Università degli Studi di Modena e Reggio Emilia
Dipartimento di Economia Politica

Materiali di discussione

\\ 539 \\

Ecoprofit environmental certification as a public good: SWOT analysis of a relationship network

by

Paola Bertolini[1]
Enrico Giovannetti[2]
Antonio Cecchi[3]

September 2006

Università di Modena e Reggio Emilia
Dipartimento di Economia Politica
Via Berengario, 51
41100 Modena, Italy
[1] e-mail: bertolini.paola@unimore.it
[2] e-mail: giovannetti.enrico@unimore.it
[3] e-mail: cecchi.antonio@unimore.it

Ecoprofit environmental certification as a public good: SWOT analysis of a relationship network

Prof. Paola Bertolini; Prof. Enrico Giovannetti; Dr. Antonio Cecchi

Dep. Of Economics – University of Modena, Italy

Abstract

The present work aims at carrying out an analysis of the strengths and weaknesses of the Ecoprofit certification through an institutionalist framework capable of incorporating the role of enterprises, institutions and relationship networks.

Through the analysis of case studies on cooperation and on the food farming industry it is possible to subdivide the possible markets into 4 stages of maturity, according to the different degree of interaction among the agents, and to investigate the present and future role of environmental certifications seen as social capital increase vectors, thanks to their capability of recognizing and producing a culture of quality and, therefore, of sustainable development.

1. Introduction

The “Ecoprofit" (EP) brand is a public good produced by a social and economic process and it is based on the interaction of various subjects. It is therefore a complex theoretical object that has to be analysed from different angles, in order to understand its nature, assess its evolution and observe it in its future perspective.

Our objective is to try to carry out a SWOT analysis of the brand itself, in the light of three years of experiences, contacts, debates, meetings and specific in-depth studies that have taken place during the twinning activity. In other words, this analysis is made possible only thanks to the experience on the field, concerning both the relationship network created during the Interreg IIIc programme and, in particular, the result of the work experience with the firms.

The present work is divided into six parts:

- A SWOT reflection on the EP brand
- Description of the application context
- Description of the network model as main strength of the brand
- The real effects produced inside the firms
- Evaluation of the experience and conclusions

2. SWOT analysis of the Ecoprofit brand: strengths

At the beginning of this chapter, EP has been defined as a “public good” produced (and reproduced) by a social/institutional process – oriented towards the market, but previous to it –, the main objective of which is the creation of a favourable environment, where the attention to quality receives an economic valorisation.

The evaluation system which strongly predominates in the western culture makes use of the parameters of exchange (prices) to evaluate goods and relationships. This system is based on the assumption of methodological individualism, that is, on the idea of an allocation of scarce (because given) resources, according to an individual evaluation system based on tastes and on the best (technical) employment opportunities to be identified – once again – among the ones known and, therefore, already at disposal.

When this static vision is confronted with complex theoretical objects, both because they are dynamic and because they result from no-market relationships, a complex evaluation problem arises. There are many examples which, in fact, form the most interesting part of the economic process: in the first place, the strictly speaking innovative process, but also the establishment of a standard, the determination of a set of rules, the creation of coordinating institutions. Confronted with these economic “facts”, the standard evaluation system collapses because its “data” – and therefore its measuring parameters – are transformed into "variables".

Of course, to a non-economist reader these considerations may seem very far away from the economic reality of a specific area, for example, from the description of the economic role of the quality system of Parmigiano Reggiano (PR, [Italian cheese produced in the Parma area, N.d.T.]), or

from the intervention on waste or from the decision to intervene on dust and noise in a workshop. In reality it is not so and the diaphragm that separates theory and practice is extremely thin, so that it makes productive osmoses possible, but creates also – in the case of impermeability between theoretical reflection and empirical practice – very long lists of particular cases, which are actually sterile on the level of result abstraction/generalisation.

The most delicate situation, which interests especially the evolution of the EP experience, occurs when the idea of a separation between actions and individual preferences of the subjects is accepted, in parallel with the recognition of the value of interaction and of the creation of relationship networks: the critical passage is represented by the coincidence of strengths and weaknesses as possible (unknown) results of an innovative process.

An example for all: the PR quality system is based on a constant controlling and guiding action on behalf of the protecting consortium institution. How important this is in the creation of a culture of quality and environment has been noticed in a firm participating in the EP programme, where the intervention stimulated by the contribution of experts inserted itself easily into the flow of positive actions, conducted spontaneously by that firm already in its previous experience inside the consortium of PR producers. Nonetheless, this action was put more than once under observation and sanctioned by the antitrust authority, which considers institutional coordination and the control of the quantity offered to keep quality standards high detrimental to competition. The weakness of the system is precisely that many of the doubts of the antitrust authority can find a basis and be proved in specific cases; in particular, every time the standard produces a segmentation of the market, information asymmetries, or every time opportunistic conducts develop and, in general, every time the recognition of the product does not imply a defence of quality but the creation of a monopolistic revenue (Coase, 1937, p. 386 – 405.).

In the light of these general considerations, which are the strengths shown during the EP experience in Modena? It is possible to summarise them in four points:

- Low costs and rapidity in starting up implementation processes
- High level of participation and involvement of the stakeholders
- Strong impact on the governance processes and, therefore, on entrepreneurial culture
- Independence from the business scale and sector of the firm

Joining an EP programme is relatively less expensive and more simple than the EMAS and ISO certification procedures. In fact, the enterprises are “just" required to pay more attention from an economic point of view (stimulated also by the contribution of experts) to all the resources employed in the process. But the real strength is that this analysis – seemingly oriented only to saving/preserving material resources – can rapidly give way to a cultural change followed by an innovative action. If the stimulus continues, it is possible to prefigure the development of a virtuous growth process that moves from the environment to technics and – if there are strong incentives to move in this direction – from technics to the environment, with possible technological jumps induced precisely by the systemic significance of the environment itself. Such a mechanism, in its turn, is sustainable if it is "sustained" by a cultural change involving all the stakeholders, first of all, of course, those who hold the right to use the resources.

The cumulative innovation model can be synthesized by a chart. Figure 1 is drawn from a study on the social responsibility of a firm as far as environmental issues are concerned, carried out by Legacoop in 2004. The model shows the common features identified in all the cooperatives interviewed. This figure is useful as a general outline: further on we will se how precisely the cooperation sector can become a counterfactual element for assessing the strengths of EP exactly along this line.

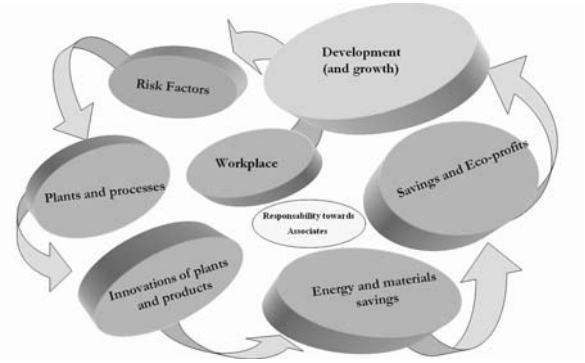

Fig. 1: Social responsibility towards associates in the cooperative model and the environment-innovation-development coil (Source: Giovannetti, 2005)

It is important to underline that the virtuous process mentioned above can be triggered independently from the scale and sector to which the enterprise belongs. This characteristic is partly connected to the low cost of initial investments or to the closer attention paid to the conditions of primary resources (power, heat, water) or to the conditions of basic healthiness (dust, noise, harmful substances). The strength that makes EP independent from the business scale and sector is the great attention paid to the execution modalities of the single processes and to their possible "external" consequences, which has to be shared as a cultural element from all those who participate in the process itself, regardless of the technical competencies and hierarchical position of the task assigned. Of course, the point of concurrence common to all these certification processes is Total Quality, but in the case of EP the concept is explicitly declined together with that of sustainability.

The considerations just made enable a further step forward in the perspective of the production of human resources and social capital of an area. As it has already partly been said, in order to let the (EP) process develop and set off – as the logo itself seems to stylize – a development of experiences, expertise and awareness is required, that is, a participation of a growing number of people involved in observation, innovative thinking and in the creation of economically sustainable proposals. The experience on the field shows that, if the results are positive, expertise passes rapidly from the group of experts to a plurality of other subjects, not necessarily belonging to the enterprise. This does not represent only an increase in the human capital available, but it also develops and enhances the relationship network and thus the value of the social capital of the productive system of an area (Zuckerman, 2003, p. 545 - 565).

The spreading process of good practices appears therefore as a very delicate passage, a kind of ridge between the strengths and weaknesses of the EP actions and method. As a matter of fact, although the positive environmental actions are independent from the business scale of an economic

unit, they are not at all independent from the scale of good practices and of economic culture of sustainability achieved by institutions and social forces in an area, that is, from the level of the social capital accumulated. The maintenance of a "critical mass" appears to be fundamental to contrast the natural tendency towards exhaustion of the impact of any innovation, and to act as a driving force to trigger new ideas and spur new initiatives.

We will come back to these points, qualifying them more in detail with empirical examples; what we want to underline is the basic principle on which EP rests: it is possible to save resources if, and only if, new resources are "created". This passage is extremely delicate because it comes into open theoretical conflict with the standard economic theory. An example may clarify the various passages: let us imagine that a firm, spurred by the good results reached and by the achievement of the EP brand, decides to decisively undertake a further investment in projects with a high environmental content. In order to permanently incorporate this choice in the governance actions, the costs of this research have to be considered "fixed", as they cannot be avoided, if one wants to continue on a sustainable innovative route. It is important to underline that any innovation has the nature of a process that uses resources; this is why, as time goes by, this process may prove unsuitable or dangerous or too expensive. For example, the Ford production model – in a certain historical period – enabled a strong saving of resources compared to the previous organisation methods (Coase, 1998, p. 72 – 74); just-in-time production showed the organisational limits of the Ford model precisely through the saving of resources and the valorisation of individual competencies; to this purpose there are countless examples also of a strictly environmental kind. To make the choice sustainable, the *sunk costs* have to be covered, that is, the investment made has to be economically recognised: this is the task of certification.

For example, taking the case of one of the firms just certified, it is possible to invest time and resources to analyse the radioactivity content of paper. The initial hypothesis was to test that the paper did not come from highly polluted areas (ex. Cernobyl). In theory, the employment of these resources motivated by a social responsibility principle of the firm is not at all compatible with the hypothesis of profit maximisation of the standard theory, so it should to be considered an irrational/inefficient action. On the contrary, the same action can be observed from the point of view of an investment in human capital and as an attempt to create a "relational asset" (firm reputation). The EP brand makes these investments visible, enabling the firm to present them in its CV. This shows, therefore, the importance of interacting with the external economic environment and of institutional action in giving economic weight and value to specific allocation choices.

3. Weaknesses in the Ecoprofit certification brand

As it has already been mentioned, being EP a relational asset, its strengths can turn into weaknesses.

The main weaknesses are:

- The scale of the relationship network in which the firm is integrated

- The life cycle of the single innovative idea
- The progressive sclerosis of the EP institution (self-reference, reduction of the network dimensions, transformation of the brand from a public good into a club or private good)

The start-up strength of the brand is, as already mentioned, the independence of the possible actions useful for the certification from the business scale and sector. It is also true, though, that on a small scale the incentives towards innovation, for example in terms of resource saving and carrying out of good practices, can be completely marginal if they do not succeed in affecting the organisation of the processes and the business scale itself: for example, modifying a lighting system on a small scale can give limited incentives in terms of energy bills to justify a change of the plant facilities and therefore try to obtain a technological improvement. Always for reasons connected to the business scale of the firm, the innovations can involve aspects that are too specifically connected to the organisation, so that they do not spur the creation of intervention protocols, thus reducing the possibilities of repeating the innovation itself.

Every innovation has its own specific life cycle that depends on the impact it achieves in the environment where it is implemented. The more the change triggers chain reactions, the more it is possible to hope for feedback effects. In a tissue of small firms this is possible, but it is a function of the efficiency of the relationship networks, of the innovative culture, of the will to invest (and not to speculate) and, of course, of the incentives that such a process determines in the course of time. In short, speaking in strict economical terms, innovation is generated by an organisational change and is maintained in time by the organisational changes that it can generate in its turn: the lower the transaction costs and, therefore, the faster the transmission of the impact, the longer the life cycle of innovation; but the level of transaction costs and the rapidity of transmission are closely connected to the governance forms of the network itself and to its degree of efficiency in the management/organisation of relationships (Coase, 1998, p.72 – 74).

An important empirical example comes from the food production chains of the food farming industry sector of Modena (meat, milk and dairy, wine) and from the strategic role played by cooperation, by the importance, and the limits, of the quality/origin certifications. We will discuss these elements further on, showing the potentials of the application of EP in the farming sector. Here it is important to point out how all the institutions, the formal and the informal ones, the private and the officially recognised ones, are subject to a life cycle that moves in synchrony with the success on the market of the various products.

The EP history in Modena is no exception, nor will it be in the future: its main weakness is the sclerosis of institutional action in sustaining the start-up, promoting incentives for the development of good practices at network level, relaunching the process of environmental innovation.

The following chapter will discuss in more detail the economic context of potential application of the practices stimulated by EP. Attention is placed especially on the farming sector, chosen as a privileged filed of investigation because of its big economic importance in the province of Modena. This sector, thanks to its characteristics, represents an ideal lab to study the opportunities that can develop from the spreading action of good practices in the environmental field. The industrial farming sector is, in terms of people employed and turnover, the second activity sector of the province after

the mechanical sector, which gathers, though, a multitude of activities in particular subsectors, spurred by the many compartments present in the area and by the final firms. Such heterogeneity, although it is by no means a limit to the actions set out by EP, makes it difficult to investigate the life cycle of the products and, therefore, the innovative effects of the brand itself. At the same time, the sector is facing a rapid evolution of the scenario of reference: once again, the strengths on which the model has based its development can turn into weaknesses under the threat of certain negative and distinctive characteristics of the globalization process: the breaking of rules, the uncertainty of quality standards, social dumping, aggression against natural resources and energy supplies.

4. Distributed economy as a spreading opportunity for the Ecoprofit network: cooperation, culture of quality and environmental actions in the food farming sector

In the economic debate on the Italian industrial set-up, wide space is given to the discussion concerning the "nano-dimension" of Italian enterprises, which is generally considered a structural weakness. We do not agree with this view that seems to derive from an abstract hypothesis of the standard enterprise theory, not filtered by the comprehension of the structure of food production chains, of the nature of these subpopulations and of their evolution; such filter is particularly important in sectors – especially those that show the presence of enterprise clusters and/or in the districts – where the division of work is very strong. The case of the food farming sector of the region in general, and of Modena in particular, provides an excellent example of such an aggregated complex (Cabral, Mata, 2003, p. 1075 – 1090). We will try to show how the structure of the food production chains of the Modena area represents a remarkable opportunity for intervention actions in the environmental field, especially because one of the main glues of the economic tissue is the great attention paid to the level of quality. This care is expressed institutionally and is strengthened through the coordination action of cooperatives and consortiums (Bertolini, Giovannetti, 2002, p. 13 – 43).

The province of Modena is, together with the one of Parma, the most important of the region as far as food production is concerned and has a considerably diversified productive structure both with regard to the production activities present and to the enterprise typologies within which the activity is articulated. The most important sector is the meat one, which comprises two distinct, leading production chains in this activity: bovine and swine transformation; other zootechnical transformation activities play a secondary role. This sector is followed by the milk and dairy compartment, which is again divided into two differentiated activities, which are both important for the economy of the area: edible milk and parmigiano reggiano. In the drink sector a very important role is played by the wine transformation activity, which involves a particular food production chain which is becoming more and more significant in the food economy of the area: the chain of vinegar and in particular of aromatic vinegar in Modena with all its connotations (traditional and non, with registered designation of origin and without). The province registers also an important cereal transformation activity, both for the production of flower for human consumption and, especially, for zootechnical alimentation. Lastly, there is the fruit and vegetable transformation, which has witnessed deep changes in the last five years, which have progressively downsized its role within the food economy of the region.

As far as the characteristics of production and enterprise organisation are concerned, the coexistence of big, private and cooperative, firms and of local systems of small and medium sized enterprises has often been underlined; the latter are widespread in the field of local quality production, which counts some of the most prestigious *made in Italy* products (Parmigiano Reggiano, Aromatic Vinegar, Modena ham, Lambrusco wine) (Bertolini, 2003). Literature on the area indicates, also for these productions, the presence of all the characteristics identified in the most mentioned industrial districts, such as the coexistence of cooperative and competitive conducts of enterprises, the existence of a social capital created from experience already available, shared languages and contract culture, which provide the social "glue" of the enterprises and the "lubricant" of their economic relationships (Anderson, Jack, 2002, p. 193 - 210): in particular, among the elements of the social capital, there stands out the important role, the ability to cooperate in a broad sense, of the contractual institutions that derive therefrom, which often carry out the same role, or represent the necessary precondition for technological innovation (Bertolini, 2003).

A detailed analysis of the sector lies outside the aims of the present work. We will instead concentrate on the connection between quality and development, on the role of institutional action and of certification processes. Let us examine, for example, the relations between the local and international dimension of production in the meat sector, which characterises one of the best industrial performances of the Modena food farming sector.

The swine meat sector in the province of Modena is made up of a thick network of small and medium sized enterprises, that have developed also in neighbouring areas, giving rise to a *cluster* structured on specialisation in the various processing stages. In general, it is thought that with the demolition of commercial frontiers, the level of competitiveness rises, stimulating enterprises to enlarge their dimensions, developing merger or take-over phenomena, that might radically change the configuration of the district. In reality, this is not the route followed by the sector. On the contrary, the group of enterprises cannot be considered a generic *cluster*, but a complex economic subject, capable of determining a coherent action, regulated by institutional mechanisms and based on a set of "public goods" that form its social capital.

The processing stages that characterise both the food production chain and the distribution of the enterprises on the territory are breeding, slaughter, sectioning, transformation into preserves (salami, ham etc.), seasoning and other kinds of processing (fat and rejects). The growth of the sector has favoured the division of work among enterprises, with special reference to the production activity for third parties; this has acted in particular as a stimulating element for the establishment of firms of small dimensions: among the enterprises there is, therefore, an inter-industrial relationship network of mutual supply of specific products, necessary for the productive process of interest. The relationship network does not involve only the exchange of finished goods, which follows the dynamics of orders, but also the exchange of information and imitative behaviour. All this represents a great opportunity to spread good practices and good ideas. The quality certification process has followed this route, the same that can be followed to introduce and spread the EP brand.

A good example of what has just been said is represented by the process of achievement of EEC labels, started at the beginning of the Nineties. According to the CCIAA (Chamber of Commerce,

Industry, Agriculture and Crafts) data, in the area there are over 200 firms operating in the field of swine meat processing, 10% of which are specialised in slaughter, 40% in sectioning and 50% in transformation into ham, salami etc. Fig. 2 shows the distribution of the firms according to their dimensions and number of employees.

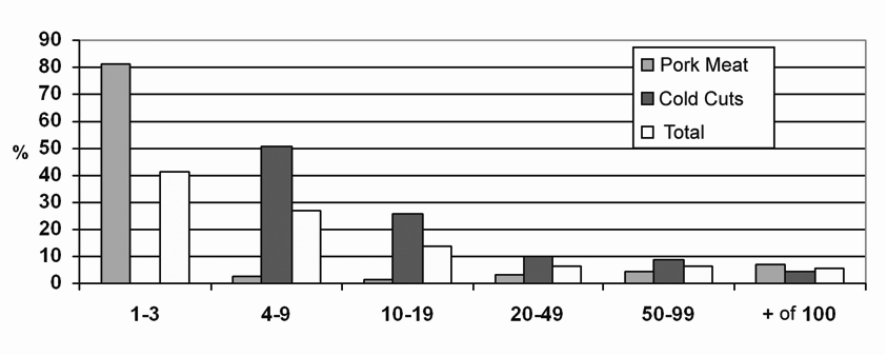

Fig. 2: Firms according to dimension and number of employees in 2002 (Source R&I, 2003)

The activity of the swine compartment has its origin in local culture, far back in time; nonetheless, it is in particular in the Seventies that the industrial transformation activity gains impetus, mainly centred on the activity of small and medium sized firms, in strong connection with the local breeding tradition (Bertolini, Bertacchini, 1998). The Eighties witness a consolidation of the activity, which is shown by a sharp acceleration in the number of enterprises registered at the Chamber of Commerce; the trend continues also in the last decade, as is evident from the fact that the number of firms registered keeps increasing, even though at a slower pace (Fig. 3).

Also the number of employees has risen in the last five years at a rate of around 2% per year: it is important to underline that the sector, in the food industry, is the most important of the province as far as employment is concerned and is quite relevant also in the national context (10% of the enterprises of the sector).

The growth of activity at local level has surely benefited from the positive trend of consumption. Nonetheless, observing Fig. 4, it is possible to see that the expansion of export appears much more relevant as driving element of growth. Moreover, it has to be said that enterprises show a strong propensity towards export, as is evident from the development of EU certification applications, which are necessary to have access to European markets: the trend of applications anticipates the export one. This process underlines the relevance of the European dimension and of its institutions: the impact produced by the launching of the Single Market in 1993 is significant.

The sector has therefore gained a very positive experience from the application of European standards, from which it has achieved a clear competitive advantage compared to other areas of the country, and it has been able to satisfy a growing demand of processing from abroad, which currently represents one of the main lines of activity.

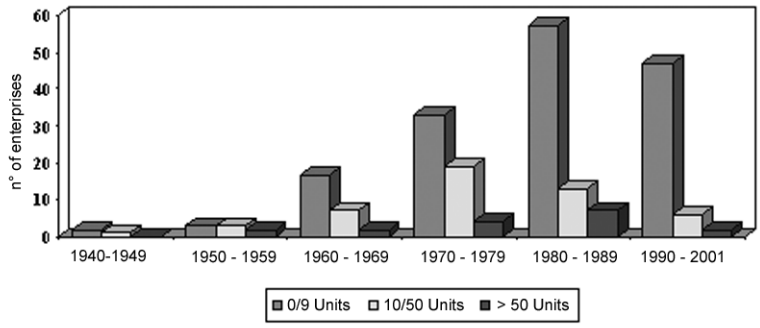

Fig. 3: Enterprises enrolled in the CCIAA registers (Source: elaboration of CCIAA database, 2005)

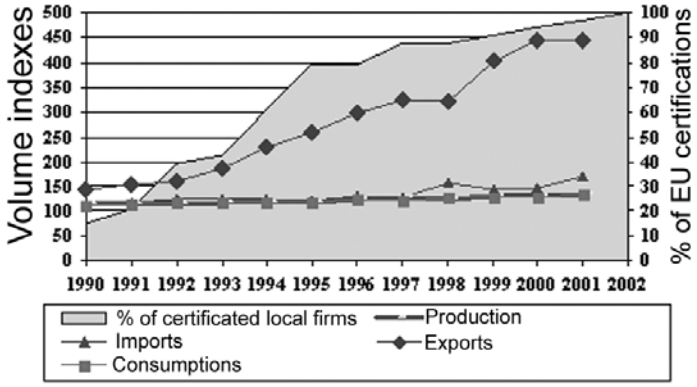

Fig. 4: National volume of production, consumption and exchange of swine products (1986=100) – Percentage of local firms with UE certifications - Area of Castelnuovo Rangone (Source: ISTAT, 2002)

The connection between achievement of standards and growth is particularly interesting if we consider not only the dimensional characteristics of the enterprises, the majority of which is formed by structures of small and medium dimensions, but also the forms of business – with special reference to the enterprises of the cooperative sector – and the institutional role played by them. Especially, notwithstanding the fragmentation in small and medium sized units, in analogy with what happens in the rest of the country, it has to be pointed out that this territory welcomes the first and the third Italian enterprise and other leading companies with brands that are well known at national and international level; moreover, one of these groups holds the national and international leadership in the commerce of PDO hams. The group is part of the cooperation structure, and it is likewise significant that it includes also the main slaughter and sectioning firm; this shows the importance of the cooperative movement in guiding and promoting the local system. The same phenomenon can be observed in the wine sector and in the milk and dairy sector, which represent the pillars of the food farming system of the area.

The role of cooperation: the territorial quality brands

It is unlikely that the economy of the district would exist without cooperation and territorial quality brands on the other side; these two elements have represented, and still represent, the essential driving forces of the economic structure and of the success of the activity.

Local quality brands existed on the territory long before the European acknowledgement. The creation of this kind of brands is a significant indicator of the good organisational ability of the producers of the area: in fact, through the definition and the recognition of collective rules, the producers have been able to correct fragmentation in production thanks to the creation of a collective image of the product, which makes it recognisable on the markets. We must not forget the cultural and economic importance of the great institutional "bustle" in setting out the distribution rules of risks, incentives and proceeds, defined democratically according to the principles of cooperation. The positive consequences of these principles can be seen in particular in the definition of quality standards.

The collective brand is a "*common asset*" that, in order to survive, needs a strong coordinative action and distributive rules; even more so, if it is a brand based on an image of high quality. It is likewise obvious, that the difficulty of coordination increases with smaller dimensions, higher number and greater fragmentation of the firms, as in the case of the economy of the area, at least at the beginning of the history of the district. In this case the valorisation of the product is made possible by the finalization of an agreement among the various stakeholders operating on the territory (farm producers, transformers, local institutions); this implies also an organizational management ability, aiming at managing the relationships between economic and institutional stakeholders in the various stages.

In this context an essential role was played by the cooperative movement, and the history of the process that transformed great part of the production of the wine sector into organic production largely coincides with the evolution of the biggest wine-growing cooperative in the sector of sparkling wines. Once again, it is the relationship network that represents the opportunity to be seized, but also the guiding role of a big enterprise that carries out its task of guiding institution becomes clearer. The action takes place in three moments and is paradigmatic of the way in which good practices can be transformed in productive standards.

The economic nature of cooperation in the wine sector is represented by the handing over of the grapes on behalf of the members, to carry out in a centralised way the stages that go from transformation to marketing, making good use of the scale economies of plants of big dimensions and of a common organisation. If, at the beginning, the direction of relations went from the farms to the creation of an organism of technical support, with time this relation has been inverted and coops have developed a guiding and managing role towards the members themselves: the most important example is, indeed, the introduction of integrated fight against pest, which has progressively eliminated chemical pesticides.

In the first phase, coops took advantage of regional incentives for experimentation and progressive carrying out of experiments of organic agriculture. In this stage, only a few enterprises –

the most motivated and aware of the pesticide problem – joined the programme, but they were enough to carry out the experimentation and finalize application protocols and good practices.

In the second stage, coops created a structure of economic incentives to pay the handing over according to the quality of the grapes, placing particular emphasis on the ecological safety of the cultivation processes. This incentive structure again pushed forward the definition of a cultivation standard, which then became compulsive in the final phase, in which all the firms adopted the organic cultivation protocols.

The description of the food production chain of Parmigiano Reggiano and of its cooperative and consortium institutions would retrace the stages just described, this time referred to a much wider area, but nonetheless homogeneous in the economic substance and in the contractual institutions that link the firms and the stages of the production chain.

The social capital and the "net dimension" of enterprises

The development just described answers many of the questions posed at the beginning concerning the costs of innovation: for example, if the division-enterprise relationship is governed by the choices of a entrepreneur, who will decide the specific coordination among the stages carried out by different enterprises? Who will align the incentives for exchanges characterised by high specificity? How will investment expenses and risks be distributed? How will information asymmetry be filled and opportunistic conduct be sanctioned? Who will play the role of the “collective entrepreneur”? In short, the complex of these problems corresponds simultaneously to the controlling of transactive costs *and* to the solution of a problem of social *governance*.

It appears, therefore, that contract agreements and unwritten conventions play a fundamental role. To this purposes, the food production chain relationships and the organisational importance of the cooperative sector have already been analysed in the previous part. In particular, it is necessary to underline the action of proceeds redistribution among all the subjects of the network: this becomes of fundamental importance in the creation of the dynamic balances of the network itself. This action is carried out according to an “equity” principle – based on “mutuality” in the evaluation of costs – that determines the basis for the establishment of prices in the transactions between the segments of the food production chain. The evaluation action is, in its turn, the product of real, empirically observable processes (Tab. 1).

The elements mentioned can be traced in the evolutionary process and in the conducts of the biggest enterprise of the sector, which can be considered an archetype of the functioning of the cluster analysed: the Unibon cooperative. For example, Unibon plans its requirements, taking into consideration its own productive capacity and the one of its suppliers. It is important to point out that this information, acquired through specific surveys and as a relationship custom, is known to Unibon. Of course, to know the productive capacity of a competitor does not necessarily imply knowing its costs, but this gap is filled by the knowledge of the district and the existence of strong competitive mechanisms on all the factor markets. According to the typology of products, the sales department keeps record of the daily, weekly and monthly demand. The synchronisation of the productive

processes takes into account, at the same time, both the internal productive capacity available and that of the network of suppliers. Simultaneously, the knowledge of industrial costs is pushed to extremely high levels of detail and constantly updated by the research and development departments inside the firm. Obviously, between the "virtual" food production chain that Unibon plans to satisfy demand, and the "real" food production chain, there is all the organisational activity of the internal productive lines and the contract negotiation with the network of suppliers. In a long-term collaboration perspective, the most efficient economic solution is identified empirically: to consider the network as an integrated unit. This implies aligning incentives in proportion to the – direct and indirect – industrial costs of the single units. To reach this target it is necessary to distribute the use of the productive capacity in a homogeneous way among all the enterprises of the network, regardless of the level of aggregated demand faced by the *cluster*. The consequence is also a development of the social division of work through the spreading of incentives and the research of new *partnerships*.

Tab. 1: An enterprise-institution case study: coperation and coordination in cluster relationships at Unibon (Source: Bertolini, 2003)

Of course, possible strong fluctuations of demand can cause an interruption in the alignment of the incentives; the existence of shared distributive criteria mitigates, but does not completely eliminate such risks. In an industrial structure as the one described, the organisational solution for the reduction of the risk of an unforeseen drop in the level of productive activity is represented by the articulation and the variety of the network itself.

The accepted, and mutually fostered, conduct is that which promotes economic relationships with other agents of the food production chain. For example, in the course of specific in-depth surveys, in all the interviews with Unibon suppliers – besides the explicit confirmation of the necessity of stable long-lasting relationships with the consigner enterprises –, the *leitmotif* was the diversification of risk to maintain an articulated order portfolio; at the same time there was a repeated refusal to accept orders that would glut, in a complete way and for long periods, the productive capacity. This concern is not motivated, though, by the fear of a possible unfair conduct of the consigner; on the contrary, it is motivated by the fear that unforeseeable events might make it impossible to fulfil the agreements, prejudicing the firm's reputation. In short, the possibility of a crisis does not modify the theoretical framework based on the advantages of cooperative conduct. Once again, the possible interruption of the alignment of the incentives must not necessarily be ascribed to opportunistic conducts: from an empirical point of view, it is more reasonable to consider a situation of crisis as a spur to look for alternative industrial solutions (Foss, 1997, p. 307 – 323).

The considerations just expressed represent an introduction to what is probably the most relevant point in the definition of a *cluster* as a unit of analysis: the mechanisms of mutual orientation. In fact, this concept implies the simultaneous action of a considerable number of empirical variables: the creation and the defence of a system of long-lasting relationships; mechanisms not only of exchange, but especially of information production; determination of a system of shared and co-

experienced rules; respect of agreements, of delivery and payment terms; common analysis and sharing of risk; lastly, as salient and unavoidable element, equity in the distribution of the advantages of cooperation.

It is important to observe that all the factors listed can be summarised in the concept of *environment with low transaction costs* (Coase, 1992, p. 713 – 719). The complex of the elements just mentioned can be considered a "social capital": the flow of benefits that derive from it is compared with the costs of the resources dedicated to institutional action, similarly to the way in which the management costs are measured with the advantages of integration. Precisely because this “capital” is available to all members, the environment is particularly stimulating for the establishment of new organisational models, products and enterprises (Tab. 2), coherent with the socially produced context (Putnam, 1993).

From the empirical point of view, the action of these forces can be seen when an organisation has to remodel both its internal set-up and its external relationship network, to take a new innovative route. As an immediate countercheck, this model can be compared with other *cluster* models (poles or agglomerations), where hierarchical, often monopsonistic, relationships dominate, of big enterprises in the subcontract network, with particular reference to the ability of these enterprises to create public goods (information, competency formation, technology transfer). In particular, we must not forget the most serious and long-lasting consequences produced by crises and restructuring of big enterprises in other *cluster* typologies.

For the Unibon network, a radical change was determined by the introduction of the Total Quality system. Following the certification according to the UNI-EN 29000 norms, the R&D department of Unibon draws up very detailed purchase specifications with the technical specifications and the guarantees required for each product typology concerning physical, chemical-microbiological and organoleptic requisites, together with the packaging, boxing and preservation modalities. Through a long and complex process of negotiation, these documents are known to the whole network of suppliers that have undertaken to comply with the standards prescribed. In this action, the firm surely uses its market power to make the system converge as rapidly as possible towards the balance of competition. The reference to this “private set of rules” is internalized by the parties to the extent that it has disappeared in the formalization of the currant contracts. Quality norms represent, in fact, an institution of reference in transactions, that goes beyond the Unibon network: culture of quality, organisational solutions and technologies employed stop being a “private good” and assume – through the enlarged relationship network – the characteristics of "social capital".

Tab. 2: Culture of quality as social capital asset

The structure described represents an important distinctive feature of the *cluster*, that can be traced back to the social network form (Gordon, McCann, 2000, p. 513 - 532); thanks to its characteristics, the innovative choices that are made in this kind of network modify the social capital and, exactly because of this, they must necessarily be spreaded among all the members of the *cluster*.

Given these characteristics, we feel we can say that, seen from the outside, this system behaves in the same way as a “big”, vertically integrated enterprise, capable of facing autonomously international competition. It must never be forgotten, though, that in order to make the whole system work, it is necessary that the bad money of speculation on short-term “savings” in quality, should not replace the good money of long-term investments: for example, in order to align the incentives of all the operators in this direction, the rigorous monitoring action of the health authorities has an importance that goes well beyond the generic defence of public health. The reflection on public institutions, another fundamental element of the cluster balance, appears too far-reaching to be tackled in this work.

5. Threats: globalization processes and institution sclerosis

The globalization processes represent an objective threat against quality systems, on the one hand, and challenge the concept of development sustainability on the other. Of course the statement has to be further qualified to achieve a meaning relevant for the economic policy. For example, remaining in the same territorial context, the set-up and the development modality of the meat sector represents a driving force of globalization with amply positive characteristics – not only for the economy of the area, of course –, because it has managed to transform quality (and environmental impact) control into a strength. The same can be said, for example, of the growth of the Austrian economy on the whole, which appears as one of the main driving forces in Europe in the globalization process. On the other side – unfortunately on a very limited scale – the same can be said for the creation of food production chains in fair trade, for which interesting case studies are beginning to appear. In Modena it is worthwhile mentioning the experience of two cooperatives: the Cico Mendez coop (from the name of the Brazilian leader murdered on behalf of multinational corporations), committed to the marketing of nuts from Amazonia, and the Ghanacoop, a firm formed by immigrants from Ghana for the marketing of pineapples produced in the plantations of their country. Once again, it is the world of cooperation that plays a decisive role – not only for the sharing of the values of solidarity and “external” mutuality – but also for the possibility of using its controlling power on the large distribution stage as a control room for the whole food production chain: last but not not least through the imposition of quality standards and food safety standards of products, but also through the *recognition* of the higher costs of local producers, spreading the culture of quality, both as a bond and as an opportunity for local producers.

The negative elements of the globalization process appear as two different sides of the same basic problem. The crucial point is the breach of the distributive rules inside the food production chains for the exclusive benefit of stronger subjects of the chain itself. This breach can be carried out through the privatization of the social capital shared by the members of the food production chain. Let us use the concept of “social capital” in its particular meaning of “relationship network”: seen as common and coherent conducts in compliance with the rules, respectful of reputation, in the cooperation among subjects, in the exchange of information, in mutuality as a principle of valorisation etc.; or as a slackening of the guiding power of institutions. In standard economic terms we could think

of these phenomena as the expression of oligopolistic relationships and/or expression of market failures, but according to the institutionalist view that we are following, this approach mistakes the cause with the effect.

From an empirical point of view, the relationships just described can appear in various forms: first of all on the labour market, then in the use of natural unprotected resources, with particular reference to the use of social and environmental dumping mechanisms, with the aim of internalizing the advantages produced by the connected reduction of costs (Giovannetti, 2001). The degree in which the “bad money” of the unilateral modification of the distributive rules and of the externalization of environmental costs is capable of replacing the “money” of good practices, and of the redistribution of the advantages among all the stakeholders, is closely connected with the capability and the power of the institutions of regulating the level of “equity” of the system in the enlargement process of the markets and the creation of wider economic relationship networks. We use the concept of “equity” in the meaning indicated by Sen (Giovannetti, 2001). In other words, the costs of the social distribution of work not covered – or not recognised by the complex of enterprises – are transformed, on the one hand, into private advantages and, on the other, in expenses for the production of income of other subjects that determine, in their turn, the real extent of the social mismatch in terms of lesser well-being of single people, with potential cumulative effects on the quality of the resources (capability level). The same framework is used to analyse the employment and the (private) reproduction of environmental resources; and, at the same time, the discrepancy between the degree of use of these resources and the sustainability of development.

A useful way of reflecting on the outlooks of the EP experience, and on the threats that can arise in perspective, is to consider the globalization process as equivalent to a "shrinking" of institutions, with a particular impact on those – formal and informal, public or private ones – that regulate local markets. As just said, this is not in itself a negative factor, when the old rules are replaced by new ones capable of spreading benefits and costs on a wider number of stakeholders. In the absence of such a spreading, the previous institutions risk to undergo a rapid aging and sclerosis process, not being able to provide new spurs and incentives for the enterprises any more. Given these changing processes, the main risk is to transform the informative content of the brand from a public good into a mere marketing strategy, making therefore the “privatization” of the brand an element of discrimination and/or a barrier to access.

6. Conclusions

Every certification brand is a public good subject – as any other good – to a life cycle. Ecoprofit does not escape this “law” and the passing from a maturity stage to a new stage of expansion is possible, not so much through the maintenance of the consolidated protocols, but especially through the increase of the scale of the network itself and, therefore, of the variety and richness of experiences from which to draw new ideas, good practices and common targets.

The relationship network developed during the Interreg IIIc programme for the development of the EP model enables to x-ray in an excellent way all the problems just tackled, with particular

reference to the risks that EP has to face, being in its turn an institution subject to a life cycle. To this purpose we can describe four different states:

1. Maturity (Graz)
2. Development (Modena)
3. Introduction (Maribor/Pécs)
4. Experimentation (Dresda, Częstochowa)

It is important to notice how this classification describes the degree of spreading (and prestige) of the brand, but also the degree of integration between local institutions and local economic tissue: this is extremely high in Austria, much slacker in the experiences of Dresda and Częstochowa. In this framework the Modena (and Emilia) experience can play a strategic role in the spreading and relaunching of the brand, with positive effects for all the partners of the network.

The description of the economic tissue of the Modena area, with particular reference to the structures and the institutions of the food farming industry, shows the crucial role played by quality productions (PDO) – synthesis of the local production culture and organisational ability –, to the extent that it would be difficult to imagine the existence of the local system without such brands. Under this profile, we have highlighted the strategic role of cooperation, which remains a fundamental institution for the organization and consolidation of the *cluster*. In general, the sector – which is highly representative of the structure of the whole economy – has shown a good capability of adapting to globalization. Nonetheless, it is possible to identify some weaknesses, all connected to the "reproduction" of resources: some due to endogenous forces, others to exogenous ones.

Among the endogenous elements, the critical points are linked especially to the reproducibility of local resources: environment, expertise and culture. In perspective, the endogenous elements of weakness can appear as limits in the use of the territory and of environmental resources; as a slackening of the innovative or guiding power of the technological-organisational changes; as a missing entrepreneurial changeover in family enterprises of smaller dimensions; as a difficulty to find workforce with the specific technical expertise of the *cluster*. In the past, these limits have been largely solved thanks to the "social capital" available (Helmsing, 2001, p. 277 - 308).

Among the exogenous variables, the role that institutions will play is again fundamental. For example, in the WTO talks that are taking place, elements of strategic relevance are represented by the defence of a concept of quality that incorporates the cultural values of local know-how, the importance of the defence of variety in determining new resources, the fight against homologation trends: all this, we believe, represents the high profile, the real frontier on which to make the enlargement processes of interchange proceed.

Another example of an exogenous bond is represented by the general rules that influence the reproducibility of economic coordination organisms (cooperation, collective brands, economic policy institutions, etc.). As has been seen in the case study, the latter play an essential role in the *cluster*. To this purpose, in the perspective of medium-term policies, we think that it is necessary to create a favourable culture towards collective coordinating institutions, which have to be considered as having the same theoretical dignity as the traditional concept of "enterprise". In general, virtuous circles have always been set off increasing, and not reducing, the social capital; stimulating the development of the

expertise available, and keeping it on the spot with positive governance actions aiming at defending not an abstract “consumer”, but concrete and universal rights of citizens and quality of life (Putnam, 1993) (Putnam, 1995, p. 65 - 78) (Helliwell, Putnam, 2000, p. 253 - 268).

In this context, the role of a brand like EP can be strategic, managing to connect simultaneously culture of quality, technical expertise, cooperative action and development sustainability. The experience on the field carried out in the Modena sectors has shown great potentials and easiness of introduction. Local institutions have made a remarkable effort, investing in the creation of a human capital formed by the team of experts that has achieved excellent results inside the partner firms. Moreover, as already said, the economic tissue of the Modena area – with particular reference to the food farming sector – is very receptive as far as the economic role of certifications is concerned and therefore represents an enormous potential for the diffusion of the EP brand. Lastly, the philosophy of awareness towards environmental issues is perfectly in line with the one followed by the cooperative movement that – being present with leading enterprises in many manufacturing sectors and in services – is surely ready to incorporate intervention strategies and good practices, in order to obtain the Ecoprofit certification.

In short, there are all the conditions to lead the life cycle of the brand in a new phase of expansion. The critical point is, once again, the role that institutions will be able to play, the coordination capability that they will be able to express, the value of reputation that they will be able to maintain and enhance, guiding – and not undergoing – the globalization process.

References

Anderson, A.R., Jack, S.L., 2002: The articulation of social capital in entrepreneurial networks: a glue or a lubricant. In: Entrepreneurship & Regional Development. vol. 14, p. 193 - 210.

Bertolini, P., Bertacchini, A., 1998: Il distretto di lavorazioni carni suine in provincia di Modena [The swine meat processing district in the province of Modena]. In: Materiali di Discussione [Discussion materials]. n° 239. Dipartiment of Political Economy. Modena.

Bertolini, P., Giovannetti, E., 2002: Il processo innovativo nell'agroalimentare: istituzioni, imprese e consumatori [The innovative process in the food farming industry: institutions, enterprises and consumers]. In: Rapporto sulla situazione Economica e Sociale della Provincia di Modena 2001 [Report on the Economical and Social situation of the Province of Modena 2001]. Del Monte Association and Unversity of Modena and Reggio. p. 13 - 43.

Bertolini, P., Giovannetti, E., 2003: The Internationalisation of an Agri-food Cluster: a Case Study. In: Clusters, Industrial Districts and Firms: the Challenge of Globalization. Conference in honour of Professor Sebastiano Brusco. Modena.

Cabral, L., Mata, J., 2003: On the Evolution of the Firm Size Distribution: Facts and Theory. In: American Economic Review. vol. 93. n° 4. p. 1075 - 1090.

Coase, R., 1937: The Nature of the Firm. In: Economica. n°4, p. 386 – 405.

Coase, R., 1992: The Institutional Structure of Production. In: American Economic Review. vol.82. n° 4, p. 713 – 719

Coase, R., 1998: The New Institutional Economics. In: American Economic Review. vol. 88. n°2. p.72 - 74.

Coase, R., 2002: Why Economics Will Change. In: International Society for New Institutional Economics. vol. 4. n.1.

Foss, N., 1997: The Classical Theory of Production and the Capabilities View of the Firm. In: Journal of Economic Studies. vol. 24. n° 5. p. 307 - 323.

Giovannetti, E., 2001: La divisione del lavoro è limitata dalla divisione del lavoro [The division of work is limited by the division of work]. In: Materiali di discussione [Discussion materials]. n° 385. Dipartiment of Political Economy. Modena

Giovannetti, E., 2005: Strategie di sostenibilità ambientale per il sistema cooperative [Environmental sustainability strategies for the cooperative system]. Legacoop, Modena

Gordon, I.R., McCann, P., 2000: Industrial Clusters: Complexes, Agglomeration and/or Social Networks?. In: Urban Studies. vol. 37. n°. 3. p. 513 - 532.

Helliwell, J., Putnam, R., 2000: Economic Growth and Social Capital in Italy. In: Social Capital: A Multifaceted Perspective. Word Bank. Washington D.C. p. 253 - 268.

Helmsing, A.H.J., 2001: Externalities, Learning and Governance: New Perspectives on Local Economic Development. In: Development and Change. vol. 32. p. 277 - 308.

Putnam, R., 1993: Making Democracy Work: Civic Traditions in Modern Italy. Princeton University Press. Princeton.

Putnam, R., 1995: Bowling Alone: America's Declining Social Capital. In: Journal of Democracy. vol. 6. p. 65 - 78.

R&I, 2003: Indagine sull'industria agroalimentare in provincia di Modena [Enquiry on the food farming industry in the province of Modena]. Mimeo. Modena.

Sen, A., 1992: Inequality reexamined. Oxford Un. Press. Oxford.

Zuckerman, E.W., 2003: On Network and Markets. In: Journal of Economic Literature. vol. XLI. p. 545 - 565