in their products.

Belletti (1999) points out however that reputation can only improve market efficiency by avoiding the impact of information asymmetries, if it is protected through a process of "institutionalisation of reputation". This institutionalisation takes place by way of legal instruments (such as GIs) that formalise the nexus between a product's attributes and its region of origin. In agricultural markets that are characterised by search, experience and credence goods (Rangnekar, 2003) which create a high risk of adverse selection, GIs act as a signalling device. It transmits information on quality, reducing consumers' search costs and supporting the building of reputation. Unlike trademarks, GIs signal the collective reputation of the group that participate in the production of the product and which is taken forward through tradition over time (Marty, 1998). Moschini et al (2008), in commenting on the impact of GIs on consumer welfare, finds that before the introduction of a GI, mixed qualities or only the low quality goods are supplied as per Shapiro's model on reputation. After the introduction of a GI consumer welfare improves for those consumers purchasing the

high quality product while those consumers who purchase the low quality goods remain unaffected. Zago and Pick (2004) confirms the welfare enhancing impact of GIs also for producers, in instances of imperfect information and high quality differences. For a producer, the possibility to signal quality and thus reputation means that a GI becomes a commercial asset for the firm, as in the case of trademarks (Grossman and Shapiro, 1988) and a valuable offensive marketing tool.

Through a qualification process, GIs confer the right of exclusive use to those producers within the demarcated region who comply with the production practices. The GI qualification process transforms the resources that give rise to the products specific qualities into a “collective intellectual property” (Tregear et al, 2004). Legal recognition of the collective IP provides an exclusion mechanism that averts usurpation of the product’s reputation. This defensive role of GIs in protecting reputation has become increasingly important in recent years, as instances of usurpation and misappropriation of origin based names have risen significantly. This is confirmed by Belletti et al (2007) who finds that prevention of name usurpation is one of the key considerations for the use of GIs on international markets. Internationally there are a number of important cases of misappropriation of regional names such as the Basmati case, around which there has been more than 100 trade mark infringement cases in over 30 countries (Adlakha (unknown) as cited by Jena and Grote 2010). The US and Japan in particular have seen an aggressive increase in the trade marking of regional names. The widespread abuse of origin based product names alludes to the commercial potential of these names with respect to market access and potential price premiums, as further explored below. These unfair business practises not only impacts negatively on the producers through loss of revenue² (Das, 2009) and dilution of reputation but also on the consumers that are misled in their purchasing decisions. As a result, the role of GIs as an instrument for institutionalising collective reputation has become increasingly important in protecting the consumer (through addressing information asymmetries and quality) and the producer (by protecting reputation as an asset) (OECD, 2000).

Improved market access through differentiation and value creation

In a context of increased competition on commodity markets, decreasing market prices and changing consumer preferences, it has become necessary to find an alternative approach to the production and marketing of agri-food products. Producers are devising ways to escape commodity markets where they are price takers and to enter more lucrative niche markets where they are price makers, liberating them from the price fluctuations associated with commodity markets (Hayes et al, 2003). With the demand for GIs based on the economics of product differentiation (Moschini et al 2008), this institutional tool affords producers a valuable opportunity for the creation of territorially-differentiated niche markets.

The ability of GIs to support place-based differentiation derives from the GI product’s strong link with the territory. The GI captures the local resources, transforming territory into an attribute (Pacciani *et al*, 2001). Where territory takes on the characteristics of an attribute and a link is established between the product’s place of

² See Origenandino (2008) who gives an indication of monetary losses due to counterfeiting of origin based products.

origin and quality, origin becomes a basis for a “socially constructed” differentiation which is validated by external actors. The economics of product differentiation rests on market segmentation and the creation of monopolistic competition. GIs segment the production market and establish barriers to entry for producers located outside and within the designated area. The monopoly formation observed in GI supply chains is the result of institutional barriers which limit entry in two ways. Firstly only producers within the demarcated area qualify for participation and secondly, of these producers, only those who comply with the code of practice qualify for participation. In this way, GIs impose a monopolistic market structure with respect to those producers that fall outside the demarcated region or who do not comply with the product specification. It’s a monopoly which has its foundations in the causal link between a product and its origin which results in a proprietary right for those entitled to use it and which is not unlike the monopoly creation permitted under trade mark laws.

This proprietary right is the exclusion mechanism of GIs by which the differentiation is sustained. The institutional framework in support of GIs provides a legal instrument for producers to achieve property rights to the differentiated product, thereby preventing other producers from entering the market. Erosion of the niche market created through this differentiation is further prevented due to the fact that GIs control supply, both through exclusion and limiting yields. GIs furthermore enable collective production and marketing that provides the required scale to justify the cost of creating and marketing the differentiated product image. Enabling the achievement of economies of scale is an important dimension, as the majority of GIs are artisanal products which derive from small scale production. Devising a common marketing strategy which allows these producers to reach a scale of production large enough to justify the investment in the differentiated product image, increases these products chances of success (Barjolle and Chappuis, 2000)

In exploring the conditions for successful differentiation, Hayes et al (2003) confirms reaching a scale of production sufficient to justify the expense of establishing and maintaining the differentiated image among consumers and preventing imitation of the differentiated product, as crucial elements for any instrument of differentiation. In this he also finds that in order to capture any profits that result from the differentiation, producers must own the rights to the differentiated product. By meeting these criteria, GIs thus provide a valuable differentiation tool, eliminating competition from similar products produced elsewhere and improving market access for those producers entitled to use the designation.

By improving market access, GIs can lead to higher incomes through increasing the volume of goods sold. But GIs have a further potential income effect through its collective process of value creation (Barjolle & Sylvander, 2000) that could lead to the capturing of a premium. This GI embedded value is a mixture of economic, cultural and social values which derive from locality. In marketing terms this value increases the “immaterial dimension of food consumption” for consumers, leading to a potential increased willingness to pay and consumer premium (Reviron et al 2009). A number of studies provide evidence of price premiums for GIs from developed countries. These studies include willingness to pay surveys which have found that 43 percent of consumers in the EU are willing to pay a 10% premium for a product with GI labelling, while 8% of EU consumers have indicated a willingness to pay a 20%

premium (Berenguer, 2004). Reviron et al (2009) observes that developing country GI products are in many instances sold at large premiums in European supermarkets. They raise the possibility of this happening also in developing countries itself due to urbanisation. That there is demand for GI products in developing countries which could lead to higher prices is confirmed by Tran (2005) who finds that for 265 products, urban consumers in Vietnam regard place of production as an indication of higher quality. The ability of GIs to lead to value creation thus allows actors to pursue a valorisation strategy whereby intellectual property is harnessed in an attempt to appropriate these values which allow for the extraction of rent. Importantly, the embedded value does not in all instances give rise to a price premium, with factors such as the size of the market, the existence of substitutes, consumer perceptions about the linkage of an indication with product attributes and demand elasticity (Correa, 2002) all impacting on a GI's ability to capture a premium.

Rural development dynamics

It is widely articulated that protected GIs may contribute to rural development (see for example Van de Kop et al, 2006; Rangnekar, 2003). GIs have for many years been the main pillar of the European Union's agricultural product quality policy and is seen as strong development tool for lagging rural economies. The EU's perspective on GIs has been described as "a legal and commercial basis for development of rural areas, the preservation of cultural heritage [and] the promotion of small and medium firms in the rural economies context" (Sylvander and Allaire, 2008 as cited by Huges, 2009). In line with endogenous development theory, GIs' ability to give rise to rural development processes derives from its link with the territory. GIs reflect by definition a strong association between a product and its territorial origin in that the product derives its characteristics from the region's unique environment, including climatic and human factors. This ability of GIs to strongly express locality (Pacciani et al (2001) leads to positive rural development dynamics.

GIs potentially impact rural development in two ways. Firstly, through its remuneration of specific assets directly involved in the production process. In this regard, the link between an origin labelled product and its area of origin allows for the creation of rents based on the "qualities" of the product, allowing for the remuneration of the specific assets used in the production process. The GI qualification process itself, by defining product standards and signalling territorial values embedded in the GI product, increases as explained above, the ability of capturing price premiums. Also, by preventing the diversion of income from misappropriation, GIs enable producers to potentially enjoy larger income flows from their origin based production processes. In this way GIs lead to a more equitable distribution of value for local producers and communities (Zografos, 2008).

GIs secondly impact rural development through bringing an inclusive territorial benefit to all actors within the region. This relates to the indirect benefits which may flow from establishing a GI for certain regional products. Sylvander (2004) observes in this respect that the assessment of the impact of GIs on rural development should consider the multi-dimensional nature of the instrument, taking into account also indirect development impacts. So for example the legal certainty created by protecting the GI gives rise to increased investment and land values (Zografos, 2008; Passeri, 2007). Réviron and Paus (2007) similarly argue that a GI can positively impact rural

development through diverse aspects including employment, agro-tourism and environmental spin-offs. It has for example been found that the Comte GI and the increase in demand for the product have improved the agricultural employment opportunities in the region (ETEPS, 2006 as cited by Requillart, 2007).

These indirect impacts that flow from the GI give rise to linkages that have the potential to strengthen and reinforce the development impact of a GI. In this way the promotion of agro-tourism around a GI could serve the added purpose of promoting the GI through the strengthening of brand image (Das, 2009). The potential inter linkages are well illustrated in the case of Boseong green tea in South Korea. Suh and MacPherson (2007) states that in the 6 years following the introduction of the GI, in addition to promoting the product image, doubling production and increasing tea prices with 90%, the number of tourists to the Boseong region has tripled. These linkages could be strategically exploited in support of rural development. It should be noted also that the production of GI products not only represents an economic activity but is also an important cultural expression for local communities. By enabling communities to continue producing their traditional products instead of finding alternative means for survival outside their traditional activities, GIs contribute to the preservation of cultural heritage, a factor which strengthens regional identity and again reinforces the inter linkages in support of rural development. The GI qualification process may similarly lead diverse participants to engage on important aspects of natural and cultural resources, improving awareness of locality and possibly leading to the creation of new organisational links (Tregear et al, 2004). The creation of these networks is likely to further deepen rural development dynamics.

Looking at the profile of communities that generally engage in GI related production, it is evident that they are often located within marginal or lagging regions in terms of productivity, at least for GIs in developed countries (Larson, 2007). A study by Parrot et al (2002) as cited by Bowen (2010), finds that in excess of 70% of all registered GIs in the EU are linked with economically lagging regions. GIs are therefore likely to support rural development in regions that are in most need of it. The unique characteristics of GI products are usually also the result of conditions that exclude the possibility of conventional large scale agriculture in these regions (Murdoch et al, 2000). Linked to this, Downes and Laird (1999) finds that GIs show the greatest potential to benefit local producers where traditional small scale production is still present. The majority of GIs in the developing world are agricultural and artisanal products, highlighting the importance of the potential rural development impact of GIs for these countries as a large portion of their people depends on these sectors for their livelihoods.

The GI itself however does not automatically give rise to rural development dynamics. Sylvander (2004) cautions that the institutionalisation of the resource origin does not *per se* set the conditions for development. Instead, he argues that it depends on how this process is developed and on the effectiveness of the valorisation strategies built upon it. Pacciani et al (2001) highlights a number of factors that influence the development dynamics of a GI, including the ability of local actors to capture the rents and the strength of the link between the product, the region and the local community. Section 3.2 highlights some considerations on factors that could influence the actual development impact of GIs in a developing country context.

Preservation of traditional knowledge

The protection of GIs as defined in TRIPS is conditional on the “quality, reputation or other characteristic” of the good being linked to the territory. As these attributes of many GIs derive from traditional practices transmitted through time, this IP right could arguably contribute to the preservation of traditional knowledge (Gopalakrishnan et al (2007)) (see for example also Panizzon, 2006). It is argued (see for example UNDP (2007)) that the unique characteristics of GIs make it more appropriate for the protection of traditional knowledge than other forms of IPR. GIs are firstly collective rights and are therefore more appropriate than trade marks for the protection of community held traditional knowledge in that it cannot be assigned as the link with the territory needs to be maintained (Babcock and Clemens, 2004). Secondly, as GI protection involves the codification of traditional practices into rules that fall within the public domain, it prevents both entities and individuals from gaining absolute control over the knowledge entrenched in the protected indication. Thirdly, rights in a GI can potentially be held for an unlimited period of time, provided the product/origin/quality link is upheld and the indication does not become generic. The duration of the protection is however dependant on the design of the particular registration system and whether the designation is protected domestically, a factor which determines whether it will enjoy protection internationally under the TRIPS agreement (Escudero, 2001).

GIs however do not protect traditional knowledge as such but rather, as explained earlier, the collective reputation of an origin based product. It cannot prevent the appropriation of traditional knowledge embedded in the GI. It does however, by valorising the products which draw on traditional knowledge in its production, allow for the traditional knowledge to be recognised and for the knowledge holders to benefit from its commercialisation. GIs thus reward producers that utilise traditional knowledge based processes and therefore indirectly encourage the continued use and preservation of the associated traditional knowledge. It is therefore not the traditional knowledge as such which is protected, only its continued existence through the GI’s role in enabling “people to translate their longstanding, collective and patrimonial knowledge into livelihood and income” (Berard and Marchenay, 1996). It is therefore more appropriate to view GIs as a method of preserving rather than protecting traditional knowledge. Huges (2009) emphasises however that the valorisation of the traditional knowledge is the result of a successful GI based marketing strategy and not the introduction of the legal protection as such.

It should be noted that the impact of GIs on traditional knowledge is ambiguous as the GI may in some instances adversely affect traditional knowledge. Huges (2009) mentions the Parmaggiano-Reggiano case, where the GI marketing strategy has proven so successful that the pressure to increase production may actually lead to an adverse impact on the use of traditional knowledge. GIs may also in the case of undisclosed traditional knowledge work against the preservation of traditional knowledge. Gopalakrishnan (2007) point out in this respect that, at least in terms of the Asian legislative frameworks analysed, legislative provisions dealing with quality control require GI applicants to provide details regarding the nature and quality of the product and how this will be maintained. They warn that this could in some instances

oblige the disclosure of previously undisclosed traditional knowledge, a concern which can be circumvented through the creation of legislative exceptions (Gopalakrishnan (2007)).

Preservation of biodiversity

Biodiversity preservation is not a direct objective of GI protection. It has been argued however that it may in some instances be an outcome of the GI process. Larson (2007) shows that a GI can promote biodiversity conservation both directly, as production may derive from the use of specific natural resources and indirectly, through the design of a code of practice that accounts for biodiversity considerations and which is codified in the product specification. Where, for example, GIs create production limits, this is likely to impact positively on natural resource sustainability and on biodiversity conservation. In this way the GI can give rise to “rational land use strategies” (Guerra, 2004). The Rooibos industry in South Africa which is located in an environmentally sensitive area has, in designing its product specification, considered biodiversity concerns and has aligned its code of practices with existing biodiversity initiatives (Bienabe et al, 2009). Lybbert et al (2002) explains that resource commercialisation further leads to increases in the price of the harvested product which raises the local communities’ valuation of their resource. By increasing the value of the resource, a GI thus increases the value of conserving the resource. The impact of this may however be placed at risk as a result of the “tragedy of the commons” (Reviron et al, 2009).

Again it should be noted that GIs do not automatically give rise to positive environmental dynamics such as biodiversity preservation and that the impact is likely to vary from case to case. GIs may lead to a significant increase in demand for the product which could place pressure on fragile eco-systems. In order to avoid the detrimental impacts of this, GI product standards should include sustainable production guidelines (Downes and Laird, 1999). GIs may further lead to “genetic erosion” in those instances where the GI product is derived from a specific resource to the exclusion of other species (Boisvert, 2006). As in the case of rural development, biodiversity dynamics around GIs are highly dependent on the GI’s specific local dynamics and on the policy environment. In designing the latter Boisvert (2006) highlights that a participatory approach is crucial and that economic and conservation considerations cannot be separated. The potential environmental impact of GIs, including its role in biodiversity preservation, remains one of the least studied GI dynamics and it may thus be premature to draw definitive conclusions in this respect.

3. Considerations for interpreting the socio-economic benefits of GIs

3.1 Measuring the socio-economic impact of GIs

The discussion above has identified a positive socio-economic impact associated with GIs. It should be noted however that no consensus exists among researchers as to the extent of the actual benefits of GIs, especially in the context of developing countries, with much of the work on the impact of GIs being conceptual in nature or based on

anecdotal evidence without empirical foundation. The lack of empirical evidence is particularly pronounced in the case of developing country GIs³.

Furthermore, whereas some empirical evidence indicates the possibility to earn a premium, the costs are often underestimated, leading to a skewed interpretation of the net benefits. Costs linked with traditional production methods and with attaining and ensuring the product quality are often not taken into consideration in calculating the total cost (Kerr, 2006). Grote (2009) points out in this regard that evidence on the actual cost of GIs is even scarcer than on the benefits. Difficulties in measuring the actual costs implications and net benefits of GIs clearly complicate inferences on increases in producer welfare and impacts around rural development, aspects that are crucial for developing countries in making the decision on whether to commit scarce resources to this.

A further important void is empirical studies on the distribution of rents in GI supply chains. While the EU regulation specifically states the raising of farm incomes as a goal, there is very little empirical work on whether farmers actually benefit from price premiums (Requillart, 2007). The ETEPS (2006) report provides some insights into this for the Comte, Parmiggiano Reggiano and Baena Olive Oil industries in France, Italy and Spain respectively (as cited by (Requillart, 2007)). While this study indicates that farmers could in some instances earn a premium as a result of the GI, no empirical studies of this nature exist for developing country products. Jena and Grote (2010) also refers to the lack of empirical evidence on how price increases are "filtered" down to producers at the bottom of the value chain. Requillart (2007) lists Chatellier et al (2006) and Sckokai et al (2007)) as some of the very few empirical studies that exist on how rents are distributed to the producer and processors in GI supply chains.

Hudges (2009) explains that there are essentially two methods for empirically evaluating the impact of a GI. Firstly a "diachronic" evaluation" which entails a comparison of the position of a product before and after enhanced GI protection and/or origin based marketing and secondly "synchronic" evaluation" which compares two similar products, where one of the products is protected and/or marketed as a GI and the other is not. These methods clearly highlight the difficulties in empirically evaluating the impact of a GI in those countries where GI protection has only recently been introduced or lack completely. Barjolle et al (2009) explains that diachronic and synchronic measurements are objective measures that compare two situations. They go further in saying that there are also subjective measures that measure opinions on the impact of GIs. These methods include use of the Likert scale and surveys.

These empirical methods are however complicated by factors that constrain the empirical evaluation of GIs including a lack of data (OECD, 2005) as well as difficulty in defining a point of reference and relevant set of indicators (Barjolle et al, 2009). A further difficulty is separating the impact of GIs from that of other factors such as technological advances, quality control, advertising and policy dynamics. Jena and Grote (2010) lists as an important consideration in the measurement of GI

³ A notable exception to this is the Mexican GI Tequila and the Indian Basmati GI. See for example Bowen (2010) and Jena and Grote (2010).

impacts, the choice of the product as a crucial factor. They explain this with reference to the diversity in the size and scope of GIs which prevents generalisation and cautions that only if the chosen product meets some of the important attributes of a GI, will a form of generalisation be possible.

Despite difficulties in empirically measuring the economic, social and environmental impact of GIs, the arguments in favour of origin based marketing schemes are supported by significant studies, especially from European countries, that have concluded that it is in most instances possible to measure a positive impact from the use of GI labelling. A review of these studies is presented in Réviron and Paus (2006). Looking at the little empirical research available on developing country GIs, the study by Bowen and Valenzuels (2009) finds that despite a successful increase in sales volumes, the introduction of the Mexican Tequila GI has not significantly benefitted the local community or environment. In contrast, Jena and Grote (2010) conclude with certain caveats that, after empirically testing the income effect of the Basmati GI, the adoption of a GI does enhance household welfare. The lack of empirical studies on a broader diversity of GI products however clearly limits definitive conclusions on the socio-economic impact of GIs.

3.2 Challenges for developing countries in harnessing the socio-economic benefits of GIs

The EU has come out strongly in WTO fora on the point that GI protection can be implemented successfully worldwide, particularly in developing countries. The discussion above indicates that there are significant socio-economic benefits associated with GIs that could address developing country concerns. But harnessing these benefits is by no means an easy process and developing country GIs face particular challenges that arise from their environment. Das (2009) mentions in this respect how 106 GIs have been granted protection in India since the enactment of the Indian Geographical Indications of Goods Act in 2003. He points out however that despite legal recognition, these right holders face significant challenges in harnessing the potential benefits of GIs. In this context, the following section explores some considerations for achieving the socio-economic benefits of GIs in developing countries. It highlights the necessity of appropriate legal protection but goes further in listing factors that generally pose a challenge to right holders in developing countries and which should be taken into consideration when assessing the potential socio-economic impact of GIs.

Hudges (2009) warns that although appropriate legal protection is absolutely necessary for successful GI marketing strategies, the “piling up of laws” should not be confused with the “accumulation of reputational capital”. It is really in the latter where the benefits for developing countries lie and the introduction of stronger laws is only one step in achieving this “decommodification”. Bowen (2010) analyses the impact of the Tequila GI in Mexico. In the discussion she observes that GIs are legally defined in an almost identical manner under Mexican law as it is in France, a country which is seen as having the most sophisticated GI system in the world. She points out however that despite this, and although sales volumes have increased significantly, the introduction of the Tequila GI has largely failed to benefit the local community and environment. Stricter laws do therefore not in itself give rise to the potential socio-economic dynamics of GIs. Developing countries should furthermore

guard against merely duplicating legal systems in place in developed countries as they do not take into consideration environment specific dynamics. Boisvert (2006) highlights in this respect that transplanting institutions is likely to be as problematic as the transfer of technology. It is thus crucially important that the institutional framework in developing countries be adapted for the local dynamics of the developing country context (Giovanucci et al, 2009).

As mentioned above, GIs is a collective instrument of value creation. Legal protection and the collective nature of this IP right is however no guarantee that the value created through the GI process will be fairly distributed within the collective (Reviron et al, 2009). In this, Moschini et al (2008) finds that producers do not automatically benefit from a GI. Reviron et al (2009) similarly shows that in the European context, not all GIs share price premiums with producers. In discussing the challenges faced by producers of Indian GIs, Das (2009) highlights difficulties in ensuring that the producers receive a fair share of the benefits of the GI. This is confirmed by Gopalakrishnan et al (2007) who finds that in India, where GI protection has recently been introduced, it is the traders and not the producers that capture the largest share of the economic benefits that flow from the GI. Kaplinsky and Fitter (2001), in analysing differentiation in the coffee sector, similarly finds that price premiums are more likely to be captured by traders and distributors than by the actual producers.

While GIs clearly have the potential to improve the livelihoods of producers in developing countries, this is highly dependent on how equitably the actual benefit is distributed along the supply chain. The importance of this is emphasised by Jena and Grote (2010) who finds that the actual impact of GIs critically depends on whether producers share in the benefits. Jain (2009) points out in this respect that to judge the actual benefit of a GI, it is necessary to look at the supply chain as a whole. Disparity in the economic and bargaining power of the different supply chain actors are likely to impact on the distribution of value. Resource poor producers with limited power often receive very little of the benefit, a factor which is clearly important in a developing country context (Reviron et al, 2009). As GIs are likely to lead to an upscale of the supply chain, new power relations will emerge, especially where the GI leads to lengthening of the supply chain and embeds itself in larger networks (Hinrichs, 2003). Bowen (2010) highlights the importance of considering this change in power within the supply chain which may flow from the introduction of a GI.

The distribution of benefits is also tied to who has the right to use the GI. Distinction should be made between who can own versus who can use the GI. In their comparative analysis of the Asian legal frameworks for GI protection, Gopalakrishnan et al (2007) find that although there are many differences regarding who can own the GI in these systems, most of the laws limit the right to use the GI to the actual producers and traders of the product. The authors point out that the intention behind this is that the socio-economic benefits should flow to the actors within the region and not to external intermediaries. They find however that the flow of socio-economic benefits that reach the producer will be improved if the right to use the GI is limited to the actual producers who can then license downstream actors to use the indication. In this respect, Hedges (2009), in referring to Africa's troubled history with centralised agricultural schemes, cautions that if the control of a GI rests with central authorities, there is a real risk that any premiums will be extracted by the government.

Reviron et al (2009) further states that the distribution of value derives to a large extent from the quality of supply chain governance and cites Barjolle et al (2007) in saying that the efficiency of the collective organisation and the cohesion between the operators are crucial in achieving a fair distribution of value. GIs are a fairly new concept in developing countries, triggered by legal obligations under TRIPS. Unlike in European countries where GI protection was given in response to demands from producers, it is thus externally imposed on developing country producers, and in most instances do not flow from an actual expressed need (Dwijen Rangnekar as cited by Mara (2009)). Boisvert (2006) warns in this respect against a “too centralised” GI system and highlights the importance that the process should evolve from “local initiatives”. Reviron et al (2009) points out that in the EU GI collectives are created in most instances by actors personally involved in the supply chain. He contrasts this with the situation in developing countries where it is in most instances the government or NGOs that start the process for the creation of the GI collective. This highlights a difficulty for developing countries in that the processes that lead to the creation of the GI collective are in many instances externally imposed. This, coupled with the characteristic lack of cooperation between many actors in developing countries leads to collective action problems, a significant concern for developing countries as it has been shown that coordination is an important condition for success of GI products (Chappuis and Sans, 2000).

The fact that the development impact of GIs will be limited in instances where the monetary benefits is not shared equitably by all participants, makes a strong argument, as pointed out by Das (2009), in favour of stronger public intervention. But so does the potential indirect GI impacts such as biodiversity preservation. Whereas public support is an important element in the European GI system this is not always the case in developing countries. Bowen (2010) emphasises the importance of this and calls for “explicit intervention” from governments in support of rural development and resource poor producers. In the context of inequality an argument can be made that government has an oversight function in order to assess the control exercised by powerful actors and to intervene in support of a more equitable distribution of benefits. Jena and Grote (2010) states that institutions play an important role in ensuring that producers receive a fair share of the benefits which flow from the GI. Governments have a role to play in providing an appropriate and enabling institutional context. Larson (2007) points out in this respect that developing countries face particular challenges due to a “weaker institutional context” and that a GI’s success is as much dependant on its institutional environment as it is on factors such as reputation and quality management. CIRAD (2009) also identifies weak institutions as an impediment to developing country GIs and states that institutional considerations around GIs go further than the provision of regulatory mechanisms to include also policies that support the “emergence and promotion” of GIs, including financial support. Bowen (2010) states that state support should at least give producers access to the minimum of information and resources needed to organise effectively. She continues to say, in the context of the increased withdrawal of government from agriculture, that “sustainability and equity” cannot be pursued if producers do not receive “institutional and organisational” instruments that can facilitate the organisation required by GI supply chains.

In discussing the challenges faced by producers of Indian GIs, Das (2009) further highlights the need for effective marketing. Alavoine-Mornas (1997) states that for

territorial differentiation to be successful, consumers need to recognize its value. This highlights the fact that in some instances, origin based niche marketing may require an extensive awareness campaign in order to capture the benefits associated with territorial differentiation. This is explained also by Reviron et al (2009) in referring to Chamberlin's (1933) theory which shows that differentiation can only lead to an increase in demand if consumers are made aware of it through the provision of information, an aspect which is likely to lead to an increase in marketing costs. This crucial aspect thus often proves challenging and expensive for resource poor stakeholders. Even more so on international markets where the GI may not as yet enjoy a reputation (Das, 2009). In this, Suh and MacPherson (2007) conversely argue that as GIs often utilise territorial names that are well-known, the initial marketing costs may not be that high. Zografos (2008) contradicts this however in stating that developing country GIs, with the exception of a few, are relatively unknown on international markets. In an environment of changing consumer demands, expensive marketing strategies are high risk investments (Yeung and Kerr, 2008) for any firm, but even more so for resource poor producers. A careful consideration of the GI's potential success is thus needed to prevent the inefficient use of scarce resources. Marketing difficulties also extend to decisions around distribution, an important consideration for developing countries, as the choice of distribution channel impacts on economic power within the supply chain. As discussed earlier, this could significantly influence the producers' ability to benefit from the GI.

There is thus clearly a range of complexities around the marketing, promotion and distribution of GI products. Albisu (2002) observes however that efforts are usually channelled toward production activities, with marketing a weakness of GI supply chains. This is confirmed by CIRAD (2009) who, in its study on GIs in ACP countries, highlights a lack of knowledge around market aspects as a significant weakness of developing countries. Developing countries would have to devise means of addressing this weakness, including stronger state support as discussed above, in order to improve the likelihood of capturing the benefits which could potentially flow from GIs.

As in the case of trademarks, building the image of the GI product and benefitting from the collective reputation depends crucially on achieving and maintaining a consistent level of quality. The purpose of reaching consensus on the product specification is to arrive at an agreed quality standard for the product which needs to be maintained by compliance with the code of practice. This is a fundamental part of the GI process as the agreed standards should protect the unique quality of the GI product. The collective action problems that plague developing countries in particular, as discussed above, complicates the process of reaching consensus on quality standards (Das, 2009). The quality dimension of GIs requires once again that developing countries address concerns around collective action and organisation.

Addor and Grazioli (2002) points out that the dynamics which take place when implementing a GI have the advantage of structuring production methods and marketing in order to guarantee a product with consistent and specific quality. In agreeing on the quality standards actors should however take care not to arrive at standards that are so rigid that it impedes potential innovation processes. It has been observed in this respect that rigidity in the French wine industry is to blame for many of the difficulties faced by the industry, including its inability to adapt to a changing

market environment. Where demand increases for emerging products there is the risk that producers will move away from traditional production practises to more mechanised processes which may change the intrinsic quality of the product. Bowen (2010) states in this respect that moving from local to “extralocal” markets can significantly change the way production is organised and the characteristics of the product. The need to adapt the production process may relate to transport requirements or flow from differences in consumer tastes in new markets. Changes in the production process brings with it a risk that the product may lose its specificity, a crucial element in the success of a GI (Barjolle and Sylvander, 2002). The challenge for developing country operators entering new markets will lie in finding a balance between delivering a product with consistent quality attributes in support of product specificity whilst allowing for the needed innovation to move from localised to “extralocal” and potentially international supply chains.

The collective dimension of GIs requires that exclusion mechanisms be put in place to deal with non-compliant operators that risk the collective reputation by not meeting the quality specifications. This requires an effective quality control mechanism. TRIPS itself does not provide any prescribed form of quality control although the obligation to provide for it in national systems is implicit in the reading of article 22(2) (Gopalakrishnan, 2007). Ensuring quality is approached differently in national systems. The EU has for instance decided that control should be carried out by “a competent public authority or accredited certification body”. Das (2009) states that quality control should preferably rest with an independent body. The weak institutional environment in developing countries together with high levels of corruption is likely to pose a challenge to quality control mechanisms in developing countries. CIRAD (2009) adds to this in raising the lack of certification bodies as a concern for quality control in ACP countries.

WIPO (2008) points out that, in addition to successful marketing, the efficient management of intellectual property depends on the right holders’ ability to monitor and enforce its IP. Pacciani et al (2001) points out that the rural development potential of GIs is strongly dependant on the ability of local actors to create institutional processes that can regulate the use of the GI. This extends beyond quality enforcement as discussed above to include regulating the use of the name to prevent counterfeiting. The effective enforcement of protected GIs, both on domestic and export markets, entails significant monitoring and administrative costs as well as knowledge capital, posing a further challenge for developing country GIs. Notably, international protection under the TRIPS agreement is dependent on the GI being protected domestically⁴. National laws thus need to be amended, a process which is likely to entail additional costs. In the absence of a mandatory international register, protecting GIs in foreign territories with *sui generis* systems further entails complying with complicated territory specific legal requirements in each jurisdiction it seeks protection. Wagle (2007) as cited by Das(2009) estimates for example the cost of applying for registration in the EU at US\$20 000. Depending on the type of system in place in the foreign jurisdiction, the burden of proof may rest on the infringed party. This often necessitates costly consumer surveys to prove distinctiveness. The enforcement in foreign territories is thus potentially a costly and uncertain process for GI right holders from developing countries. Das (2009) finds in this respect that the

⁴ See article 24.9 of the TRIPS Agreement.

lack of public support significantly hampers Indian right holders' enforcement in international markets.

The costs associated with GIs remain one of the biggest challenges to developing countries (CIRAD, 2009). In addition to costs related to the institutional framework, development of the production chain, promotion and enforcement costs, there is likely also to be costs linked to achieving and maintaining the unique qualities of the product. These include costs in defining the product specification, establishing producer organisations and control costs. CIRAD (2009) finds that costs related to quality control generally fall on the producer in developing countries and Hughes (2009) cautions in this respect that a GI will not result in an economic rent if any potential premiums go into expensive quality control. This raises again the need for developing countries to carefully estimate the net benefit of GIs through an empirical calculation of the cost of protection and profitability, bearing in mind also the indirect GI benefits and policy objectives.

Finally, optimising the potential socio-economic impact of GIs necessitates a consideration of the broader policy environment. It is important not to approach GIs merely as intellectual property rights. GIs form part of a much wider policy context and focussing only on one of its potential dimensions is likely to curtail its positive impact. Bowen (2010) mentions in this respect how the Mexican GI system has been implemented to protect Mexican products from usurpation and that no attention has been given by the Mexican government to broader policy objectives. Barjolle et al (2009) mentions that where economic benefits are the only concern in implementing a GI system, there are likely to be threats to the other potential GI dynamics such as rural development and sustainability. This emphasises the need to consider the broader territorial and social objectives. Bowen (2010) mentions that the new legislation introduced in developing countries is often not supported by clear policy objectives. She explains how this lack of a coherent policy approach leads, especially in the context of lengthening supply chains, to an increased risk of outside actors capturing the benefits of the GI dynamics. Developing country governments should be clear on the policies behind GI strategies and ensure that these are in coherence with and support the broader policy objectives. The role of institutions and the procedures of the GI system should be aligned with these objectives (Barjolle et al, 2009). In this Addor and Grazioli (2002) cite Vivas-Egui (2001) in saying that “*developing countries need to draw a clear action plan at the national and international level in order to consolidate the benefits of their own GIs*”.

4. Conclusion

The paper reviewed the international literature on the socio-economic impact of GIs. It explored the benefits associated with GIs from a quality signalling, market access and rural development perspective. It went on to identify traditional knowledge and biodiversity as potential objectives which can be pursued through a GI system. The review highlights the significant benefits which could potentially flow from this IP right. The discussion is qualified however by considerations around interpreting the potential GI dynamics. It is shown in this respect that the discussion on the potential socio-economic benefits is to a large extent conceptual, given the lack of empirical evidence. Methodological difficulties in the empirical measurement of these impacts were briefly explored. The lack of empirical measurement remains the biggest hurdle

to conclusions on the socio-economic impact of GIs. The discussion further cautions that there are particular challenges to harnessing the potential socio-economic benefits in a developing country context. It shows that, as emphasised by Huges (2009), GI laws do not by itself lead to the potential socio-economic benefits. The challenges faced by developing country GIs emphasises that, in addition to suitable legal protection which considers the dynamics of the local context, the GI process needs the support of appropriate institutions and policies.

In summary, it is undisputed that there are significant benefits attached to GIs. Achieving these dynamics is however not a simple process and is dependent on how the process is implemented, protected and exploited. This requires concerted efforts by both governments and producers. Developing countries should take note that the socio-economic dynamics of GIs are highly context specific and that the impact of GIs is likely to vary from country to country and from product to product. This is confirmed by Grote (2009) who, in discussing environmental labelling schemes in general, finds that the results of impact studies vary greatly depending on the production process and that the impacts are highly heterogeneous across countries, regions and sectors. Therefore, while GIs present an interesting policy tool with potentially significant benefits, it is left to countries to undertake careful analysis of the expected benefits and costs in their particular environment and for their particular products. As shown, GIs are multi-dimensional instruments and any impact assessment would need to account for the broader territorial impact thereof, including all potential economic, social and environmental impacts. Informed policy decisions around GIs should therefore beyond economic considerations also take into account the potential social and environmental benefits. It should be kept in mind however that GIs are in the first instance IPRs that protect the goodwill and reputation of these differentiated products. Additional socio-economic impacts may flow from its introduction and protection but are likely to require policies in support of these additional objectives.

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