
Support for Farmers' Cooperatives

*EU synthesis and
comparative
analysis report*
**Social and
Historical Aspects**

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Preface and acknowledgements

In order to foster the competitiveness of the food supply chain, the European Commission is committed to promote and facilitate the restructuring and consolidation of the agricultural sector by encouraging the creation of voluntary agricultural producer organisations. To support the policy making process DG Agriculture and Rural Development has launched a large study, "Support for Farmers' Cooperatives (SFC)", that will provide insights on successful cooperatives and producer organisations as well as on effective support measures for these organisations. These insights can be used by farmers themselves, in setting up and strengthening their collective organisation, and by the European Commission in its effort to encourage the creation of agricultural producer organisations in the EU.

Within the framework of the SFC-project this EU synthesis and comparative analysis report on Social and Historical Aspects has been written.

Data collection for this report has been done in the summer of 2011.

In addition to this report, the SFC-project has delivered 27 country reports, a report on policies for cooperatives in non-EU OECD countries, 8 sector reports, 5 other EU synthesis and comparative analysis reports, 33 case studies, a report on cluster analysis, and a final report.

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1. Introduction

1.1 Objective of the report

This report has been written in the framework of the EU-funded research project “Support for Farmers’ Cooperatives”. This project was commissioned by the European Commission DG Agriculture and Rural Development, and carried out in 2011 and 2012 by a large consortium of researchers from various European universities and research institutes. The main objective of the EU wide research project is to provide insights on successful cooperatives and producer organisations as well as on effective support measures for these organisations. These insights can be used by farmers themselves, in setting up and strengthening their collective organisation, and by the Commission in its effort to encourage the creation of agricultural producer organisations in the EU.

In the context of this research project, data have been collected in all of the 27 Member States of the European Union, on the evolution and development of agricultural cooperatives and producer organisations, but also on the policy measures and legal aspects that affect the performance of these organisations.

The present report provides an EU-level analysis of the historical, cultural and social aspects underlying the propensity of farmers’ to engage in cooperatives. It draws on the data from the country reports in the sense that we used information on cooperative membership and membership of producer organisations, as well as about the historical and institutional context. In addition, the work of Geert Hofstede and his colleagues on indicators for underlying cultural dimensions will be used, as well as data on trust, social networks and voluntary work from the Eurofound Survey on Living Conditions.

1.2 Analytical framework

This paper fits in the analytical framework about the determinants of the success of cooperatives and producer organisations in current food chains, that forms the basis of the EU study on ‘support for farmers’ cooperatives’. These determinants relate to (a) position in the food supply chain, (b) internal governance, and (c) the institutional environment. The position of the cooperative in the food supply chain refers to the competitiveness of the cooperative vis-à-vis its customers, such as processors, wholesalers and retailers. The internal governance refers to its decision-making processes, the role of the different governing bodies, and the allocation of control rights to the management (and the agency problems that goes with delegation of decision rights). The institutional environment refers to the social, cultural, political and legal context in which the cooperative is operating, and which may have a supporting or constraining effect on the performance of the cooperative. Those three factors constitute the three building blocks of the analytical framework applied in this study (Figure 1).

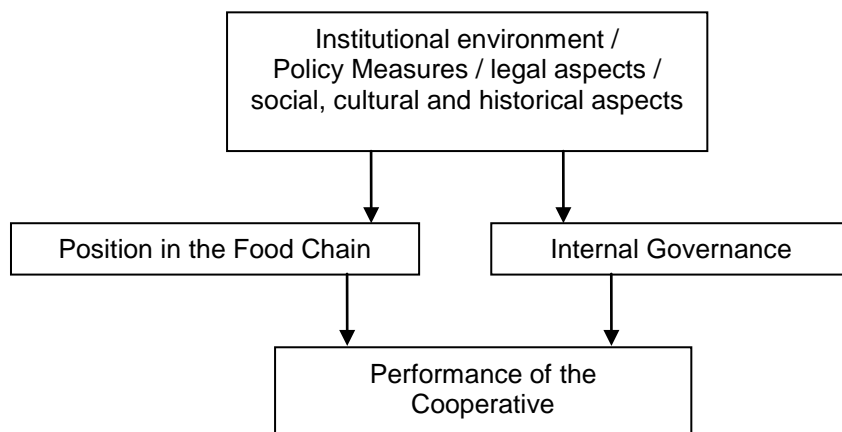


Figure 1. The core concepts of the study and their interrelatedness

1.3 Social, cultural and historical dimensions of the institutional environment

As the above image shows, one of the building blocks influencing the performance of cooperatives is its institutional environment. This environment in turn is composed of several dimensions, of which the legal framework and the myriad of policy measures that impact the functioning of cooperatives, are among those considered most important or influential. Nevertheless, the surrounding institutional environment is as much a result of factors of a less palpable, more diffuse nature. By these we refer to influences stemming from historical evolutions, or factors that are shaped by culture and social processes.

The research question we aim to answer in this report is how these more palpable historical, social and cultural dimensions are related to membership of agricultural cooperatives or producer organisations. How this research question is operationalised will be explained in Chapter 2.

1.4 Definition of the cooperative

In this study on cooperatives and policy measures we have used the following definition of cooperatives and Producer Organisations (POs). A cooperative/PO is an enterprise characterized by user-ownership, user-control and user-benefit:

- It is user-owned because the users of the services of the cooperative/PO also own the cooperative organisation; ownership means that the users are the main providers of the equity capital in the organisation;
- It is user-controlled because the users of the services of the cooperative/PO are also the ones that decide on the strategies and policies of the organisation;
- It is for user-benefit, because all the benefits of the cooperative are distributed to its users on the basis of their use; thus, individual benefit is in proportion to individual use.

This definition of cooperatives and POs (from now on shortened in the text as cooperatives) includes cooperatives of cooperatives and associations of producer organisation (often called federated or secondary cooperatives).

1.5 Period under study

The study on 'Support for cooperatives' covers the period from 2000 to 2010 and presents the most up-to-date information. This refers to both the factual data that has been collected and the literature that has been reviewed. For EU Member States that joined in 2004 and 2007 the focus is on the post-accession period. However, this paper which aims to provide background information on the historical, cultural and social aspects, inherently has a much wider time frame. The influence of communist regimes in Central and Eastern European countries on the propensity of farmers to cooperate cannot be underestimated and of course, the communist era as well as the transition after the fall of communism dates back before 2000. Likewise, 19th century crises have given way to the development of farmers' cooperatives in the first place. Even more longstanding are more underlying dimensions that are covered by the Hofstede indicators and that describe attitudes, norms and values, world orientations and the like. As Hofstede, Hofstede & Minkov (2010) argue, their roots go back to ancient times. With respect to these historical, cultural and social aspects, no new data are being collected. Existing data and insights from the literature are used to provide a contextual analysis.

1.6 Structure of the report

In the next section (2), we describe the literature upon which we base our analysis. Next, we describe the data and methods used (section 3), followed by a description of the results of our analysis (section 4). We end up with a discussion and conclusion (section 5).

2. Literature review

In this report, we will analyze the performance of cooperatives from a different perspective. First because 'performance' will not be measured through economic output indicators of turnover, profit, growth or market share, but because following Fulton (1999), we conceptualize performance as member involvement/commitment, which implies an input-oriented point of view. It will thus be operationalized in terms of membership. Moreover, this will not be measured at the level of the individual coop or PO, but at country level.

Secondly, our approach is different, because we will not look at economic variables affecting cooperative performance. Instead we will focus on social, cultural, historical dimensions that might affect the performance of cooperatives, i.c. the intensity of membership of farmers' cooperatives and producer organisations in a country.

Of course, these dimensions are not the sole factors that may influence the propensity of farmers to cooperate. There are many dimensions that bear on the performance of cooperatives in agriculture. On the one hand there are those aspects that have an immediate effect on cooperatives. Reference can be made to economic and fiscal (dis)incentives and public support measures, legal aspects or recent political or market changes (for example due to the movement of other actors in the food chain, accession to the European Union, food crises, etc.). These aspects will be dealt with in the other EU synthesis papers.

A fundamental reason for cooperation lies in the perceived need to cooperate in the eyes of the members, and in a certain level of cohesion between these members. Defourny and Develtere (2009) describe these two aspects as two necessary conditions for the establishment and the continued existence of a cooperative. This need might arise from market and government failures. A cooperative will only be able to cooperate if a certain level of cohesion exists between its members, which keeps them stimulated to put in extra efforts even when cooperating does not yield (immediate) major benefits. This factor refers to normative/ideological motives to cooperate, and the extent to which this balance is changed depends on macro-social and macro-economic variables (see Figure 1). However, other factors might influence the propensity of farmers to cooperate. Even in case a need is objectively present and even subjectively felt, it might be the case that historical, social and cultural factors make the cooperative model not available or eligible to farmers.

Any attempt to construct a general framework for explaining the current performance of cooperatives cannot be limited merely to legal institutional frameworks or the perceived need and cohesion among members, but should additionally incorporate elements of a more diffuse nature that may find their origin in a longer time frame. By these we refer to major historical transformations, but also to values, norms and attitudes, rules, habits and routines. Unconsciously, they influence the way we act, the things we are likely to do or not. Hence they also influence farmers' inclination to become member of a cooperative.

The argument for the recognition of social, cultural and historical aspects with respect to the establishment and viability of farmers' cooperatives is derived from the insights of economic institutionalism, historic institutionalism and sociological institutionalism (see e.g. DiMaggio & Powell, 1994; Finnemore, 1996; Greenwood & Hinings, 1996; Meyer & Rowan, 1977; Scott, 1987; 2008).

2.1 Institutionalism

In economic institutionalism, historic institutionalism and sociological institutionalism. In these approaches institutions are seen as important formal and informal rules that govern interactions. They are grounded in history (past experiences, traditions, customs, conventions), in efforts to use scarce resources efficiently, and in norms and values governing roles and situations (see e.g. DiMaggio & Powell, 1994; Finnemore, 1996; Greenwood & Hinings, 1996; Meyer & Rowan, 1977; Scott, 1987, 2008).

It is recognized that different levels in a hierarchy of rules or cultural levels exist. At the top of the hierarchy individual behavior is situated, governed by rules that might be changed more quickly, whereas at the bottom culture and custom are situated, which change only slowly. New rules might first affect informal interactions. Next, formal contracts will be affected. In case a large number of actors must be implied legislation might be set up or changed. If the rule proves to be continuously fruitful, it becomes part of cumulative history and culture. New rules might be needed when new goods are introduced (e.g. genetically modified food) or might be introduced when contexts change (e.g. new membership of EU). New rules will be accepted easier when they are based on a previously known rule. If old rules are abandoned before new ones are put in place, this might lead to less desirable rules governing transactions leading to less desirable results. The introduction of new rules might lead to different outcomes in different contexts according to the prevailing fundamental rule structure. Therefore, understanding the rule structure is important in case one wants to analyze different kinds of performance in different structures as well as the introduction of new arrangements (Ollila, 2005).

If the question is posed whether regulations that aim to stimulate the development of farmers' cooperatives and producer organisations indeed (will) lead to more cooperation among farmers in these types of organizations, it is useful to take into account the existing rule structures as embodied by the existing legal frameworks (this will be taken care of in the report on legal issues, by Van der Sangen, 2011), as well as the more fundamental rule structures found in values, norms, customs, by 'institutions' in brief. In this paper we will try to shed light on these underlying properties. In order to do so, we look at three different dimensions that, from the literature, might be found to influence the propensity of farmers to cooperate:

- 1) Research on transition societies.
- 2) Social capital theory
- 3) Hofstede indicators on 'the software of the mind', i.e. patterns of thinking, feeling and acting that are found to be different among national cultures (Hofstede 1991, 1994, 2001; Hofstede, Hofstede & Minkov, 2010).

2.2 Transition societies

Although most member states of the European Union have a long, deep-rooted tradition of cooperative entrepreneurship, and saw the development of the first cooperatives in the 19th century, communism destroyed the liberal-democratic cooperative model.¹ In the transition period after the fall of communism this liberal-democratic cooperative model was not fully rediscovered and restored. Putnam (1993) mentions a strong correlation between time of dictatorship and destruction of trust and cooperation. He argues that in post communist countries, there is a widespread tendency toward passive reliance on the state. Also Fukuyama

¹ In his book, "The search for community. From Utopia to cooperative society", George Melnyk (1990) makes a distinction between four cooperative traditions: the liberal-democratic, the communist, the socialist and the communalist tradition.

(1995) argues that in communist societies there was no room for entrepreneurship, experiments, and voluntary organisation. In an introduction to a reader of studies on trends and challenges for cooperatives in Europe, including former communist European member states, Borzaga & Spear (2004) state that positive co-operative experiences in a number of sectors (credit, housing, as well as agriculture) provide evidence of the capacity of cooperatives to replace poorly functioning markets, also in Central and Eastern Europe. However, in many post communist countries an initial boom of co-operative development (mainly due to the way the privatisation process was carried out), is followed by a deep crisis of the cooperative model. In those countries, co-operatives today have unexpressed potentials, largely underestimated as compared to other organisational models (both capitalistic companies - generally preferred in the transformation of state enterprises - and not-for-profit organisations like foundations) (Borzaga & Spear, 2004). As Lissowska (2012) states these countries all went through a long period in which the development of horizontal relations was weak, stifled by ideological paternalism and administrative control. Cooperation existed but was limited to the inner circle of family, close friends and colleagues at work. During the transition period the focus was on the protection of individual entrepreneurship, boosted by a 'propaganda of individual success', at the expense of collective interest and cooperation (Lissowska, 2012).

Of course, different political and economical trajectories can be discerned in different transition societies. A consolidated democracy and market economy can be observed in about one third of the former communist countries, in about a dozen countries democracy and market economy are still unconsolidated, whereas an authoritarian regime and consolidated statist economies can be perceived in the rest of the post communist countries. The impact of communism is argued to be less perseverant in countries where communist regimes were imposed on nations or regions that were civic and democratic culture existed before than on nations where communism was merely another form of their 'natural' or 'detrimental' path. Also, after Stalin, satellite communist countries were allowed to build their own form of communism and some (like Poland or Hungary) applied the most 'liberal' or least repressive variants of communism, whereas others (like Romania) were much more orthodox in their variant of communism. In (former) Czechoslovakia liberal reforms were repressed with the Soviet military intervention in 1968. The paths former communist countries took after the fall of communism are found to be contingent with different actors playing a decisive role, albeit also path dependent, that is constraint in their choices by their legacies. The literature on this topic is still very much in evolution and discussions about the extent of path dependency are not yet fully settled (Bågenholm, 2005).

In this paper we will look at the intensity of farmer cooperatives and producer organisations in member states of the European Union and see whether systematic differences between former communist and other member states, as well as among former communist member states can be found.

2.3 Social capital theory

A key sociological factor that is found to underlie differences between former communist countries and other countries of the European Union is a deficit of cooperative attitudes and trust in former communist countries (Lissowska, 2012). A stream of literature that has much to say about facilitating cooperation, networks of relationships, and trust is the literature on 'social capital'. In economics 'social capital' is increasingly recognized and studied as an important factor for economic performance (van Schaik, 2002).

Paldam & Svendsen (2002) found a diminished level of social capital in former communist countries. Chloupkova, Svendsen & Svendsen (2003) demonstrate that in Poland the level of social capital is significantly lower than in Denmark, though both countries went through a lengthy process of social capital formation in the 19th century. They argue that the social capital

that was built up in Poland, was destroyed by the communist regime. Chloupkova, Svendsen & Svendsen (2003) take voluntary agricultural cooperatives as a proxy of social capital, pinpointing to the network component of social capital. Other studies confirm the low present level of cooperative entrepreneurship in post communist and post socialist EU member states, despite long and firm traditions of cooperativism before the introduction of communism (Borzaga & Spear, 2004; Leś, 2014; Kolin, 2004; Hunčova, 2004; Jeliaskova, 2004; Otsing, 2004; Bubnys & Kaupelyte, 2004; Szabó & Kiss, 2004).

In describing these studies, two components of social capital have been touched upon. Social capital is generally defined as the trinity of 'networks, norms of reciprocity and trust'. James Coleman (1988) defines social capital as "a variety of entities with two elements in common: they all consist of some aspect of social structure, and they facilitate certain actions of actors (...) within the structure". It refers to anything that facilitates individual or collective action, generated by networks of relationships, reciprocity, trust, and social norms. According to Coleman, trust and norms of reciprocity emanate from networks of relationships. Robert Putnam (2000) states that social capital refers to "the collective value of all 'social networks' and the inclinations that arise from these networks to do things for each other."

Narayan and Pritchett (1997) argue that social capital|:

- improves society's ability to monitor the performance of government, either because government officials are more embedded in the social network or because monitoring the public provision of services is a public good;
- increases possibilities for co-operative action in solving problems with a local common property element;
- facilitates the diffusion of innovations by increasing inter-linkages among individuals;
- reduces information imperfections and expand the range of enforcement mechanisms, thereby increasing transactions in output, credit, land and labour markets;
- increases informal insurance (or informal safety nets) between households, thereby allowing households to pursue higher returns, but more risky, activities and production techniques.

However, the complex concept of social capital, and especially its measurement, is much discussed in social sciences. A certain circularity can be discerned: through social networks trust is developed, but trust is also needed in order to engage in networks. Likewise, the existence of social capital is often inferred from outcomes that are supposed to be the result of its existence. Moreover, social networks are not merely a positive thing: social networks can also have negative aspects (exclusion of outsiders, objectives that are negative to others, restriction of individual freedom and autonomy). Furthermore, the measurement of social capital is still in its infancy. Often highly aggregated and undifferentiated proxy measures are used, or the concept is reduced to one of its components. And last but not least, measuring patterns of social interaction across nations or cultures is complex. Causal explanation is hampered by these measurement problems, but also by the complexity of the concept in itself (Fahey, Nolan & Whelan, 2003).

In this paper we will therefore stick to an analysis of separate components of social capital and stick to description. First, we will look at the relationship between trust and the intensity of membership of a farmers' cooperative or producer organisation. We will look at general trust (trust in other people), as well as trust in political institutions. Secondly, we will look at the relationship between voluntary work and the intensity of membership of farmers' cooperatives and producer organisations. Since a prerequisite for trust is found to be a general feeling of satisfaction with life, we will also look at the relationship between the degree of satisfaction with life and the intensity of membership of farmers' cooperatives and producer organisations.

We will use data on membership intensity drawn from the country reports and data on the social capital components drawn from Eurofound's Monitoring Living Conditions and Quality of Life in Europe (the 'Eurofound-survey' in short) which encompasses data for all EU member states on these topics.

2.4 Hofstede indicators

As Hofstede e.a. have pointed out (2010), based on a large scale and long term study of national and organisational cultures, deeply rooted cultural values remain relatively unaltered by modernization or, to the extent that changes occur, these occur across all countries (such that there won't be any change between countries).

Hofstede played a pioneering role in developing a systematic framework for the assessment and analysis of differences among national and organisational cultures. His work shows that national and regional cultures influence behaviour of societies and organisations and that these influences are persistent over time. In subsequent and worldwide surveys, Hofstede found systematic differences between nations in particular for questions dealing with values, this is "broad preferences for one state of affairs over others", and they are mostly unconscious. The values that distinguished countries (rather than individuals) from each other appeared to group themselves statistically into four clusters, referring to four anthropological problem areas that different national societies handle differently: ways of coping with inequality (refers to the dimension of Power Distance), ways of coping with uncertainty (refers to the Uncertainty Avoidance Index), the relationship of the individual with her or his primary group (Individualism versus Collectivism), and the emotional implications of having been born as a girl or as a boy (Masculinity versus Femininity). Research by Michael Bond and colleagues paved the way to add a fifth dimension called Long- versus Short-Term Orientation. A sixth dimension, called Indulgences versus Restraint, is based on Minkov's analysis of the World Values Survey data.

Therefore, six national cultural dimensions can be distinguished (Hofstede, Hofstede & Minkov, 2010; see also www.geerthofstede.nl) for which scores are listed for 76 countries:

- **Power Distance:** "the extent to which the less powerful members of institutions and organizations within a country expect and accept that power is distributed unequally,"
- **Uncertainty Avoidance:** "the extent to which the members of a culture feel threatened by uncertain or unknown situations,"
- **Individualism** (versus Collectivism): "Individualism stands for a society in which the ties between individuals are loose: everyone is expected to look after him/herself and her/his immediate family only. Collectivism stands for a society in which people from birth onwards are integrated into strong, cohesive in-groups, which throughout people's lifetime continue to protect them in exchange for unquestioning loyalty,"
- **Masculinity** (versus Femininity): "Masculinity stands for a society in which social gender roles are clearly distinct: men are supposed to be assertive, tough, and focused on material success; woman are supposed to be more modest, tender, and concerned with the quality of life. Femininity stands for a society in which social gender roles overlap: both men and woman are supposed to be modest, tender, and concerned with the quality of life,"
- **Long Term Orientation** (versus Short Term Orientation): Long Term Orientation stands for the fostering of virtues oriented towards future rewards, in particular, perseverance and thrift. Its opposite pole, Short Term Orientation, stands for the fostering of virtues related to the past and present, in particular, respect for tradition, preservation of 'face' and fulfilling social obligations."
- **Indulgence** (versus Restraint): "Indulgence stands for a society that allows relatively free gratification of basic and natural human drives related to enjoying life and having

fun. Restraint stands for a society that suppresses gratification of needs and regulates it by means of strict social norms.”

We will take recourse to the Hofstede indicators to gauge the presence of ideological motives of the members to cooperate. It is claimed that cooperatives that can rely on substantive normative commitment of the members will prove more robust and performative than those which base their actions solely on pragmatic grounds (see for example: Fulton, 1999; Galle, 2010).

There is no determinism in this, in the sense that it is recognized that a person’s behaviour is only partially determined by his or her mental software. Every person has the basic ability to deviate from it and act in creative, innovative, destructive or unexpected ways. However, the ‘software of the mind’ indicates what actions are likely and understandable in virtue of general patterns of thinking, feeling and acting that seem to be characteristic in certain countries or regions (Hofstede, Hofstede & Minkov, 2010).

The various analyses by Hofstede and collaborators (2001, 2005, 2010) already depict scenarios of what we might expect from the various indexes with regard to the implications for our dependent variable:

- A low **PDI** will lead to less hierarchical organisations, more public involvement in politics, organisational performance will be higher when leadership is embedded in a culture of consultancy with others. As the core property of cooperatives is the democratic decision making structure and actual involvement of members in decisions about which course to steer, it is likely that in countries with a low PDI the cooperative model will be more readily embraced than in countries with a high PDI. Therefore, we might expect more cooperative membership in countries with a low PDI than in countries with a high PDI.
- **UAI** bears on the citizens’ likelihood to organize themselves for their own or their society’s benefit or a greater willingness to venture into unknown territories (if UAI is low). Since cooperatives are economic self organisations, demanding a high personal responsibility and engagement, it is likely that higher cooperative membership rates will be found in countries with a low UAI than in countries with a high UAI. On the contrary, it may as well be argued that in countries with a high UAI a higher inclination toward cooperative membership may be found, since cooperatives intend to lower risks and provide farmers with greater security of sale and less volatile income through market activities.
- **IDV** implies a higher in-group solidarity, while a high score correlates with pluralist societies with atomized individuals. Since in-group solidarity is a prerequisite for cooperatives, it is likely that higher cooperative membership rates will be found in countries with a low IDV than in countries with a high IDV.
- A low **MAS** implies that solidarity, care for the quality of life and participation in voluntary organisations are equally shared by men and women. In a high MAS society, these are typically important roles for women, men being more focused on material success. One could argue that since cooperatives are based upon solidarity and voluntary involvement, they are more likely to attract more (persistent) members in societies with a low MAS. Cooperatives may be highly attractive in societies with a high MAS as long as they realize indisputable benefits, but in times where the cooperative benefit is not that clear, membership may more easily fall in societies with a high MAS than in societies with a low MAS.
- The orientation on future rewards in high LTO societies may correlate positively with cooperative membership, since cooperatives are inherently striving for future rewards rather than short term profits. However, a high LTO score also seems to imply that citizens are less likely to be mobilized for social issues and invest in real estate sooner than mutual funds. This seems to counteract cooperative behavior.

- In high IvR countries citizens seem to be more confident of their own competences, and perceive they are in control of their life, and the nation's institutional fabric is looser. This kind of citizens are more likely to turn to cooperative entrepreneurship as a form of self-help, self-responsibility, self-control. Moreover, they may feel supported by a more liberal, less strict and restricting legal framework for self-organisation and cooperative entrepreneurship.

The indexes are constructed on the basis of a 34-item paper-and-pencil survey with 4 questions covering each dimension, complemented by questions inquiring about the usual standard demographic information (questionnaire obtainable at www.geerthofstede.nl). All content questions are scored on five-point scales. Index scores are derived from the mean scores on the questions for national samples of respondents. Scores can be easily computed on the basis of simple formulas.

These indicators are available for all EU member states but one: Cyprus. However, as no country report on Cyprus was available, compounded by serious methodological issues regarding how to construct index scores ourselves, we have omitted Cyprus from this research line altogether.

3. Data and methods

3.1 Data collection

This EU level synthesis report is partly based on data collected in the Spring of 2011 in 27 EU Member States (by an expert on cooperatives in each of the Member States). In collecting these data, multiple sources of information have been used, such as databases, interviews, corporate documents, academic and trade journal articles. The databases used are Amadeus, FADN, Eurostat and a database from DG Agri on the producer organisations in the fruit and vegetable sector. Also data provided by Copa-Cogeca has been used. In addition, information on individual cooperatives has been collected by studying annual reports, other corporate publications and websites. Interviews have been conducted with representatives of national associations of cooperatives, managers and board members of individual cooperatives, and academic or professional experts on cooperatives.

In addition we used data from the Eurofound survey on 'Living Conditions and Quality of Life in Europe' and the Hofstede indicators, readily available online (www.geerthofstede.nl).

3.2 Data analysis

The country reports written in an earlier phase of this research project contain a wealth of information. We kept a specific focus on multiple dimensions when processing this information. The various issues we zoomed in on of course derive from our angle on the overall subject. We therefore looked for information pertaining to historical influences and for facts that bear on the intensity of membership of farmer's cooperatives and producer organisations in a country. We stick to the country level, since the data we confront the data on the intensity of coop and PO membership with are also measured at country level and do not allow for an analysis at the level of regions or sectors.

3.2.1 Constructing the dependent variable: membership intensity

As argued in the previous chapter, we operationalised the issue of *cooperative performance* as the propensity to cooperate, measured in terms of the intensity of membership of farmers' cooperatives and producer organisations. Based on the information in the country reports, we constructed a score, per country, of this intensity of cooperative and PO membership.

Ideally we would make use of information on the number of members of agricultural cooperatives, which could then be set out against the number of agricultural holdings² to construct an indicator of this intensity. After calculating this ratio for all countries, we could then award each country with a score, on a scale of one to five. However, as the country reports were not congruent, and therefore did not systematically contain the required information, we could not uniformly calculate this percentage for all 27 EU member states. Some of the country reports allowed us to construct this proxy easily, while others were not as specific on these issues. In some cases, hard data on membership intensity was available, yet only for a segment of the agricultural sector. In other cases, the year for which farmer membership was calculated differed from the referential year 2007 for which the number of agricultural cooperatives and PO's was calculated. In both cases, this could have led to an underestimation of membership intensity, as farmer membership of coops and PO's can be higher for the entire agricultural sector than that for only a part of the sector and the number of agricultural cooperatives and PO's is expected to be lower as time proceeds due to the general trend of intensification.

²Available at Eurostat.

As a response to this data liability we gathered more qualitative information on cooperative membership and performance from the country reports. In particular for those countries where the score could not be calculated based on hard statistical data, we scanned the country reports for information (even remotely) related to cooperative performance and proliferation. We thus have estimated a score, aiming for as close an approximation as possible to the score it would have been ascribed had the information been at hand. For this estimation we used descriptions and interpretations by the national experts of the current state and recent evolution of the cooperative sector in agriculture more broadly.

The scores on the membership intensity index as well as the information upon which they were calculated can be found in Appendix 1.

3.2.2 Gathering independent variables on the social and cultural dimensions

For the social dimension, indicators deriving from the literature on social capital were included. More specifically, the retained indicators were: general trust, trust in political institutions, participation in voluntary organizations, degree of engagement in voluntary work, and life satisfaction.³ Additionally, the *Hofstede indicators* that are readily available for all countries but Cyprus were consulted. These indicators will be applied as indicators of national culture on membership intensity. They were downloaded from www.geerthofstede.nl.

All indicators were then correlated to membership intensity, using a bivariate two-way correlation resulting in a significance test with the Pearson coefficient. Given the differences observed between former communist EU member states and other member states of the European Union, we controlled the relationship between the respective variables for this factor in a multiple regression analysis.

3.2.3 Gathering information on the historical dimension

The third pillar of our analysis concerns the study of a country's historical tradition and its influences on agricultural cooperatives. Information on this issue was collected in the country reports. Throughout the reports, mention was made of the tradition and history of the cooperative movement. We collected this information for each country, after which we could assess pan-European trends and attribute the perceived differences in membership intensity to historical influences, complementing the analysis of the social and cultural dimensions. Therefore, whenever the historical perspective is useful for understanding, or framing, some of the exposed relations between membership intensity and the social and/or cultural influences, this pillar of the analysis will be included. The information from the country reports was complemented with insights from the literature on transition countries.

Of course, even if we succeed in fully framing the cultural, social and historical dimensions of current membership intensity, we will not be able to fully explain the observed realities. Trends in membership cannot be exclusively accounted for by these dimensions, but are the result from an interactive play including other influences as well, such as the political and legal framework or context. However, for a discussion of these dimensions, we refer to the other EU synthesis reports, in which these aspects will be discussed in detail.

³These statistics were available from various publications, based on the Eurofound Quality of Life survey.

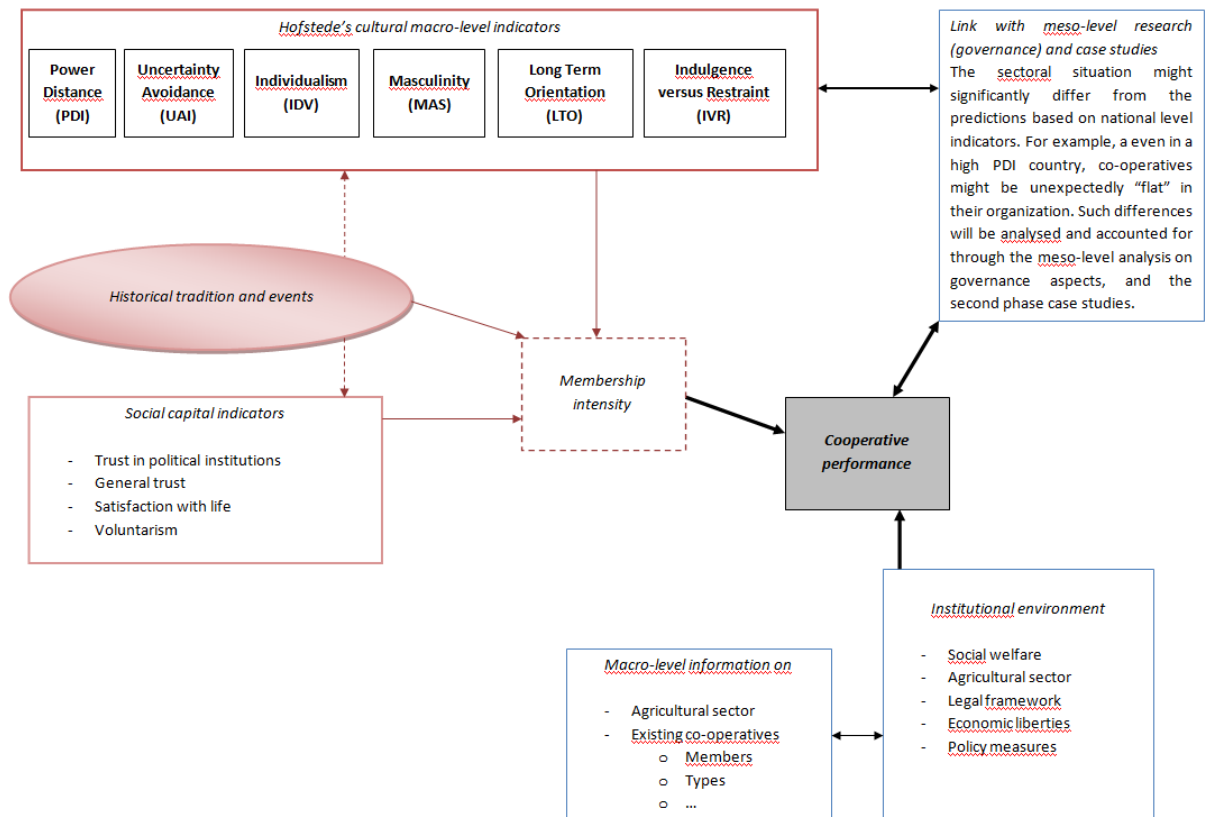


Figure 2: Methodological model (red borders mark our focus, blue borders indicate other dimensions taken care of by other methodological experts)

4. Results

In this paragraph we will present a detailed overview of the results of the statistical analysis. At all times, these results will be related to membership intensity, and a discussion will be held on the various possible explanations for the recorded (absence of a) relation.

4.1 Membership intensity

Figure 3 gives a graphic illustration of the membership intensity per country in the European Union. The map shows a clear clustering of countries according to membership intensity. One can clearly note that those countries within categories one and two nearly all (with the exception of Luxembourg) fall under the nomination “CEEC” (*central and east European country*). When searching for possible explanations, the influence of communism instantly suggests itself. This is backed by the country reports, in which, to various extent, communism was assessed to have had a detrimental effect on the public image and principles of farmer cooperatives. The effects of communism clearly linger on long after its demise.



Figure 3: membership intensity per EU member state

The difference between CEECs and other member states is completely in line with the literature on transition societies (Bubnys & Kaupelyte, 2004; Borzaga & Spear, 2004; Chloupkova, Svendsen & Svendsen, 2003; Gardner & Lerman, 2006; Hunčova, 2004; Jeliaskova, 2004; Kolin, 2004; Leś, 2004; Lissowska, 2012; Otsing, 2004; Szabó & Kiss, 2004; Uslander, 2008). Initial revivals of cooperative entrepreneurship in agriculture have been followed by serious declines in membership of farmers' cooperatives (especially of production cooperatives that were

originally established during the privatization of agriculture after the fall of communism). Even in countries with a strong cooperative movement before communism was imposed, nowadays this cooperative movement has not fully recovered yet (Bubnys & Kaupelyte, 2004; Borzaga & Spear, 2004; Chloupkova, Svendsen & Svendsen, 2003; Gardner & Lerman, 2006; Hunčova, 2004; Jeliaskova, 2004; Kolin, 2004; Leś, 2004; Lissowska, 2012; Otsing, 2004; Szabó & Kiss, 2004). Indeed, the majority of all European country reports have tracked the cooperative movement in their country back to the middle of the 19th century, where it had emerged as a response to various challenges both external and internal to agriculture. Frequently mentioned are the agricultural (food) crises, migration issues after WWII to which political leaders responded by focusing on cooperatives, the surge of nationalism and the search for a national identity (consequently found in the cooperative idea), fertile soil in the form of earlier mutual aid arrangements in rural communities which were culturally embedded, a deeply engrained mentality of decentralised responsibility.

In this respect the observation of Lissowska (2012) on the basis of data of the World Value Study, that the preference for cooperation in transition countries is close to that of the other European countries, is very interesting. Actual membership rates might be low, but this does not mean that cooperation is rejected as a way of acting. It might be the cooperative model that is rejected, not the principle or value of cooperation. During communism the model was distorted, its rules, norms and regulations changed to fit into the communist ideology and totalitarian regime. During the transition period the model is clearly underestimated as compared to other organisational models (both capitalistic companies - generally preferred in the transformation of state enterprises - and not-for-profit organisations like foundations) (Borzaga & Spear, 2004). During the transition period the focus initially was on the protection of individual entrepreneurship, boosted by a 'propaganda of individual success', at the expense of collective interest and cooperation (Lissowska, 2012).

Among the CEEC's, differences can be found in membership intensity of farmer's cooperatives and producer organisations between Poland, Czech Republic and Slovenia where coop and PO membership intensity is scored '2', compared to 1 in the other former communist member states. This is in line with the literature on transition countries in which it was mentioned that these countries had adopted (Poland) or had undertaken attempts to adopt (in the former republic of Czechoslovakia) a more liberal form of communism (Bågenholm, 2005; Gardner & Lerman, 2006). Based on the literature, we would also have expected that Hungary and Slovakia would find itself on a higher level of cooperative membership, but this was not confirmed in the national reports on Hungary and Slovakia.

The overall difference between post communist and other member states, as well as between Poland - Czech Republic - Slovenia and the other former communist countries will re-emerge in the correlations between membership intensity the variables related to social capital as well as the Hofstede indicators on national cultures.

4.2 Social capital and membership intensity

The indicators used to approach the degree of social capital in a country are: general trust, trust in political institutions and in important societal institutions such as the social benefit system, degree of engagement in voluntary work, and life satisfaction.⁴ We do not include an analysis of membership of voluntary organisations, since with the exception of Sweden, The Netherlands, and Denmark, the Eurofound-data show a rather similar pattern of voluntary organisation membership in the European member states. Therefore the discriminatory value of this variable is nihil.

⁴These statistics were available from various publications, based on the Eurofound Quality of Life survey.

4.2.1 General trust

The correlation between the intensity of membership of farmers' cooperatives and producer organisations and general trust (operationalised as "trust in people", on a scale from one to ten) is visible Figure 4. Data on general trust (national average) has been gathered from the First European Quality of Life Survey (2004)⁵.

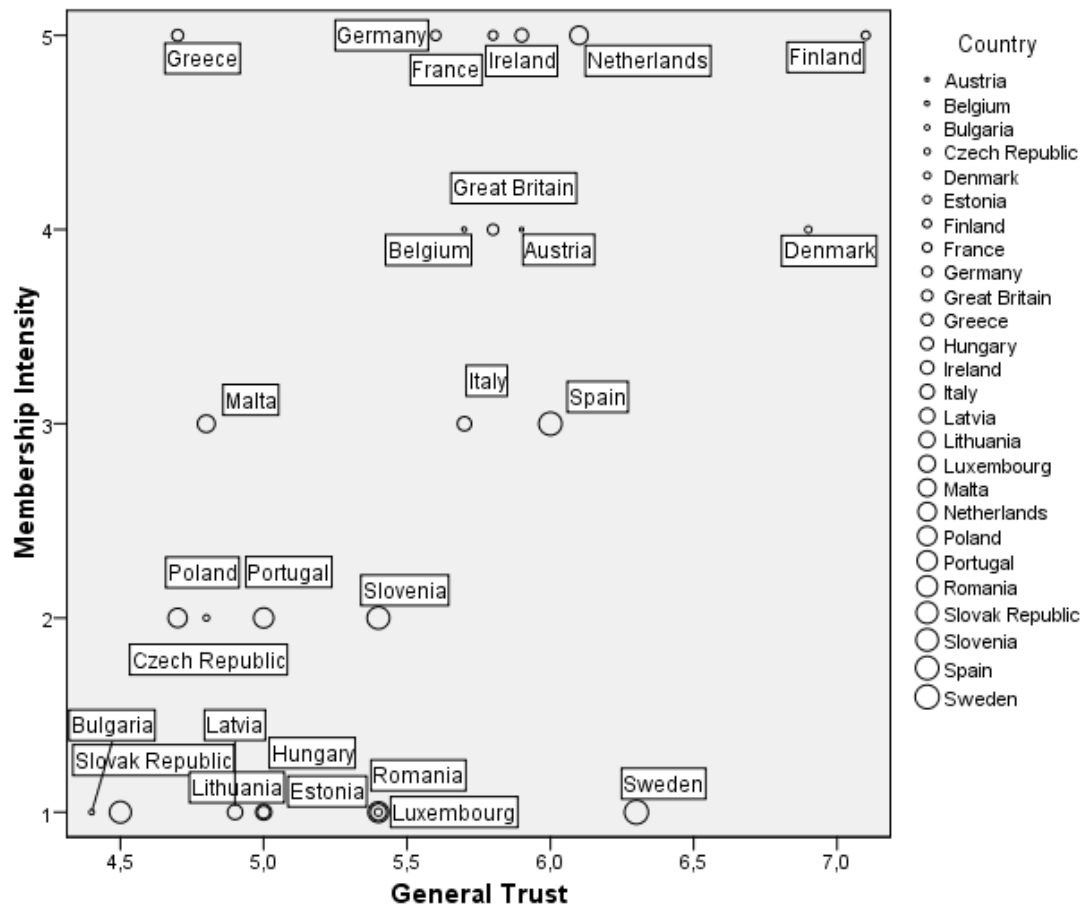


Figure 4: general trust vs. membership intensity

A significant correlation (.532) was discovered ($\alpha=0.01$, $N=26$). The same result is found when we restrict the analysis to those countries for which we have been able to create the membership intensity score based on actual membership figures. This is not unexpected. From the literature on social capital, we know that trust is both a condition for (Uslaner, 2008) and a consequence of (Chloupkova, Svendsen & Svendsen, 2003; Coleman, 1988; Fukuyama, 2000; Putnam, 1993, 2000) cooperation and involvement in networks. Chloupkova, Svendsen & Svendsen (2003) as well as Lissowska (2012) and Uslaner (2008) found a lower level of general trust (trust in other people) in transition countries. This is confirmed by our data. If we take into account the distinction between CEEC's and other EU member states, the correlation between the two variables becomes insignificant. A separate regression analysis for those member states

⁵European Foundation for the improvement of Living and Working Conditions (2004). *First European Quality of Life Survey: Quality of Life in Europe 2003*. Luxembourg: Office for Official Publications of the European Communities. [22.10.2011: Eurofound: <http://www.eurofound.europa.eu/pubdocs/2004/105/en/1/ef04105en.pdf>]

that have not experienced a communist/socialist regime indeed shows no significant correlation between general trust and membership intensity (see Appendix 2).

This points to the extreme effects of the experiences during totalitarian communist/socialist regimes and the hard yet incomplete transition afterwards on the trust that people have in each other and on the propensity to cooperate, especially with people beyond the inner circle. For an interesting elaboration on this, see Lissowska (2012).

4.2.2 Trust in political institutions

Another component of social capital is trust in institutions (Paxton, 1999; Van Schaik, 2002). Often this is operationalised as trust in political institutions. The correlation between membership intensity and trust in political institutions (measured on a scale from one to ten) is illustrated by Figure 5. Data on trust in political institutions (national average) has been gathered from the Second European Quality of Life Survey (2009)⁶.

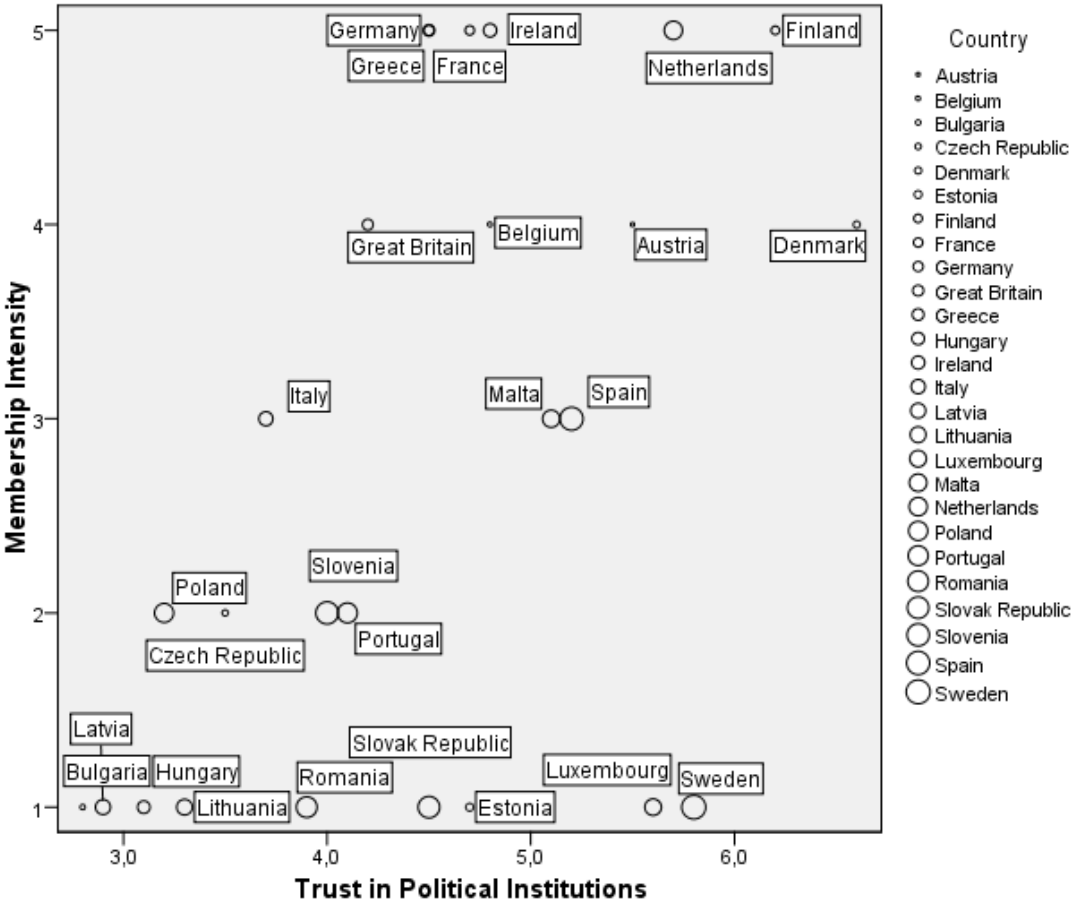


Figure 5: Trust in political institutions vs. membership intensity

A significant correlation (.494) is observed ($\alpha=.05$, N=26). Trust in political institutions (parliament and civil service) is said to be not only of major importance for the stability of

⁶European Foundation for the improvement of Living and Working Conditions (2009). *Second European Quality of Life Survey: Overview*. Luxembourg: Office for Official Publications of the European Communities. [22.10.2011: Eurofound: <http://www.eurofound.europa.eu/pubdocs/2009/02/en/2/EF0902EN.pdf>]

societies and for the functioning of democracy, but also for people's willingness to cooperate in achieving collective goals and finance public goods (Meikle-Yaw, 2006). It is argued that high trust levels not only signal that institutions are working effectively, thus reducing the chance that non-democratic forms of government will receive support, but a high level of trust in political institutions also facilitates social and economic exchange and reduces transaction costs in markets. Trust is said to reduce the need for control and supervision, which saves money for government as well as for firms and other actors in the private sector (Listhaugh & Ringdal, 2007).

Again a remarkably lower level of trust in political institutions comes to the fore in a number of CEEC's (Bulgaria, Latvia, Hungary, Lithuania, Poland, Czech Republic), compared to other EU member states.

If we take into account the distinction between CEEC's and other EU member states, the correlation between the two variables becomes insignificant. A separate regression analysis for those member states that have not experienced a communist/socialist regime indeed shows no significant correlation between trust in political institutions and membership intensity (see Appendix 2).

4.2.3 Life satisfaction

The correlation between membership intensity and the life satisfaction (measured on a scale from one to ten) is graphically illustrated in Figure 6. Data on the degree of life satisfaction (national average) has been gathered from the Second European Quality of Life Survey (2009)⁷.

⁷European Foundation for the improvement of Living and Working Conditions (2009). *Second European Quality of Life Survey: Overview*. Luxembourg: Office for Official Publications of the European Communities. [22.10.2011: Eurofound: <http://www.eurofound.europa.eu/pubdocs/2009/02/en/2/EF0902EN.pdf>]

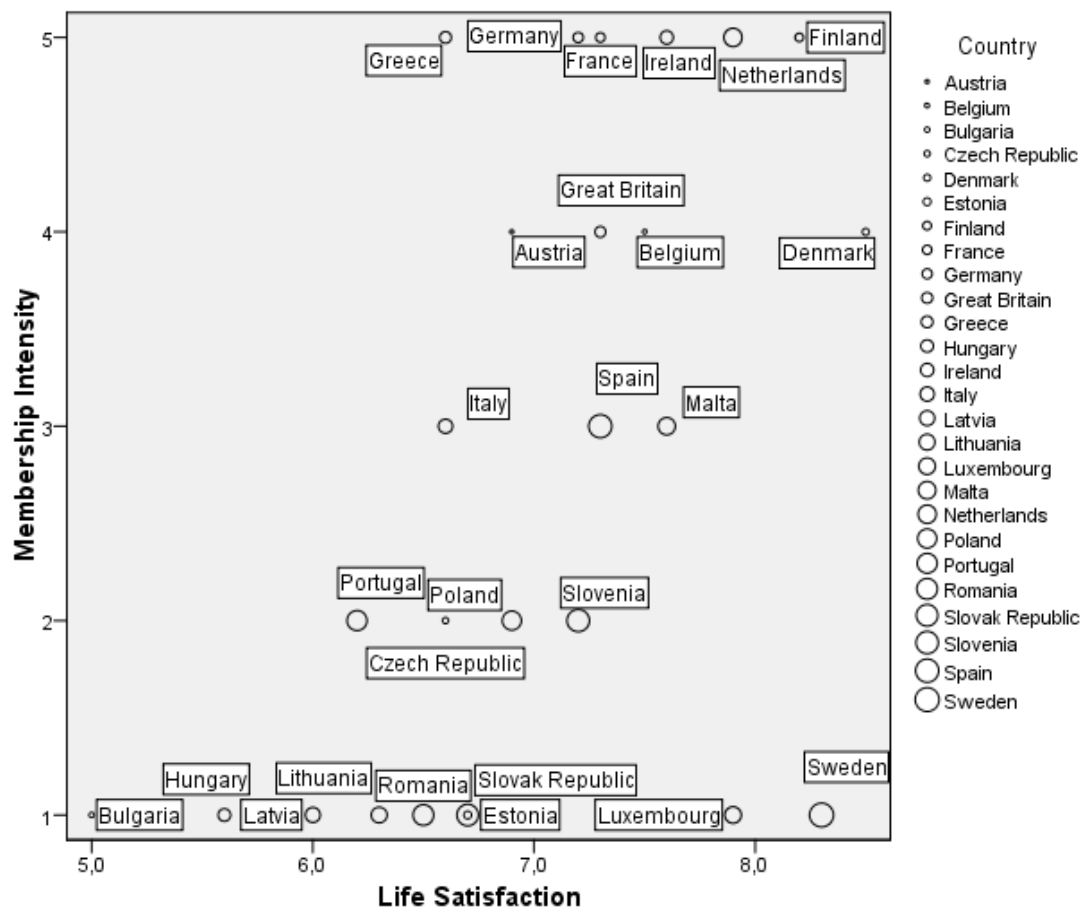


Figure 6: Life satisfaction vs. membership intensity

One can discern a significant relationship between membership intensity and life satisfaction ($\alpha=0.01$, Pearson: .500, $N=26$). General satisfaction with life is supposed to play a decisive role in general trust (trust in other people), just like other personal characteristics such as feeling of security, frequency of higher education (Uslaner, 2008).

In line with Lissowska's (2012) analysis based on data of the World Values Study, we find that a number of CEEC's (notably Bulgaria, Hungary, Latvia, Lithuania) score much below the other EU member states. If we take into account the distinction between CEEC's and other EU member states, the correlation between the two variables becomes insignificant. A separate regression analysis for those member states that have not experienced a communist/socialist regime indeed shows no significant correlation between life satisfaction and membership intensity (see Appendix 2).

4.2.4 Degree of engagement in voluntary work

The correlation between membership intensity and the degree of engagement in voluntary work (measured as the percentage of the population involved in voluntary work) is graphically

illustrated in Figure 7. Data on the degree of voluntary work as a percentage of the population has been gathered from the First European Quality of Life Survey (2005)⁸.

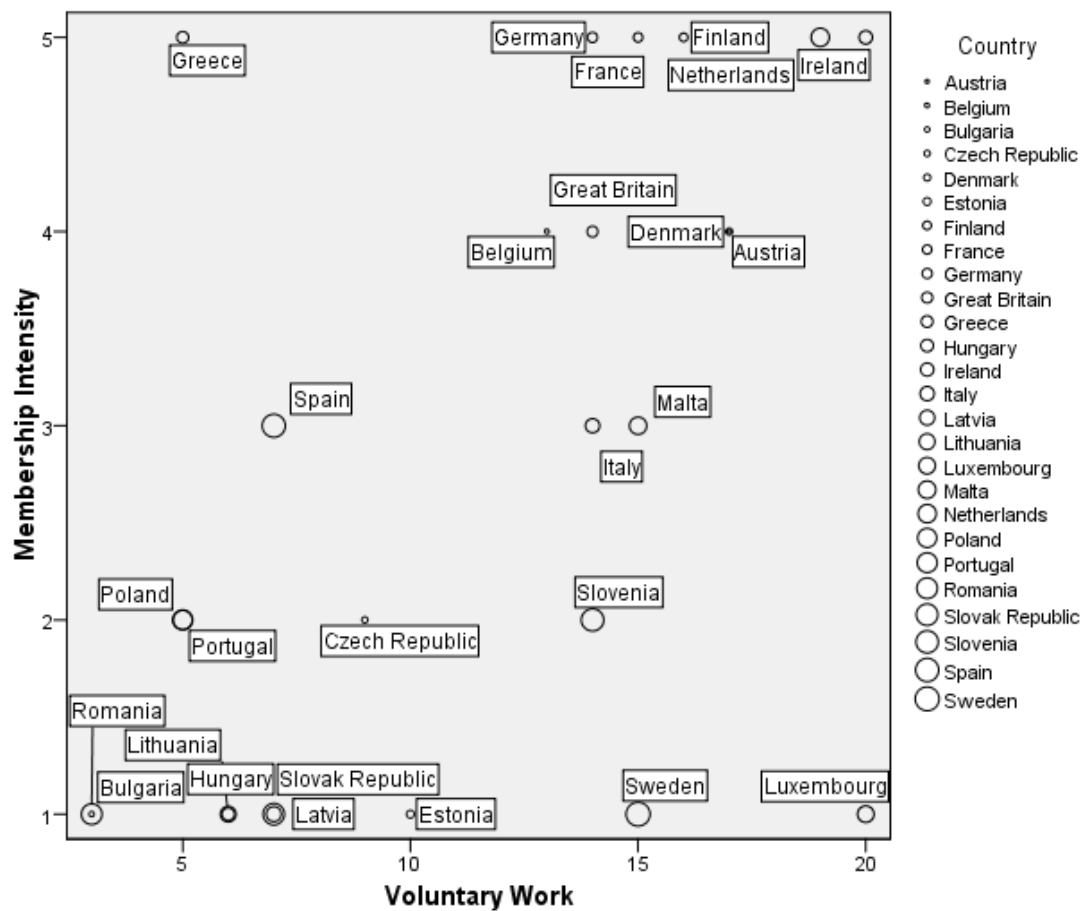


Figure 7: degree of engagement in voluntary work vs. membership intensity

Here the correlation between two dimensions of the 'network'-component of social capital is investigated. The question here is whether involvement through voluntary work in non profit associations is related to membership of farmers' cooperatives and producer organisations. Like Chloupkova, Svendsen & Svendsen (2003) we perceive cooperatives as social capital networks. Though the objectives of non profit organisations and farmers' cooperatives and producer organisations might differ quite substantially, both are loci of engagement in collective action that is intended to produce potential benefit at group level exceeding simple self-interest. In both types of networks, cooperative attitudes are needed. It appears to be the case that in general a significant positive correlation (.540) between both variables can be observed ($\alpha=0.01$, $N=26$).

However, if we take into account the distinction between CEEC's and other EU member states, the correlation between the two variables becomes insignificant. A separate regression analysis for those member states that have not experienced a communist/socialist regime indeed shows

⁸European Foundation for the improvement of Living and Working Conditions (2005). *First European Quality of Life Survey: life satisfaction, happiness and sense of belonging*. Luxembourg: Office for Official Publications of the European Communities. [22.10.2011: Eurofound: <http://www.eurofound.europa.eu/pubdocs/2005/91/en/1/ef0591en.pdf>]

no significant correlation between voluntary work and intensity of membership of farmers' cooperatives and producer organizations (see Appendix 2).

4.3 National cultures and membership intensity

4.3.1 Power Distance

The theory stipulates that a low PDI will lead to less hierarchical organizations, more public involvement in politics. Cooperative entrepreneurship will be more prevalent when leadership is embedded in a culture of consultancy with others. Therefore, we formulated the hypothesis that in countries with a low PDI more cooperative membership might be found, and less membership of cooperatives in countries with a high PDI. If this hypothesis is correct, a negative relationship between both variables would have to be found.

However, the data do not show a significant correlation between membership intensity and PDI was found. It is clear from the scatter plot (Figure 8) that the spread of the various countries across the PDI-spectrum was rather limited, diminishing the probability of finding a significant correlation.⁹ The same result is found when we restrict the analysis to those countries for which we have been able to create the membership intensity score based on actual membership figures. Among countries with a high, respectively low level of membership of farmers' cooperatives and producer organizations various PDI-scores can be found. The biggest discriminating variable is whether a country formerly has been under a communist regime or not.

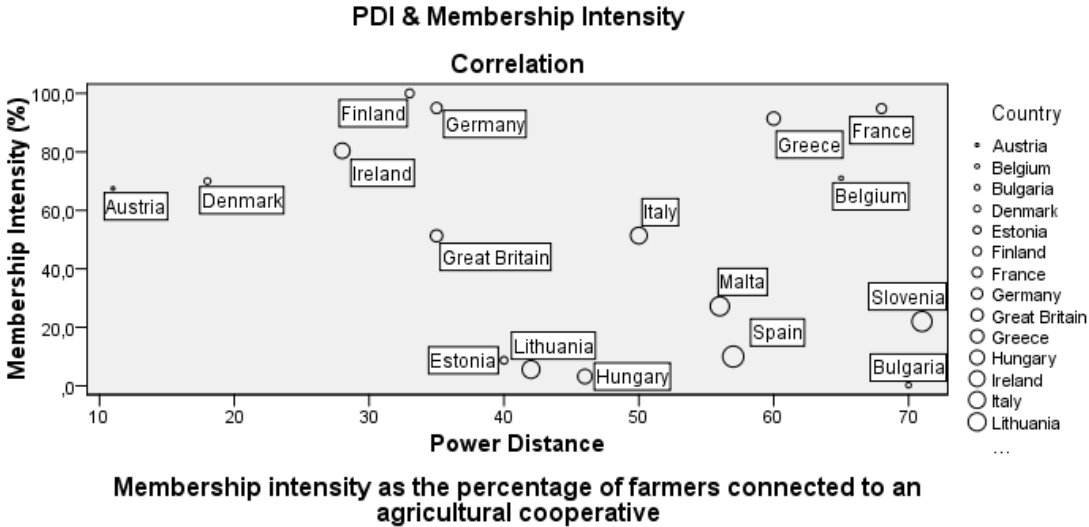


Figure 8: PDI vs. membership intensity

⁹A general remark with respect to the Hofstede indicators: The probability of uncovering correlations augments as the score on the index in question tends to either extreme of the scale. The more to the middle, the less pronounced the differences in culture and therefore predisposition of its members to act in a certain way (the country scores on these dimensions are relative - societies are compared to other societies, and their meaning sprouts from comparison to other societies) will be.

4.3.2 Individualism

IDV seems to dovetail with liberalism and the spirit of a free market-economy, as a low score on IDV implies a higher in-group solidarity, while a high score correlates with pluralist societies with atomized individuals, thus seemingly contrary to cooperative principles. Therefore, the hypothesis was formulated of a negative correlation between IDV and cooperative membership intensity.

However, as with the PDI-variable, no significant correlation between membership intensity and IDV was found, although the level of spread of the IDV-variable is higher than that of PDI. The same result is found when we restrict the analysis to those countries for which we have been able to create the membership intensity score based on actual membership figures.

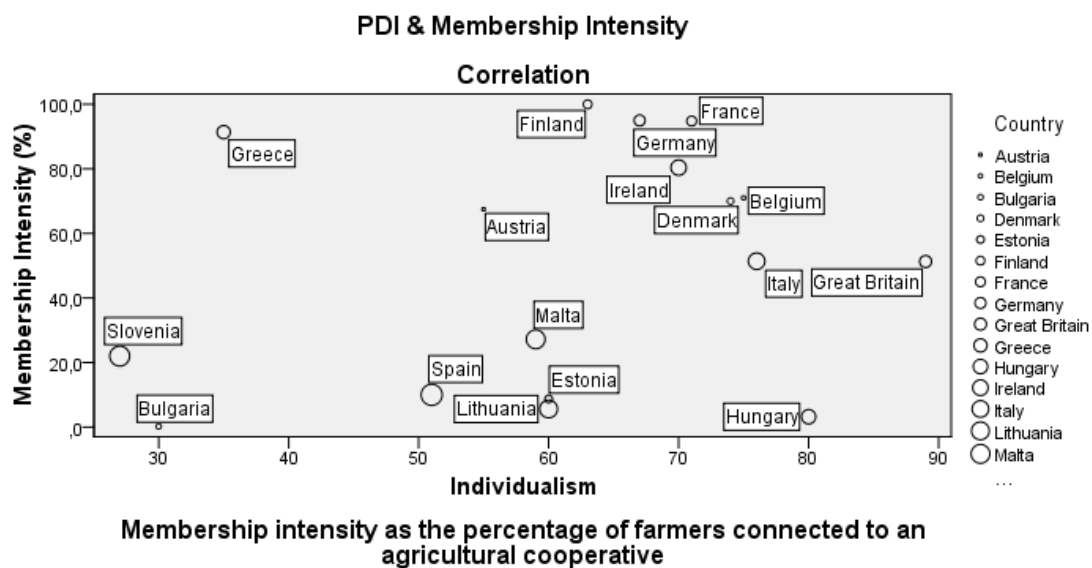


Figure 9: IDV vs. membership intensity

4.3.3 Uncertainty Avoidance

UAI bears on the citizens' likelihood to organize themselves for their or their society's benefit or a greater willingness to venture into unknown territories (if UAI is low). It was argued that since cooperatives are economic self organisations, demanding a high personal responsibility and engagement, it is likely that higher cooperative membership rates will be found in countries with a low UAI than in countries with a high UAI. On the other hand, it may as well be argued that in countries with a high UAI a higher inclination toward cooperative membership may be found, since cooperatives intend to lower risks and provide farmers with greater security of sale and less volatile income through market activities.

The UAI did not correlate with membership intensity. The same result is found when we restrict the analysis to those countries for which we have been able to create the membership intensity score based on actual membership figures.

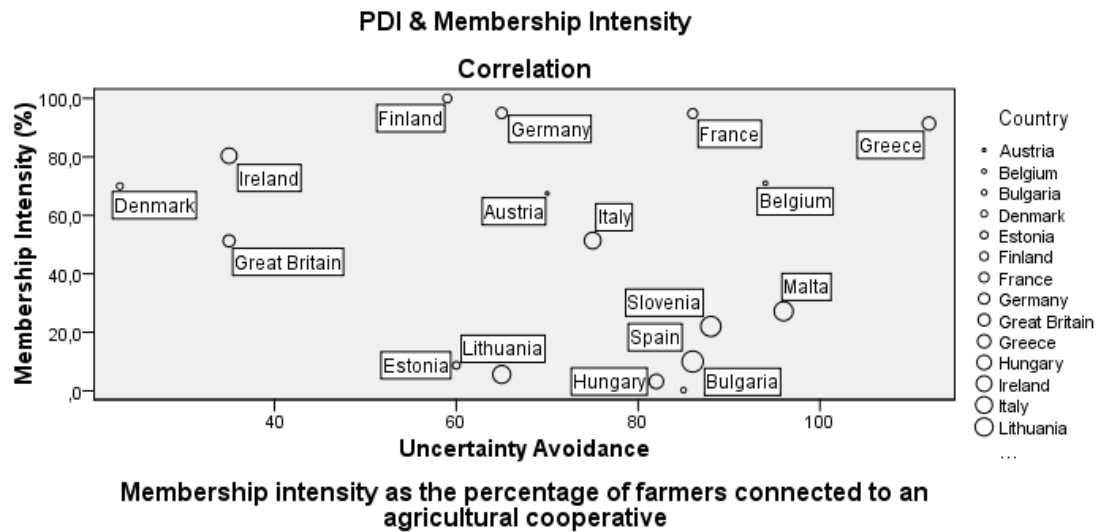


Figure 10: UAI vs. membership intensity

4.3.4 Masculinity

MAS, if low, appears to stimulate membership intensity as it signifies more solidarity and more participation in voluntary organisations. It was argued that in societies with a low MAS solidarity, care for the quality of life and participation in voluntary organisations are equally shared by men and women. In a high MAS society, these are typically important roles for women, men being more focused on material success. One could argue that since cooperatives are based upon solidarity and voluntary involvement, they are more likely to attract more (persistent) members in societies with a low MAS. Cooperatives may be highly attractive in societies with a high MAS as long as they realize indisputable benefits, but in times where the cooperative benefit is not that clear, membership may more easily fall in societies with a high MAS than in societies with a low MAS.

The data do not show an overall correlation between MAS and membership intensity. The same result is found when we restrict the analysis to those countries for which we have been able to create the membership intensity score based on actual membership figures.

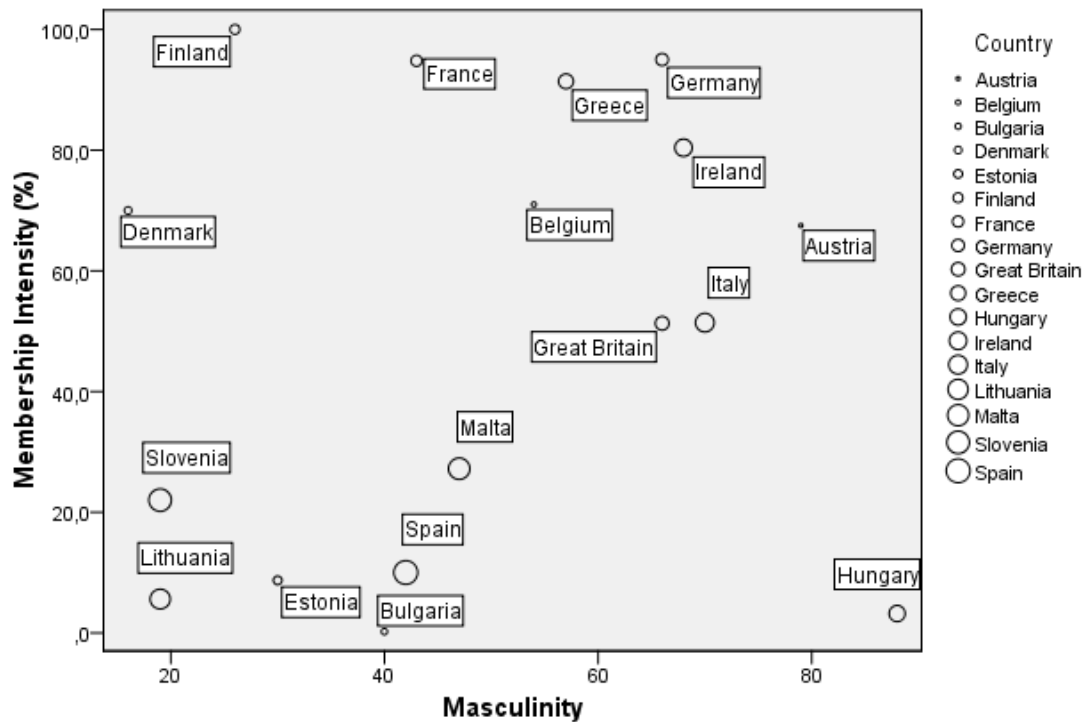


Figure 11: MAS vs. membership intensity

4.3.5 Long-term orientation

The orientation on future rewards in high LTO societies may correlate positively with cooperative membership, since cooperatives are inherently striving for future rewards rather than short term profits. The higher focus on thrift instead of spending, perseverance even when results are not delivering immediate results, a willingness to subordinate oneself for a purpose, and the favouring of personal networks over business needs are supportive for cooperatives. However, a high LTO score also seems to imply that citizens are less likely to be mobilized for social issues and invest in real estate sooner than mutual funds. This may counteract the propensity to cooperate.

The analysis of the relationship between LTO and cooperative membership intensity yielded no correlations. The same result is found when we restrict the analysis to those countries for which we have been able to create the membership intensity score based on actual membership figures.

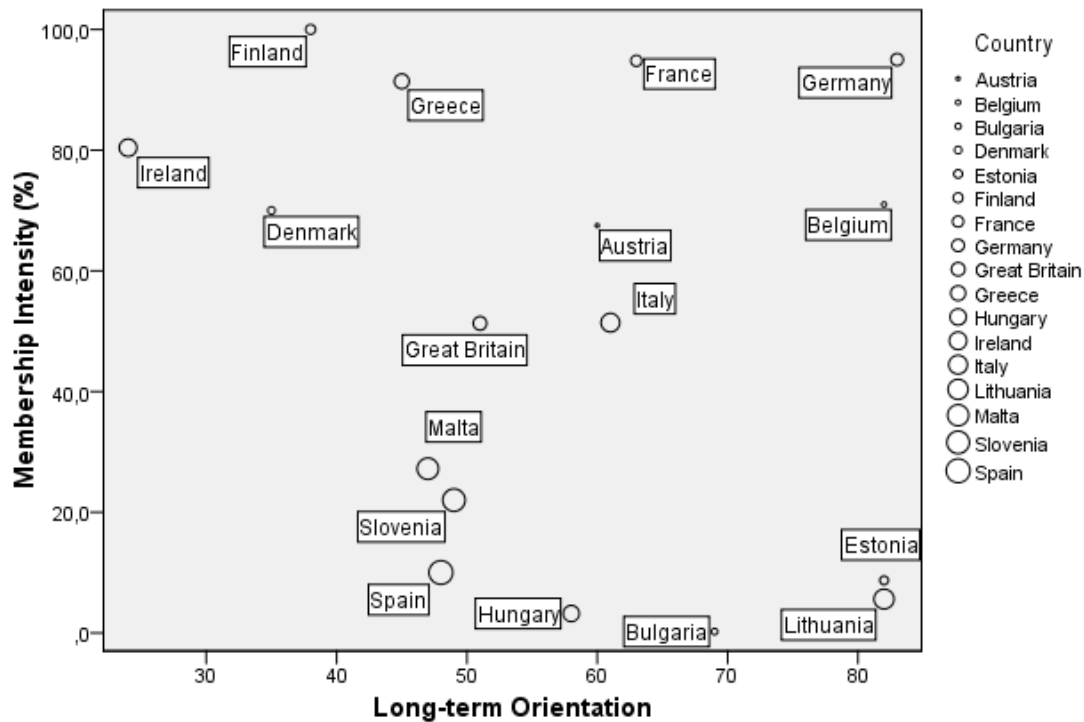


Figure 12: LTO vs. membership intensity

4.3.6 Indulgence versus Restraint

Citizens of high scoring (indulgent) countries seem more confident of their own competences, and perceive they are in control of their life, and the nation’s institutional fabric is looser. This kind of citizens are more likely to turn to cooperative entrepreneurship as a form of self-help, self-responsibility, self-control. They may feel supported by a less restrictive legislative framework leaving room for self-organization and cooperative entrepreneurship.

The analysis indeed reveals a significant correlation (.556) ($\alpha=0.01$, $N=26$). This is illustrated by the scatter plot, in which a tentative distribution along the bisector is visible. The same result is found when we restrict the analysis to those countries for which we have been able to create the membership intensity score based on actual membership figures.

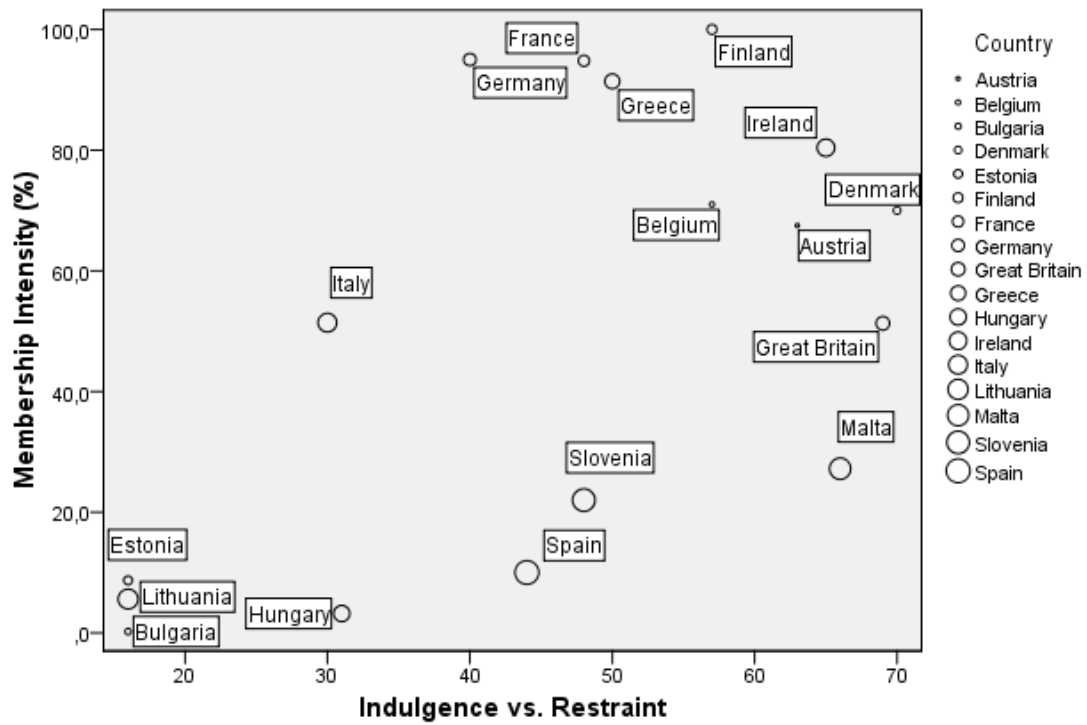


Figure 13: IVR vs. membership intensity

However, if we take into account the distinction between CEEC's and other EU member states, the correlation between the two variables becomes insignificant. A separate regression analysis for those member states that have not experienced a communist/socialist regime indeed shows no significant correlation between IvR and the intensity of membership of farmers' cooperatives and producer organizations (see Appendix 2).

5. Discussion and conclusion

5.1 Limitations of the analysis

The analysis has been done at an aggregate, country level. This means that individual and sectoral differences are not visible.

With respect to the dependent variable, we have been working throughout with an aggregate index, assimilating information from all sectors into one index. This of course obfuscates the fact that there is a high degree of variety in terms of cooperative activity between agricultural subsectors. Common sectors in which cooperatives are operational are the dairy, and the fruit and vegetable sector. This, among other things, might have to do with the high degree of investments required to keep up one's position in the market, and the expiratory nature of the products. But also to the European CMO on the Fruit and Vegetable Sector promoting the establishment of producer organizations.

Moreover, the index has been based upon information from a highly diverse quality. For some countries the index could be calculated based upon hard facts and figures, for others it was based upon rather sloppy figures and claims. A more adequate measurement, based upon membership figures for all countries, could refine the analysis (possibly discriminating more among countries that now find themselves necessarily in the same broad category) and make it more robust. When we restricted the analysis to those countries for which we have been able to create the membership intensity score based on actual membership figures, the same results were found, but in this case only 16 out of 27 EU member states could be included in the analysis.¹⁰

Also with respect to the variables related to the social and cultural aspects, it needs to be noticed that the analysis is done at country level, not taking into account differences between groups in the population of each country, or between regions. Multilevel analysis would be needed in order to refine the analysis.

5.2 Remarkable countries

Throughout the discussion of the various variables and their correlations, one might have noticed that some countries consistently portrayed a score/location that deviated heavily from what could have been expected, namely Sweden, Greece and, to some extent, Luxembourg.

Both Luxembourg and Sweden belong to those countries that in general score high on issues of institutional and interpersonal trust, as well as life satisfaction. However, they lag behind in terms of membership intensity. Greece on the other hand resides in the group of countries generally scoring low on membership intensity (in general those countries having experience a communist regime after WWII). Yet, cooperative membership is astonishingly high in Greece.

The information retained from Greece's country report, dates the Greek cooperative tradition back to the early 19th century, while cooperatives emerged in their modern form in the beginning of the 20th century. On the political, as well as the legislative level, cooperatives have increasingly been demoted and put at a disadvantage. Whereas the first legislation on cooperatives (1915) was very stimulating, consecutive adaptation rounds have diminished the potential and viability of cooperatives in Greece. Even now, legislation is restrictive towards

¹⁰Countries for which scores were calculated based on hard data on membership: Austria, Bulgaria, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Lithuania, Malta, Slovenia, Spain, Great Britain.

cooperatives, and coupled with fluctuating government support and bad management, the environment in which cooperatives have to function really handicaps them vis-à-vis IOFs. Cooperatives do not find adequate responses to current market conditions. Nonetheless, the tradition and cultural values of Greece seem robust, and membership is still larger than in most European member states. Thus, while all factors seem to work against cooperative behaviour in Greece, the sector somehow seems to retain its attractiveness for farmers. More research is needed to shed light on this phenomenon.

Sweden is another peculiar case: the Swedish cooperative movement originated from a tradition of mutual aid arrangements between farmers and villagers, and the movement could be seen as one of the driving forces behind the Swedish modernisation and industrialisation. Currently many legal forms exist for farmers to organise themselves. The Swedish cooperative sector is dominated by a few, yet powerful cooperatives. However, many of these cooperatives are engaged in the processing of products, of which many are reported to be imported into Sweden. The existing cooperatives furthermore suffer from heavy competition from foreign cooperatives from Denmark and Finland. The Swedish country report mentions a high performative cooperative sector. However, no information on membership of farmers' cooperatives and producer organisations was available in the country report. Therefore, the score given to Sweden on the membership intensity index is '1'. This may be a large underestimation of the actual membership rate. It would be highly interesting to get more information about the membership of Swedish farmers in farmers' cooperatives and producer organisations. This could correct the actually given score.

At last country that we found rather vexatious is Luxembourg. On all accounts this is a very "Western" country, yet acquiring a negligible score on membership intensity. While agriculture and finance are the most important sectors for cooperatives, this specific form of organisation is considered to be too marginal to keep statistics on. This runs in line with the overall institutional environment: contemporary legislation as well as political support for cooperatives is high absent.

5.3 The impact of communism

Perhaps the most striking result of our analysis is the difference between CEEC's and other member states with respect to the intensity of membership of farmers' cooperatives and producer organisations (see Figure 3 – map of Europe). CEEC's seem to have consistently lower scores on membership intensity than the other member states. This trend remained obvious throughout the entire analysis of the relationship between coop membership intensity and social capital variables as well as the Hofstede's indicators. We therefore decided to control for the experience of communism, by creating a dummy variable, thus effectively splitting up the countries in two groups¹¹. This revealed that none of the Hofstede indicators had any relation to membership intensity. This was already ascertained for PDI, IDV, UAI, MAS and LTO, but apparently the variance in membership intensity when including the IvR scores was to a significant extent explained by the experience of communism rather than IvR itself. With respect to the correlations with the social capital variables, the same pattern was observed. When controlling for 'communist legacy', none of the correlations we previously assumed significant retain this quality. General trust (in people), trust in political institutions, voluntary work and life satisfaction: all cede their significance to their 'communist legacy'.

¹¹Belonging to the countries without communist legacy were Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Malta, Netherlands, Portugal, Spain, Sweden, United Kingdom. The remaining countries composed the group of countries having experienced a communist regime at one point. It should be mentioned that this visually apparent classification into two groups did not hold for two countries, i.e. Luxembourg and Sweden. Yet, we already looked into explanations for this.

According to the literature on transition countries, most of these countries indeed suffer from a deficit of cooperative entrepreneurship and trust. However, this does not mean that there is no preference for cooperation (altruism, reciprocity, preference of proper behavior) in these countries. As Lissowska (2012) found out in an analysis on the basis of data of the World Value Study, the preference for cooperation in transition countries is close to that of the other European countries. Rather it is the distorted image of cooperatives due to communist appropriation of the model, distorting the rules and norms of the liberal-democratic model, in combination with a vivid aversion of it during the transition period in which the liberal-democratic cooperative rules were not restored, that leads to people's lost touch with the cooperative model (see also Pollet & Develtere (2004) who develop a similar argument with respect to the disastrous nationalist-populist strategies in developing countries). This feeds the institutionalist argument that if old rules are abandoned before new ones are put in place, this might lead to less desirable rules governing transactions leading to less desirable results. New rules will be accepted easier when they are based on a previously known rule with which one has positive experiences.

Indeed, it is interesting to see that under the Common Market Organisation on fruit and vegetables and its support for producer organizations and groups (PO's and PG's), these countries and farmers have found a new way to organize themselves without having to use the cooperative organizational form which came to suffer from a deeply negative public image under communism, turning back to pre-WWII experiences of trust and cooperation and economic performance.

5.4 Need: necessary but not sufficient condition for cooperation

In the preparatory phase of this study, in which we provisionally sketched our approach on the issue of historical, cultural and social influence on current cooperative performance, we hinted at a crucial element in the inclination of a farmer to join or set up a cooperative, i.e. the perceived *need* to do so (Defourny & Develtere, 2009). Various arguments for the need for cooperation in the food chain are brought forward in the country reports. However, a perceived need may be a necessary, but not a sufficient condition for the propensity to become and stay member of a cooperative. It is mediated by several factors. Of these, the experiences with and image of the cooperative model seemed to be important, given the low regard of cooperatives in former communist countries (cf. supra). But also, cooperative experiences and traditions (cf. infra).

5.5 The importance of cooperative experiences and traditions

In all European countries, including transition countries, a shared cooperative tradition is observed, with the establishment of cooperatives in the 19th century and the experience of realization of social and economic objectives. However, a massive destructive impact of totalitarian communism/socialism, not followed by a restoration of the cooperative model after the fall of the totalitarian regime in transition countries, is observed and confirmed by the literature.

This pinpoints to the importance of vivid cooperative experiences and traditions as driving forces for cooperative membership. At the micro level vivid and positive relationships between farmers and their coop or PO will lead to more or continued cooperation. This needs to be formalized in organizational rules regulating the relationship between members and their cooperatives or producer organizations, and it can be highly facilitated by stimulating legislative and fiscal regulations (cf. Ollilla's (2005) 'hierarchy of rules and cultural levels').

This means that mere legislative and fiscal regulations (at European level) are not enough to drive farmers to cooperation in cooperatives or PO's if in a country, the model is not supported

by farmers and their unions and associations and by the government, and if they are not able to zero in on existing vivid traditions and experiences. It also means that farmers who feel the need to cooperate and can learn from past experiences with cooperatives will be more likely to develop new cooperatives or producer organisations or join existing, performant cooperatives.

5.6 Coops: organizations with a double nature

The fact that the Hofstede indicators measuring deeply rooted cultural values that otherwise are so robust and have correlations with many entrepreneurial and organizational aspects are found not to correlate with coop and PO membership intensity, might have to do with the overwhelming need for cooperation in the market and with past experiences with highly instrumental, hybrid organizations with a 'double nature', referring both to principles and values and to economic efficiency and performance (Valentinov, 2004, 2005).

References

- Bågenholm, A. (2005). 'The Eastern European Transitions: a survey of the research fields' pp.7-21 in: Lindahl, R. (ed), *Transition and EU-enlargement*. Göteborg: University of Göteborg.
- Borzaga, C. & Spear, R. (2004). 'Introduction' pp.3-14 in: Borzaga, C. & Spear, R. (eds), *Trends and challenges for cooperatives in developed and transition countries*. Trento: ISSAN.
- Bubnys S. & Kaupelyte, D. (2004). 'Development of cooperative enterprises in Lithuania' pp.253-264 in: Borzaga, C. & Spear, R. (eds), *Trends and challenges for cooperatives in developed and transition countries*. Trento: ISSAN.
- Chloupkova, J., Svendsen, G.L.H. & Svendsen, G.T. (2003). 'Building and destroying social capital: the case of cooperative movements in Denmark and Poland' *Agriculture and Human Values*, 20: 241-252.
- Coleman, J.S. (1988). 'Social capital in the creation of human capital' *American Journal of Sociology*, 94(1988): 95-120.
- Defourny, J., & Develtere, P. (2009). 'The social economy: the worldwide making of a third sector' pp. 15-40 In J. Defourny, P. Develtere, B. Fonteneau, & M. Nyssens (Eds.), *The worldwide making of the social economy. Innovations and changes*. Leuven: ACCO.
- DiMaggio, P. J., & Powell, W. W. (1994). *The new institutionalism in organizational analysis*. Chicago: University Press.
- Finnemore, M. (1996). Review: norms, culture, and world politics: insights from sociology's institutionalism. *International organization* 50(2), pp. 325-347. [04.03.2011, JSTOR: <http://www.jstor.org/stable/2704081>].
- Fukuyama, F. (1995). *Trust. The Social Virtues and the Creation of Prosperity*. New York: The Free Press.
- Fukuyama, F. (2000). *Social Capital and Civil Society*. IMF Working Paper, Washington.
- Fulton, M. (1999). Cooperatives and member commitment. *The Finnish journal of business economics* 4, pp. 418-437. [16.03.2011, Pellervo: <http://www.pellervo.fi/finncoop/material/fulton.pdf>].
- Galle, R. C. J. (2010). *Handboek coöperatie*. Dordrecht: Convoy.
- Gardner, B. & Lerman, Z. (2006). *Agricultural Cooperative Enterprise in the Transition from Socialist Collective Farming*. Discussion paper no.9.06 of the Center for Agricultural Economic Research – Department of Agricultural Economics and Management.
- Greenwood, R., & Hinings, C. R. (1996). Understanding radical organizational change: bringing together the old and the new institutionalism. *The academy of management review*, 21(4), pp. 1022-1054. [04.03.2011, JSTOR: <http://www.jstor.org/stable/259163>].
- Hofstede, G. (2001). *Culture's consequences: comparing values, behaviors, institutions, and organizations across nations*. London: Sage Publications.
- Hofstede, G., & Hofstede, G. J. (2005). *Cultures and organizations: software of the mind* (2nd edition). New York: McGraw-Hill USA.
- Hofstede, G., & Hofstede, G. J., Minkov, M. (2010). *Cultures and organizations: software of the mind* (3rd edition). New York: McGraw-Hill USA.
- Hunčova, M. (2004). 'The Czech cooperative reality and its social aspects' pp.211-228 in: Borzaga, C. & Spear, R. (eds), *Trends and challenges for cooperatives in developed and transition countries*. Trento: ISSAN.
- Jeliazkova, M. (2004). 'The cooperative model in Bulgaria: prospects and problems of the social economy' pp. 229-246 in: Borzaga, C. & Spear, R. (eds), *Trends and challenges for cooperatives in developed and transition countries*. Trento: ISSAN.
- Kolin, M. (2004). 'The evolution of cooperative principles and the emerging Third sector activities in Serbia' p.197-210 in: Borzaga, C. & Spear, R. (eds), *Trends and challenges for cooperatives in developed and transition countries*. Trento: ISSAN.
- Leś, E. (2004). 'Cooperatives in Poland: from state-controlled institutions to new trends in cooperative development' pp. 185–196 in: Borzaga, C. & Spear, R. (eds), *Trends and challenges for cooperatives in developed and transition countries*. Trento: ISSAN.

- Lissowska, M. (2012). The deficit of cooperative attitudes and trust in post-transition economies. Paper presented at the 16th Annual Conference of the International Society for New Institutional Economics, California, June 14-16, 2012. (downloaded from <http://papers.isnie.org/paper/626.html>).
- Meikle-Jaw, P.A. (2006), Democracy satisfaction: the role of social capital and civic engagement in local communities. Mississippi State University: Department of Sociology, Anthropology and Social Work.
- Meyer, J. W., & Rowan, B. (1977). Institutionalized organizations: formal structure as myth and ceremony. *American journal of sociology* 83, pp. 340-363.
- Minkov, M. (2009). Predictors of differences in subjective well-being across 97 nations. *Cross-cultural research* 43, pp. 152-179. [03.03.2011, Sage Publications: <http://ccr.sagepub.com/content/43/2/152>].
- Minkov, M., & Hofstede, G. (2011). The evolutions of Hofstede's doctrine. *Cross-cultural management: an international journal*, 18(1), pp. 10-20. [03.03.2011, Emerald Insight: www.emeraldinsight.com/1352-7606.htm].
- Narayan, D. and Pritchett, L. (1997). *Cents and Sociability: Household Income and Social Capital in Rural Tanzania*. Washington DC: World Bank.
- Norgaard, O. (2000). *Economic institutions and democratic reform: a comparative analysis of post-communist countries*. Cheltenham: Edward Elgar.
- Ollilla, P. (2005). *Principles of institutional economics – with applications to cooperative enterprises* [Working Paper]. Helsinki: Helsinki University.
- Otsing, M. (2004). 'How to develop the cooperative movement: the case of housing in Estonia' pp.247-253 in: Borzaga, C. & Spear, R. (eds), *Trends and challenges for cooperatives in developed and transition countries*. Trento: ISSAN.
- Paldam, M. & Svendsen, G.T. (2002). 'Missing social capital and the transition in Eastern Europe' *Journal for Institutional Innovation, Development and Transition*, 5: 21-34.
- Paxton, P. (1999). 'Is Social Capital Declining in the United States? A multiple indicator assessment' *American Journal of Sociology*, 105: 88-127.
- Pollet, I. & Develtere, P. (2004), *Development Cooperation: how cooperatives cope*. Leuven: HIVA/Cera/BRS.
- Putnam, R.D. (1993). *Making Democracy Work. Civic traditions in modern Italy*. Princeton University Press.
- Putnam, R.D. (1995). 'Bowling Alone: America's declining social capital' *Journal of Democracy*: 6: 1.
- Putnam, R.D. (2000). *Bowling Alone: the Collapse and Revival of American Community*. New York: Simon & Schuster.
- Scott, W. R. (1987). The adolescence of institutional theory. *Administrative science quarterly* 32, pp. 493-511.
- Scott, W. R. (2008). Approaching adulthood: the maturing of institutional theory. *Theory and Society* 37, pp. 427-442. [04.03.2011, Springer: <http://www.springerlink.com/content/a1k45j7722lw29n2/fulltext.pdf>].
- Svendsen, G.L.H. & Svendsen, G.T. (2000). 'Measuring social capital: the Danish cooperative dairy movement' *Sociologia Ruralis* 40(1): 72-86.
- Szabó, G. & Kiss, A. (2004). 'Economic substance and legal regulation of agricultural cooperatives in Hungaria' pp. 265-280 in: Borzaga, C. & Spear, R. (eds), *Trends and challenges for cooperatives in developed and transition countries*. Trento: ISSAN.
- Uslaner, E. (2008). 'Trust as a moral value' pp. 101-121 in: Castiglioni, D., Van Deth, J.W. & Wolleb, G. (eds), *The Handbook of Social Capital*. Oxford University Press.
- Valentinov, V. (2004), 'Toward a social capital theory of cooperative organisation'. *Journal of Cooperative Studies*, vol. 37(3): 5-20.
- Valentinov, V. (2005), 'The organizational nature of agricultural cooperatives: a perspective from the farm problem theory' *Journal of Rural Cooperation*, 33(2): 139-151.
- Van der Sangen, G. (2011). *EU Synthesis Report. Project: Support for Farmers' Cooperatives. An EU wide analysis of Legal Aspects*. Forthcoming.

Van Schaik, T. (2002). Social capital in the European Values Study Surveys. Country paper prepared for the OECD-ONS International Conference on Social Capital Measurement, London, September 25-27, 2002.

Appendix I: Membership intensity scores and founding information

Name	Historical tradition <i>Information from country reports</i>	Indicators on membership intensity <i>Based on various items discussed in the country reports. The percentage membership of farmers to cooperatives is calculated by dividing the number of cooperative members to the number of agricultural holdings (data from 2007 unless otherwise indicated).</i>	Score
Austria	Agricultural cooperatives have always been the most prominent cooperatives in terms of economical viability. Already in 1873 legislation on cooperative behavior was adopted.	67.5% of Austrian farmers are a member of an agricultural cooperative. Cooperatives enjoy a dominant position in specific sectors	4
Belgium	Belgian tradition with cooperatives as well extends back to the middle of the 19 th century. Again, already as far back as 1873 specific legislation was enacted providing the cooperative idea with a business form.	Indications of membership intensity in Belgium are scarce. We know 60% of all accredited cooperatives reside within the agricultural sector, while many small cooperatives are left out of this statistic. Recently cooperatives have enjoyed an increase in interest from farmers. Cooperatives are mainly active in dairy and fruit and vegetables, and completely shun the sugar sector.	4
Bulgaria	Bulgaria's tradition with cooperatives goes back 120 years. Throughout their development, it received political support. Yet, under communism, this popularity succumbed to a serious blow by communism, decimating their number. After communism, the number of cooperatives increased again, stimulate even further by EU accession and market liberalization.	0.2% of all farmers joined a cooperative. Cooperatives are regarded as highly inefficient due to bad leadership, high inactivity and high heterogeneity of members. They are only competitive in the cereal sector	1
Czech Republic	Communism has not been favourable to cooperatives, destroying a tradition that can be traced back to 1850, and undoing an significant proliferation of cooperatives between both world wars.	Agricultural production cooperatives claim 21% of all employment in agriculture in the Czech Republic. Other indicators are absent.	2
Denmark	The roots of the cooperative movement go back to the 1880's, with the establishment of the first cooperative centre in 1882, inciting a surge in the number of cooperatives to 244 in 1888. Regardless of this moderately long tradition, cooperatives have always seemed to function well without any elaborate legislation supporting their development.	In Denmark 70% of all agriculture is cooperative. It boasts a vibrant community of cooperative organisations in all sectors, and has the highest ratio of cooperatives in Europe.	4
Estonia	In concordance with many eastern European countries, Estonia's affinity with cooperatives was ruined by communism.	8.7% of all farmers is engaged in a cooperative. This might decrease even further considering the perceived overall shrinking turnover of	1

	Cooperatives originated in 1866 and grew under tsarism. However, whatever popularity they gained throughout history, it has been severely predicated by communism. After the reign of communism, and the concomitant liberalization of the market has delivered a blow to the performance of cooperatives overall.	cooperatives. Currently cooperatives are only of marginal importance in agriculture.	
Finland	Finnish cooperative tradition started out fairly late (1897, first legislation in 1901). The reasons for this can be traced back to social conditions: the predominantly agricultural base of the economy, coupled with the landlessness of the rural communities, elicited a cooperative response.	Finland is “the biggest cooperative country”, claiming members number higher than the number of agricultural holders.	5
France	In the 1880’s many farmers’ associations were erected, followed by the installment of an accompanying legislative framework.	The authors claim that 75% of French farmers are member of at least one cooperative. Our calculations show a 94.8% membership intensity.	5
Germany	Germany is recognized as the first country in the world with cooperatives.	In Germany “almost every farmer is member to at least one cooperative”. The cooperative system is the largest economic organisation in Germany (in terms of members).	5
Greece	Incoherent government meddling resulted in a fragmented legal framework (and a fluctuation of support), which compounded with bad management and incapacity to counter market changes in the 1990’s to incite overall cooperative failure, tainting their image.	Although cooperatives do not seem to find an adequate response to current market conditions, membership of farmers in agricultural cooperatives is lagers than in most member states. Our calculations reveal a 91,4% membership intensity in 2000.	5
Hungary	Communism led to nebulous and fragmented legislation, low levels of ownership and lack of (technical) knowledge. The market collapse after communism favoured IOF’s and delivered a huge blow to those cooperatives that managed to stay operational.	Cooperatives, their public image tainted by communism, have recently emerged anew in the form of producer organisations and groups. These number 58 in 2007, with 20177 members (3.2% of farmers)	1
Ireland	Cooperatives originated in 1889: the post-famine period with high growth en stiff competition induced the growth of cooperatives who could benefit from the aspect of resource pooling to invest in new technologies. The high membership intensity has continued up to the present regardless of the lagging evolution of a legislative framework. A large part of the existing cooperatives have been around since the beginning.	Ireland boasts a strong membership intensity of 80.4%. This ratio has been calculated combining the membership data of 2009 of the dairy and livestock sector, with the data on agricultural holdings of 2007. As only a part of the agricultural sector was comprised, and the number of farms usually declines as time passes (as a result of the generally recurring trend of intensification), this ratio could be well higher in reality.	5
Italy	Italy can fall back on a long tradition	Just over half (51.4%) of Italy’s farmers	3

	<p>of farmers' cooperation (the first cooperative came into being in 1854) which has been protected and assisted by a gradually expanding legislative framework. Fascism delivered a significant blow to the cooperative idea, yet continued political support and the high industrial growth thereafter provided the movement with the much needed credibility and economic viability.</p>	<p>has pooled its resources in cooperatives. Again, numbers considering total membership were only available of 2008, while 2007 data had to be used for agricultural holdings. Given the trend of intensification, this percentage could underestimate the real membership intensity. Also worth mentioning is the fact that, according to the Author of the report, the sectors boasting a considerable degree of cooperative activity, are the most economically performant.</p>	
Latvia	<p>The idea of cooperation between farmers emerged as a consequence of a widespread cattle plague in 1828, and was furthered by the rise of nationalism and the consequent search for a national identity. Communism, and its aftermath, made way with this tradition.</p>	<p>The discussion on Latvian cooperative dealings was short, yet clear in that the idea of cooperation between farmers is catching on again since its deterioration during and after communism, yet their numbers are falling.</p>	1
Lithuania	<p>The inception of the cooperative movement dates back to 1869. It's popularity grew, yet receded under communism as the founding principles were altered and ultimately eradicated. The wave of privatization following the collapse of communism instilled a vast potential for cooperatives to flourish, as it resulted in many small active farms.</p>	<p>Lithuanian membership intensity is low (5,6%) and cooperatives are concentrated in the dairy sector.</p>	1
Luxembourg	<p>The cooperative landscape both in terms of tradition as current operability in Luxembourg is limited. Following the lack of political interest, a legal framework failed to emerge. This coincided with the fairly recent (1919) origin of the cooperative idea, and the fact that the sector hasn't evolved since (no secondary cooperatives or other structural evolutions).</p>	<p>The authors of the country report quote a statement made by their statistics bureau that 'cooperatives were so marginal that it was not planned to make wider statistics'. However the agricultural sector, together with finance, formed the nexus of cooperative operations.</p>	1
Malta	<p>Despite Malta's latecomer status in the world of agricultural cooperatives, its track record regarding the adoption of legal provisions is impressive. The sector itself has further developed greatly, and in depth, currently boasting accreditation organisations, political lobbies, central funds, ... The roots of the cooperative movement lie after the Second World War, which was followed by a mass emigration to which the political system responded by stimulating cooperatives.</p>	<p>Malta boasts a high number of cooperatives, yet this trend does not seem to guarantee a high level of membership intensity. Although cooperatives are active in all agricultural sectors, the share of farmers enlisted in cooperatives amounts to 27.2%. Yet, the number of members were available only for 2009, while the number of agricultural holdings referred to 2007. Due to the overall trend of intensification and the implied decline in the number of agricultural holdings, the intensity could increase notably.</p>	3

Netherlands	The first legislation on cooperatives stems from 1876, which could be portrayed as the result of a value system called “Polder mentality”. This mentality refers to the fact that in the Netherlands, decision-making and responsibility always has been a local matter. This of course invigorated cooperative entrepreneurship. This development was further backed by agricultural crises in the 1870’s and 1880’s.	The Netherlands boasts remarkable statistics on, and has a well-known reputation with cooperatives. However, these do not necessarily refer to membership intensity. It is said to be the second most cooperative country in the world (after France), but “only” in terms of market share. Due to stimulating legislation, the number of cooperatives has recently risen, and overall cooperatives have improved their competitive position in the market since 2000.	5
Poland	The end of the 19 th century lauded the birth of the cooperative movement, which enjoyed a increase in popularity in between both world wars. Again, communism altered the principles and the public image of cooperatives for the worse. However, private ownership was not completely abolished during the communist regime, allowing cooperatives to retain their tradition to some extent. However, the end of communism signaled a sharp recession for cooperatives as well as they were previously committed to the party and did not rely on member commitment for their operationality.	Poland suffers from a negative public image of cooperatives. These are regarded as ‘obsolete structures’. As in other countries, the recent emergence of producer organisations, as a consequence of changing EU legislation, has provided the cooperative idea with a new inventory to gain access to the market.	2
Portugal	Portugal never really enjoyed a robust cooperative tradition. It only gained importance after 1974, suffering from fluctuating support in the preceding decades. This rise in importance was due to the fact that the dictatorial regime (which ended in 1974) was unfavourable to the cooperative idea, yet the demise of the corporatist system directed all eyes to the cooperative ideals. Despite the fairly new tradition, the sector can already fall back on an elaborative legal framework.	Considering the elaborative legal framework applying to cooperatives, the are few in number and suffering from a tense competition with IOFs in the agricultural sector.	2
Romania	Romania’s familiarity with the cooperative idea is marked by communism as well. Around the mid-19 th century, due to a reality of struggles between small and big farms, the idea gained ground and steadily increased its importance in the national economy supported by a utilitarian political interest. The big turnaround was instigated by communism, which instilled a negative connotation with the word “cooperative” in the minds of the	In Romania no cooperative can compete with an IOF. Only 223 cooperatives exist, for nearly 4 million farmers. The idea of farmer cooperation is gaining attractiveness, yet the lack of technical knowledge (and the resulting dire need for assistance) impedes their growth.	1

	public which has (to a great extent) persisted up to today.		
Slovakia	Slovakia's first cooperative was founded in 1845 and paved the way for a stark increase in cooperative activity throughout history. Communism distorted this evolution and changed the overall conception of cooperation between farmers for the worse. However, after communism, when presented with a choice, most cooperatives expressed the desire to maintain their historic form and tradition.	In a country in which 69500 farms are operational, only 631 farmers' associations were active. Although the relation between the number of farms and the number of cooperatives is neither linear nor necessarily related, this low coverage reveals a low importance of cooperatives.	1
Slovenia	Slovenia's first act on cooperatives was installed in 1873 and re-enacted in 1992 introducing the traditional principles again after 3 decades during which cooperatives were nationalized under communism.	Membership intensity reaches 22%, which we calculated using (the most recent, yet undefined by year) membership data of the cooperative union of Slovenia, to the number of agricultural holdings in 2007. The total number of members might be considerable higher, given that only 76 cooperatives are represented by the cooperative union while there are many other cooperatives not accounted for. Furthermore, the trend of intensification, compounded with a reported overall increase in turnover, might lead us to underestimate this ratio.	2
Spain	Cooperatives were called into existence by the Catholic movement to counterbalance the social workers' movement. It has been guided by a multiplicity of legislation ever since, making it difficult for cooperatives to navigate through and increase their importance.	Spanish cooperatives seem able to compete with IOF's mainly in those regions IOF's stay away from. Competition in other sectors is stiff, and although a decline in number since 2008, it is reported that they are doing well. Membership intensity is retained to be 10%, although according to the report it can be much higher.	3
Sweden	Swedish affinity with cooperative behaviour was rooted in its tradition of mutual aid arrangements between farmers and villagers, and the movement became a driving force in the modernisation and industrialization of the country.	Swedish cooperatives are losing out heavily against foreign cooperatives, and many of the products processed by the few Swedish cooperatives functional and active, are imported. This indicates an overall low importance of cooperatives.	1
United Kingdom	The UK has a 200-year history with cooperatives, an organisational mode consistently awarded with a substantial amount of attention from politics, academia and business.	The UK cooperative scene in agriculture can rely on 153747 members (2010) while the number of farms in 2007 reached up to 299830. This makes for a 51.3% membership intensity. Again, this might turn out to be higher when using 2010 data.	4

Appendix 2: The influence and significance of communism/socialism

1. Indulgence versus Restraint

Coefficients^a

		Coefficients ^a		
		Standardized Coefficients		
Model		Beta	t	Sig.
1	(Constant)		,530	,601
	Indulgence vs. Restraint	,387	,858	,400
	comsoc	,966	1,999	,058
	comsoc_ivr	-,581	-,744	,465

Adj. R²=.479

Dependent Variable: Membership Intensity

2. Trust in political institutions

Coefficients^a

		Coefficients ^a		
		Standardized Coefficients		
Model		Beta	t	Sig.
1	(Constant)		1,248	,225
	Trust in Political Institutions	-,036	-,177	,861
	Comsoc	,751	3,710	,001

Adj. R²=.486

Dependent Variable: Membership Intensity

3. General trust

Coefficients^a

		Coefficients ^a		
		Standardized Coefficients		
Model		Beta	t	Sig.
1	(Constant)		-,195	,847
	General Trust	,146	,825	,418
	Comsoc	,637	3,586	,002

Adj. R²=.500

Dependent Variable: Membership Intensity

4. Voluntary work

Coefficients^a

Model		Standardized Coefficients	t	Sig.
		Beta		
1	(Constant)		1,957	,063
	Voluntary Work	,121	,646	,524
	Comsoc	,648	3,473	,002

Adj. R²=.495

Dependent Variable: Membership Intensity

5. Life satisfaction

Coefficients^a

Model		Standardized Coefficients	t	Sig.
		Beta		
1	(Constant)		,257	,799
	Life Satisfaction	,056	,297	,769
	Comsoc	,690	3,684	,001

Adj. R²=.487

Dependent Variable: Membership Intensity