

Food chain concept in food and rural policy

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Abstract: Food chain concept was firstly used as a private sector concept applied in order to optimise chain organisation and to create value along the chain. It is now becoming an approach to understand relations within a socio-economic area, both from for purely economic and production aims and from a territorial and rural development perspective. Currently food chain policy is often the result of a negotiating process involving different socio-economic policy areas and many stakeholders. The objective of the present paper is to analyse the food chain concept in rural and food policy context, to explore its interconnections with other socio-economic policy areas, and to identify the main policy perspectives in which the concept of food chain was used.

A significant number of international bodies, European Union institutions and national rural programming documents containing specific reference to food chain were analysed through a content analysis based on a common attributes grid. A Boolean matrix was created so to identify some cognitive relations between socio-economic policy areas and topics through the examination of the connected perceptual map built using multidimensional scaling method (MDS).

Documents analysis shows that food chain concept is mainly used in food policy strategy documents, but it is increasingly adopted as a theoretical instrument for territorial and rural policy documents. Food chain concept contains conceptual declinations which refer to both food and rural policies. Beyond the improvement of food safety and quality standards, it is widely used as instrument for agro-food competitiveness, improvement of management, territorial and rural development. Food chain initiatives impact on an increasing number of economic sectors, planning levels and interest groups and the stage of the food chain mostly targeted are the farmer and primary producers and the consumer. Moreover, the analysis shows a lack of a European common interpretation and clear acknowledgement of the use of the food chain approach and the policy documents and regulations highlight food chain issues only partially if compared with private stakeholders and research bodies. At international level, there is an increasing attention on network and systemic relations in the agro-food sector and along the different actors of the chain, but the full strength of the food chain paradigm could be more widely exploited.

Keywords: food chain; food policy (Q18), rural policy.

1. Introduction and objectives

From the 1980's up to now, European food policy developed from an inconsistent and fragmented legislative framework led by market-orientation and promotion of exchange of goods which left wide space for action and expression of the different national traditions of Member States, into a food policy focused on key areas of the Common Agricultural Policy (CAP) and strongly aimed at food safety, public health and consumer protection (van der Meulen & van der Velde, 2004).

The turning point in food policy development was the BSE crisis, that is the 1996 UK government admission on the probable connection between a human brain-damaging condition called Creutzfeldt-Jakob disease and the consumption of beef infected with Bovine Spongiform Encephalopathy. This pushed towards a rethinking of a EU food policy no more focused on economic efficiency, but rather on people's interests, consumer safety and

stakeholder participation (Westlake, 1997), that is all food chain actors (Bergeaud-Blackler F., Ferretti MP., 2006).

The subsequent institutional reform brought towards a proliferation of new regulations. The Commission 2000 White Paper on Food Safety defined general food safety principles and procedures and as the food production chain is becoming increasingly complex, the health of consumers can only be adequately protected if every link in this chain is “as strong as the others”. Therefore, the EU set clear definitions of the roles and responsibilities of stakeholders in the food chain within the ‘from farm to fork’ framework, including HACCP. The subsequent 2002 General Food Law acknowledges this new policy focus and states that it “provides the basis for the assurance of a high level of protection of human health and consumers' interest in relation to food (...) whilst ensuring the effective functioning of the internal market. (...) This Regulation shall apply to all stages of production, processing and distribution of food and feed”. With the same act, the EU established the European Food Safety Authority.

The new institutional, regulatory and enforcement system promoted a private-interest model and a growing power for retailers, the chain actor who more effectively was able to control the quality and direction of foods along the food chain, from the producer to the consumer, and who in the end enabled integrated food chain systems (Broberg M., 2008, Halkier B., Holm L., 2006).

Community strategic guidelines for rural development (programming period 2007 to 2013) are in line with the above framework and clearly states that rural strategies should improve the competitiveness of the agricultural sector “by focusing on the priorities of knowledge transfer, modernisation, innovation and quality in the food chain”. In the EU perspective only by improving agrifood chain integration Europe’s food industry can challenge global competition and rural economies can create and retain value and contribute to economic growth and employment increase.

In synthesis, food chain concept was firstly used as a private sector concept applied in order to optimise production organisation and to create value along the chain. It is now becoming an approach to ensure food safety and quality and to understand relations within a socio-economic area, both from a purely economic and production optimisation and territorial and rural development objectives. Networking dynamics underpinning socio-economic processes involve a wide range of policy areas whose contribution impact the whole food chain and also the interrelations within a single stage of production. Thus the economic relations create a *netchain* structure (Lazzarini, 2001) based on mutual and global interdependencies.

The typologies of actors involved in food chains are expanded also to agents with interest in the governance and control of the process in food sector and rural spaces. Currently food chain policy is often the result of a negotiating process involving different socio-economic policy areas and many stakeholders, such as private enterprises, consumers, farmers, associations and intermediaries, universities and research centres at European, national and regional level.

The objective of the present paper is to analyse the food chain concept in rural and food policy context, to explore its interconnections with other socio-economic policy areas, and to identify the main policy perspectives in which the concept of food chain was used.

2. Theoretical framework

Many are the theoretical approaches which attempt to define the patterns according to which firms work. If there is a reasonable agreement and understanding of what a firm is, it becomes more undefined how firms relate among each other and what are the different forms that these interrelations have established.

The institutional economy has adopted the word *hybrid* to define “institutional structures of production”, which lead the analysis towards “clusters, networks, symbiotic arrangements, supply-chain systems, administered channels, nonstandard contracts” (Menard, 2004). In this perspective, the networks of firms can be defined as “all arrangements involving a set of recurrent contractual ties among autonomous entities adopted”.

A network can also be defined as “a group of firms using their combined talents and resources to co-operate on joint development projects. Through complementing each other and specialising in order to overcome common problems, participants are able to achieve collective efficiency and conquer markets beyond their individual reach” (Ifor Ffowcs-Williams, 2000). The role of networks are crucial when competitiveness is the objective of a group of small and medium enterprises or farms, as networks allow to “build critical mass, facilitate their specialisation, learn from each other” (Ifor Ffowcs-Williams, 2000).

Farmers and enterprises must think in terms of a network. They must be aware that a successful business will be reached only by establishing network relationship and by way of a competitive “supply relation between companies (...) having one or more common objective” (Kulmala, Paranko, Uusi-Rauva 2002). The main reason to networking is to find new competitive advantage in order to respond to challenges set by globalization” (Kulmala, Paranko, Uusi-Rauva 2002). Networks allow to work in an entrepreneurial environment “by extending the individual entrepreneurial asset base of human, social, market, financial and technical capacity” (Jack, Dodd, Anderson 2008).

The creation of successful food chains requires farmers to be placed into an inter-firm network, so to be exposed to an entrepreneurial perspective of work and behave efficiently with a perspective of growth. Farmers cannot perceive themselves just as input providers, but must improve their capacity of using relations for a variety of purposes (Lechner, Dowling 2003).

A typology of network is the food / supply chain where “coordinating quantity or quality, or both, seems to be the engine of these arrangements, and with their stability as a key issue”, in order to achieve success and competitiveness. Many interpret the food chain, not just as a supply chain where the optimisation of goods finds wide analysis, but rather as a way of creating value along the chain. Value chain approach was defined by Porter during 1980s. According to this approach the idea of the value chain is based on the process view of organizations and on the idea of seeing a manufacturing organization as a system, made up of subsystems, according to which the focus of analysis is on the distribution of value-added throughout the supply chain amongst different agents (Porter, 1985).

Therefore, value chain actors must perceive themselves as linked by “a vertical alliance or strategic network ... A value chain is created when organizations have a shared vision and common goals” (Hobbs, Cooney and Fulton, 2000). Value is “mutually created and re-created among actors with different values” (Vanhaverbeke, 2001). Value is co-produced, co-invented, combined and reconciled, and the “units of analysis are the interactions and offerings, and the economic actors are analysed as holding several different roles simultaneously” (Ramirez, 1999).

Finally, often a food chain is used in opposition to the regional cluster or industrial district approach (Becattini, G. Pyke F., Sengenberger W., 1990). When the territorial dimension is to be taken into consideration, as in the case of interfirm relationships to be supported through rural policies, state-centred and market-led, or endogenous and exogenous development models do not sufficiently explain the complexity of relations interacting within the same territory. These are better represented by “network”. Murdoch states “network can be a new paradigm of rural development” (Murdoch, 2000). Within this framework the food chain is a “key aspect of the rural development agenda as it uses of the natural resource base and the way these shape patterns of rural development” (Murdoch, 2000). The strength of the chain approach consists in its ability to reconcile “a whole variety of social, technical, economic and

natural components” (Murdoch, 2000) simultaneously, as explained and applied in the current research.

3. Methodological approach

The research activity was subdivided in two phases joined by a common research approach as illustrated Fig. 1. The first phase was aimed to study the food chain concept in food policy at international and European level and was based on the analysis of fifteen among international bodies and European Union institutions documents, including Regulations, Communication, Technology Platforms, etc. which had specific and direct reference to the concept of food chain. The second phase was aimed to identify how food chain concept is declined in rural policy and took into account the 2007-2013 national rural development programmes of EU-15. To reach the objectives explained above, the information obtained by each step reported in Figure 1 were used as input in the subsequent steps of the analysis.

Fig. 1. Methodological path of analysis

STEPS	TECNIQUES	OBJECTIVES	RESULTS
Step 1		Identification of attributes grid to analyze documents	Grid of attributes
Step 2	CA	Content analysis of documents considered	Boolean matrix (presence/absence of attributes)
Step 3	MDS	Visual representation of the relations among the attributes considered and identification of pattern food chain concept	Map of attributes
Step 4	CL	Visual representation of the pattern food chain concept in rural policy	Clusters of attributes into the map

Legend: CA Content analysis; MDS Multidimensional Scaling; CL Cluster analysis.

3.1. Content analysis

In order to identify the main perspectives in which the concept of food chain was used, the content analysis of the documents was developed using a common attributes grid. Through a heuristic approach 48 attributes have been considered classified in eight categories, as reported in Table 1.

Table 1. Attributes of analysis

1. Topics: represent the principal themes that can characterise the food chain concept: Food chain safety ^{(a) (b)} / Food chain integration ^{(a) (b)} / Food chain competitiveness ^{(a) (b)} / Food chain management / technological improvement / innovation ^{(a) (b)} / Food chain analysis ^{(a) (b)} / Food chain development /marketing/promotion ^(b) / Consumer trust ^{(a) (b)} / Consumer health ^{(a) (b)} / Consumer education ^{(a) (b)} / Farms competitiveness ^{(a) (b)} / Agri-food competitiveness ^{(a) (b)} / Agri-food innovation ^{(a) (b)} / Territory competitiveness ^{(a) (b)} / Rural area development ^{(a) (b)}
2. Institutional level: typologies of Institutions that approved the study or promote the research or law regulation report considered; International / European / National / Regional; Public / Private
3. Stakeholders: typologies of stakeholders involved in policy implementation of food chain approach defined into the document: European, National, Regional, Sub-regional, all typologies both private and public
4. Sectors: sectors mentioned in the document: Food ^{(a) (b)} / Agriculture ^{(a) (b)}
5. Territory^(a): area of reference take into account in the document: European ^(b) /National ^(b) / Regional ^(b) / Sub-Regional ^(b)
6. Socio-economic policy areas: social and economic areas of interest joined to the food chain concept: Education and training ^{(a) (b)} / Food quality ^{(a) (b)} / Price definition ^{(a) (b)} / Cultural ^(b) / Employment ^(b) / Ecological/Environment ^(b) / Cooperation/Integration/Networking ^(b) / Multifunctionality ^(b)
7. Stage of the food chain: stages of the food chain mostly targeted in the document: Consumer-Citizen; Distribution–Retailers-Wholesales; Food&drink manufacturers; Farmer and primary producers
8. Private-Public interest: interest considered in the document: Private / Public

Legend: (a) Attributes taken into account to analyze the food chain concept in *food policy* at European level using MDS technique in the first phase of research. In this analysis "territory" was considered as unique binary variable representative of this category; (b) Attributes taken into account to analyze the food chain concept in national *rural policy* using MDS technique in the second phase of research.

The content analysis of documents was conducted considering the attributes included in the grid as binary variable. The result was a rectangular Boolean matrix of correspondence $A_{30,48}$ in which the attributes considered are in columns and the documents analyzed in rows. The elements a_{ij} of the matrix can be equal to one in the case of presence of the attribute or zero in case of absence. Only the attributes related to categories "*topic*", "*sector*", "*territory*" and "*socio-economic policy areas*" was considered to adequately represent the food chain concept in food and rural policy through spatial visualization approach. The other attributes were used for highlighting other results. At the end of this step of analysis it was possible to create the sub-matrix $B_{15,19}$, referred to the analysis of food chain concept in food policy at European level, and the sub-matrix $C_{15,28}$ referred to the analysis of food chain concept in rural development policy.

3.2. Spatial visualization

The two Boolean matrix $B_{15,19}$ and $C_{15,28}$ obtained through the content analysis of the documents were used to analyze the interrelations among attributes taken into account and to assess their spatial visualization through multidimensional scaling technique (MDS) in each phase. This technique, also known as perceptual mapping, is a procedure used to identify the relationships between objects through a map. The positioning of the object into the map is

based on the transformation of the judgment of (dis)similarity in the relative distances among objects.

Using MDS technique every attribute taken into account to explain the food chain concept is represented as a point in a multidimensional space and the points with correlation are located mutually closer. The computation of the distances among attributes was performed using a Multidimensional Scaling analysis (MDS). The choice of the number of spatial dimensions (axes) direct to map the observed phenomenon depend on their ability to represent the reality using jointly the squared correlation index (RSQ) and the standardized residual sum of square (STRESS). This research used MDS solutions that represent the attributes considered in two dimensions in every of the two phases that characterize the analysis of food chain concept in food and rural policy. In particular the dimensional solution to represent the information included in matrix $B_{15,19}$ (phase 1) and $C_{15,28}$ (phase 2) are illustrate in Table 2.

Table 2. Criteria to select the number of spatial dimension in MDS analysis

Phase 1 – Matrix $B_{15,19}$			Phase 2 – Matrix $C_{15,28}$		
# dimensions	STRESS	RSQ	# dimensions	STRESS	RSQ
3	0.10952	0.90616	3	0.12013	0.89206
2 ^(a)	0.21922	0.77590	2 ^(a)	0.20493	0.78036
1	0.33714	0.69485	1	0.32721	0.67865

Legend: (a) Solution adopted in the analysis

3.3. Cluster of attributes

In order to improve the interpretation of the MDS perceptual map directed to identify the food chain concept in rural development programmes (phase 2), the symmetric matrix of disparities joined to the MDS analysis of the information in matrix $C_{15,28}$ was used to group several attributes through cluster analysis technique. The objective of this step was to reduce and resume information merging together attributes strictly connected and then obtaining new concepts able to interpret the axes of the map and the pattern.

The procedure adopted in this step of analysis was the agglomerative procedure using average linkage between groups, in which clusters with small variances tends to be combined. In this case the result was a treelike structure, or *dendrogram*, in which it is possible to verify the formulations of clusters. Based on several cut-off level of rescaled distance it was possible to identify different agglomerations of cluster of attributes.

4. Results

4.1 The concept of food chain at international and European level

The globalization of food exchanges on a planetary level, the concerns about safety and quality of food and the market power of retailers have brought stronger attention on the concept of food chain. The results of the analysis of this concept in European and international documents, suggest that *Competitiveness* and *Management of the food chain* are the themes most frequently targeted, with respectively 34% and 23% of the times the concept of food chain is adopted. *Consumer attention to safety and quality of food* is the third key-issue with 25% - summing up *Consumer attention* (19%) and *Food safety* (6%). [Fig. 5.1].

Rural development (10%) jointly with *Innovation* (8%) are themes targeted less frequently, but it is interesting to see that the concept of food chain is increasingly used in documents with a territorial and socio-economic development objective. Indeed, for farmers joining a

food chain means stronger participation in the network, moving away from being simple raw materials suppliers and becoming a strategic player with important human and social capital skills.

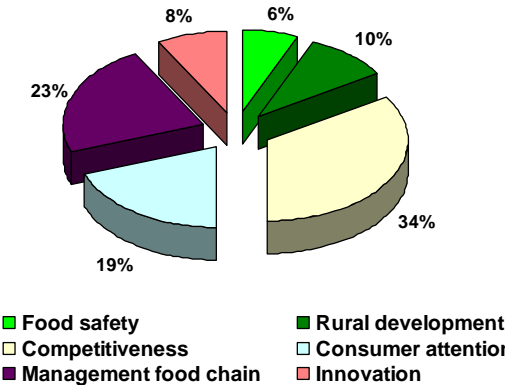


Fig. 5.1 – Topics directly targeted by the documents

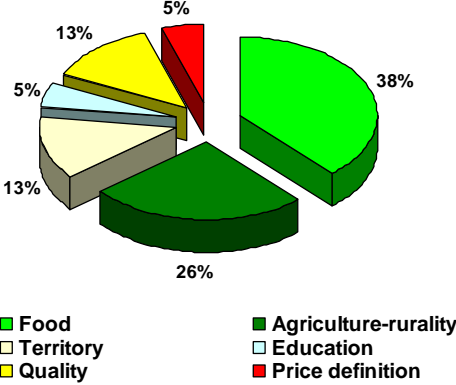


Fig. 5.2 – Socio-economic policy areas and sectors involved

Among the main socio-economic policy areas emphasized when the food chain concept was used [Fig. 5.2], *Food* and *Agriculture-rurality* are the most cited issues, respectively, with 38% and 26%. They are followed by *Territory*, mainly considered at European/National level, and *Food quality* both with 13% of frequency.



Fig. 5.3 – Stage of the chain mostly targeted

The actors of the food chain most targeted by food chain initiatives in the documents analysed are *farmers* and *food and drinks manufacturers*, followed by *consumers*, while *the retailers* reach the lowest frequency [Fig. 5.3]. This shows how from an international and European policy point of view the actors which are perceived as the most adequate or, better, in need of actions aimed at supporting and promoting food chains, are farmers and primary producers. This is suggested also by the limited attention towards the *distribution* stage, which, as known, is playing an increasingly important role in the agro-food sector. The retail market power is increasing, therefore they have direct or indirect power over the whole supply chain, often so to ensure compliance with international/national safety standards and regulations.

The spatial visualization analysis of the conceptual relation of *Topics* and *Socio-economic areas* reveal two main interpretations of the food chain concept in the documents analysed [Fig. 5.4]:

- Consumer orientation – documents adopt the food chain paradigm when they aim to consumer health, trust, education, food safety, food quality, etc.. Both consumers and public institutions are giving increasing importance to the food safety and quality, and

to some extent, to farm animal. *Innovation* and *food chain management* become elements used to ensure product quality and safety.

- Socio-economic valorisation – in a number of documents the food chain concept becomes a strategic approach to promote the valorisation of a local area. The innovative dimension of this utilization refers to the *territorial* application of the food chain concept. Food chains and networks can contribute to the viability of rural areas by creating synergies, coherence and trust among food chains actors and local stakeholders. The restructuring of farming and food systems seems to absorb some geographic declination.

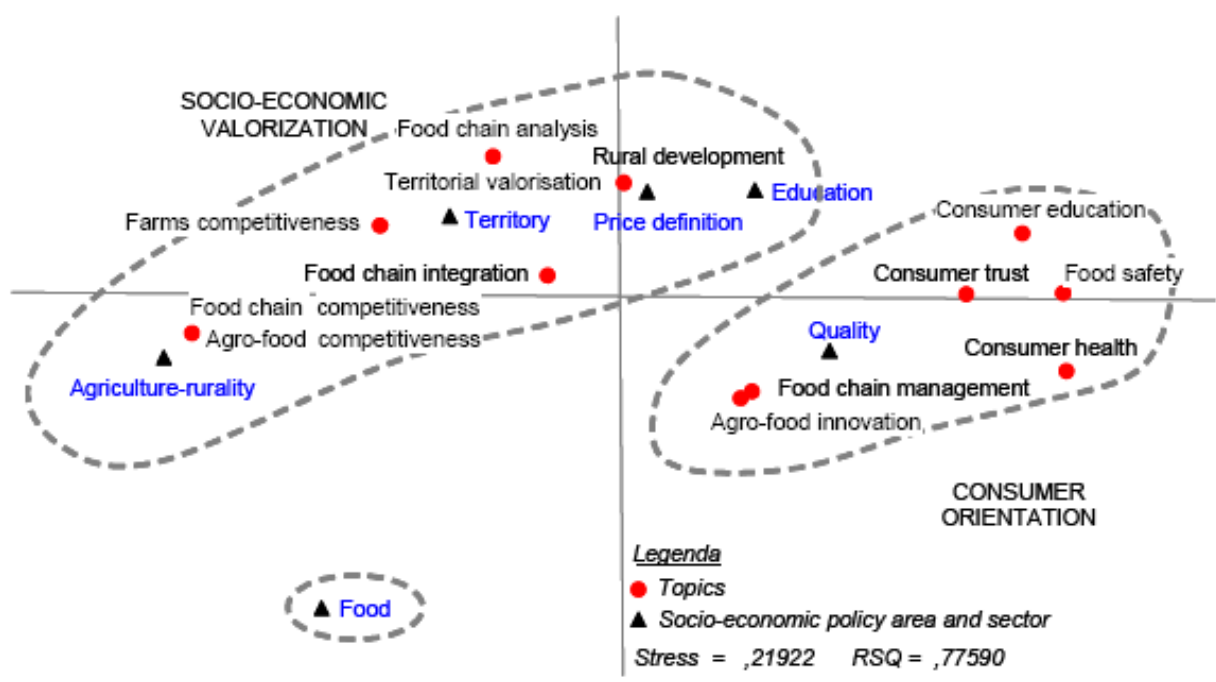


Fig. 5.4 – Perceptual map of socio-economic policy areas and topics

4.2 The concept of food chain in rural policy at European level

The 2003 CAP Reform has boosted the re-direction of rural policy towards a strengthening of the second pillar, therefore a policy addressing the multiple roles of farming in society with the challenge of diversification of activities in rural areas. EU-15 Rural Development Programmes point out their key-role in focusing on three core policy objectives: the *economic issues*, by strengthening competitiveness of the agricultural and forestry sector, the *social aspects*, by improving the living conditions and opportunities in rural areas, and the *environmental challenge*, by supporting land management and improving the environment.

European and National Institutions play a crucial role in rural policy making and their interest in the adoption of food chain paradigm as a way of delivering rural policy strategies is increasing. Food chain is a policy approach to promote and valorise local products and cultures at territorial level, but the inter-sectoral dimension and possible impact of food chain strategies is more widely applied. Food chains are becoming the networking approach in order to link agriculture with other fields of activity such as environment, landscape, tourism, culture, health, employment, etc. Only through initiatives which act along the whole food chain, it is possible to achieve the expected results.

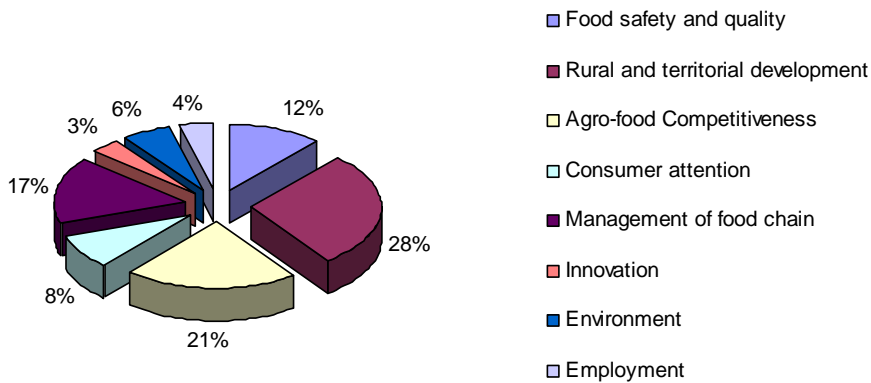


Fig. 5.5 – Policy areas in rural policy

Rural development Programmes often refer to food chain when they define their rural and territorial development strategies (28%) and the food chain is a way to promote agro-food competitiveness within the wider rural policy framework (21%). There is also strong attention on food chain management (17%) when national countries want to sustain rural policy. The analysis confirms the emergence of strong public and citizens concern about food quality and food safety (12%), to be achieved through food chain approaches, as traceability [Fig. 5.5].

Rural policies adopt a food chain approach also when they target consumers, should it be for their health, trust or education (8%). Decision makers believe that if the last stage of the chain is to be safeguarded, educated or trust agro-food products this is to be carried out paying adequate attention to the whole production process. Somehow the value created is the result of a common and shared activity realised with the contribution of all chain actors. A similar policy scheme is adopted when rural policy is connected to employment growth. Some rural policies analysed sustain that if countries aim at agro-food employment increase, this is to be achieved with the cooperation of all production players (4%). Finally, also innovation (3%) and environmental (6%) aims can be pursued also through stronger chain cooperation and support.

Generally speaking, EU-15 rural development programmes still maintain a rather traditional sectoral policy approach in favour of farm competitiveness, through the improvements of the processing and trade conditions of agricultural products, modernization of agricultural holdings and plants or by innovation and cooperation for development of new products/processes. Still, there is a common and concrete application of food chain and network approaches through inter-sectoral and multi-actor schemes. At times, these have been translated in integrated actions and collective projects or initiatives directed to ensure a better integration of private and public players at regional and local level.



Fig. 5.6 – Stage of the chain mostly targeted in EU-15 rural development programmes

In the documents analyzed the actors in the food chain most targeted were *farmers* and *processors* and to a lesser extent *consumers* [Fig. 5.6]. Nevertheless, the attempt of rural

development programmes of involving also the *distribution* stage shows an increasing acknowledgement of the complexity of relations which the first two stages of the agro-food economies are undergoing. This can be interpreted as a way of promoting increasing mutual knowledge and understanding among different food chain stages, sustaining in particular farmers competitiveness and managerial approach to work, but also encouraging and endorsing cross-stages contractual relations. Within the current globalization of trade and the changing consumers demand, producers or processors are no longer the dominant actors, as the balance of power has shifted in favour of an increasingly concentrated retail sector.

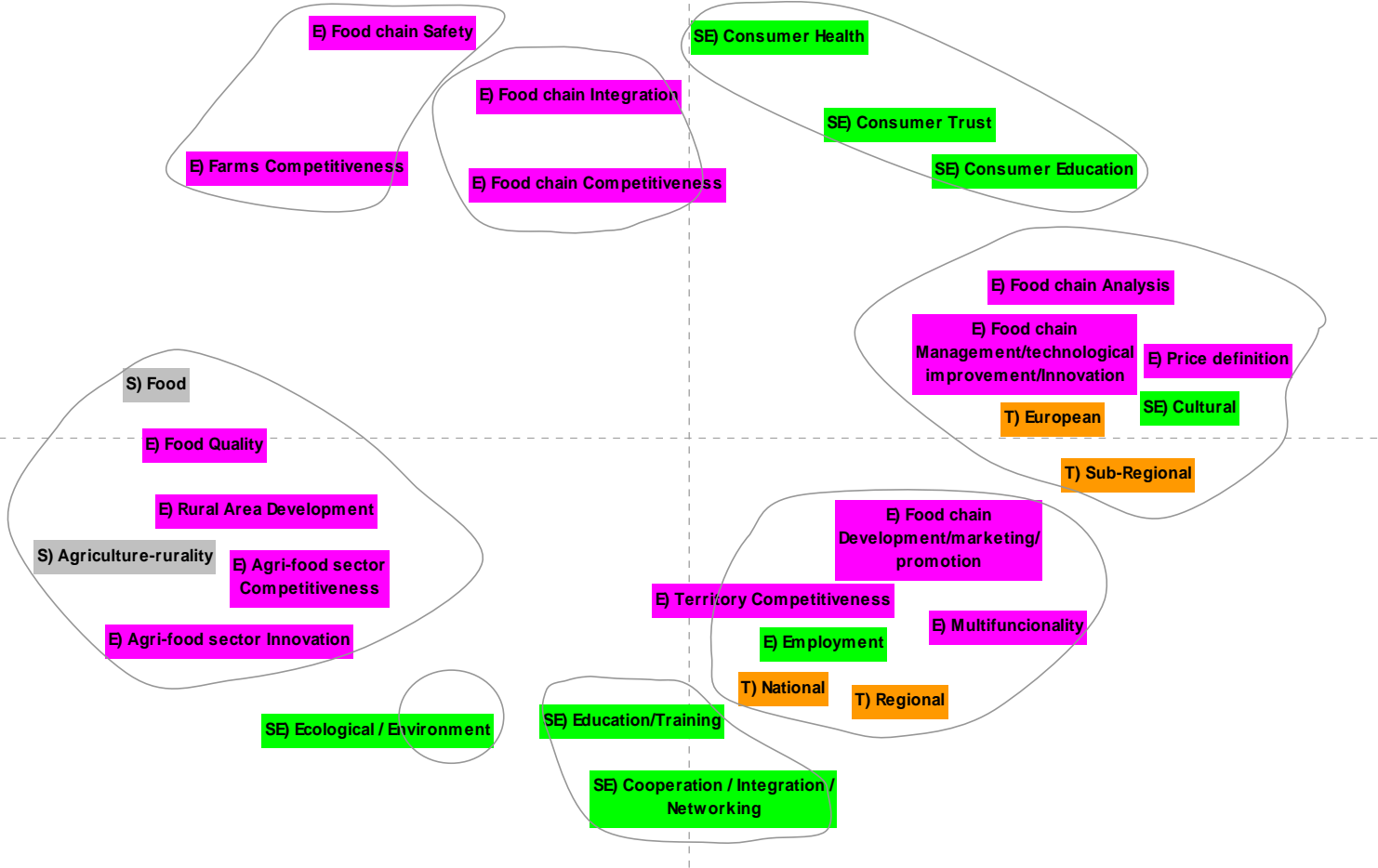


Fig. 5.7 – Perceptual map of food chain concept in EU-15 rural development programmes

Legend of attributes' colour: E = Economic; SE = Social/Environment; T = Territorial; S = Sector

The perceptual map developed shows that there is no clear predominance of one interpretation of food chain [Fig. 5.7]. Even though the concept in itself is acknowledged in all programming documents, it is used for achieving various aims. There are different clusters of attributes which show the spatial contiguity and conceptual proximity between attributes which focus the analytical exploration mainly towards the two main axes. As explained the map allows the researcher to identify correlated attributes by reporting them mutually closer; the more frequently they were mentioned together in the documents, the closer they will be.

The characterization of the two main axes of analysis represent the most evident analytical output. These can be interpreted as:

- The intensity and systemic/company interpretation of food chain concept adopted in the rural development programmes (horizontal axis); food chain concept goes from a

rural and agro-food systemic approach (left) to a concept and instrument for company management or strategy application (right);

- The socio-environmental dimension of the application of the food chain concept in rural development programmes (vertical axis); food chain is used as an instrument for achieving food safety and consumer health (top) or as a paradigm for environmental, territorial cooperation and networking (bottom).

The majority of attributes can be categorized within these two dichotomies, but others seem to be cross-cluster or not sufficiently associated with conceptual groupings. It is to be reminded that within the rural policy framework, food chain concept is still fairly recent and differently used so to better respond to the needs of the different EU rural contexts.

5. Final remarks

Food chain concept is increasingly adopted as a theoretical instrument for food and rural development policy. Over the last decades, public policy concerns over food safety and food quality identified in the food chain an instrument for defending human health and wellbeing. Many food and rural policy documents have witnessed the increasing importance of food safety and food quality as policy issue. It is widely agreed that in order to ensure the safety of food, it is necessary to consider all aspects of the food production chain, and therefore, it must impact many economic dimensions, agro-food and rural ones in primis.

The focus on food chain as safety instrument is slowly transforming into an overarching concept which expands beyond the prevention of potential health risks for citizens. It remains a way of governing and limiting negative impacts on public health due to uncontrolled or inadequate systems of production. However, it is assuming two complementary conceptual dimensions. On one side, it is a way of managing production relations among economic actors, of optimising the output of production, a necessity for complying with international standards of productions. On the other side, food chain is a new approach for analysing and then strengthening the capacity of farmers to create alliances with other actors in the chain, should they be within the same territory or beyond. Space seems to be strictly linked to the concept of food chain, but in both extremes, either as a way of denying the geographic territorialisation of production systems so to detect the current globalization processes of production; or as a way of identifying regional and local rural development strategies. This dual concept becomes clear when rural and clearly defined (short) food supply chains become a “brand” and therefore a strategy of competitive advantage for industries and retailers. Rural economy is permeating into wider regional, national and European economies.

When the food chain instrument is adopted there are recurrent conceptual declinations which come across food and rural policies. Besides the improvement of food safety and quality standards, it is widely used as instrument for agro-food competitiveness, improvement of management, territorial and rural development. However, the potential synergic effects hide a lack of a European common interpretation and clear acknowledgement of this strategic approach. Rural policy shows important investments in improving single farmers and companies’ conditions of work, but they are still not clearly food chain oriented. Only few rural development programmes foresee specific measures to promote agro-food chains.

Moreover, policy documents and regulations highlight food chain issues only partially if compared with private stakeholders and research bodies, as shown for example in the outputs of European Technology Platforms. At international level, there is an increasing attention on network and systemic relations in the agro-food sector and among the different actors of the chain, but the full strength of the food chain paradigm could be more widely exploited.

Finally, food chain interconnections with other socio-economic policy areas lead the discussion towards a rethinking of which sectors, what stakeholders, what time scales, what territorial levels should be taken in consideration in food and rural policy making and implementation. In order to foster the regional/local agro-food chains, it is essential that the measures foreseen for farm competitiveness will be able to coordinate themselves with those aimed to foster the spatial development. Food chain policy planning process ought to be extended to a number of socio-economic dimensions, sectors and stakeholders. An extended network should take into account landscape and architecture, territory and environment, urban planning and logistics, culture and entertainment, health and wellness, tourism and restaurants, social responsibility, education and training.

The possible integration of sectoral policies and the capacity of national level to co-ordinate the regional ones need further investigations.

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