

CO-OPERATIVES IN A SYSTEMS CONTEXT

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Co-operative Enterprise in a Systems Context

ABSTRACT

The co-operative enterprise is examined within a systems context to identify the key external forces that influence its performance. As a hybrid business form the co-operative generates both economic and social capital and these output factors are also examined with reference to the literature and small case examples. The paper concludes by proposing a conceptual model for future research.

Keywords: co-operative and mutual enterprises, social capital, systems perspective.

INTRODUCTION

Co-operative and mutual enterprises represent some of the largest and oldest businesses and are found throughout almost all industries and countries. According to the International Co-operative Alliance (ICA) there are more than 1.4 million co-operative enterprises globally and these businesses have over one billion people who are members. Together these enterprises have the potential to impact the lives of as many as 3 billion people (ICA, 2013). The top-300 largest co-operative and mutual enterprises have a combined annual turnover of US \$1,975.6 billion (ICA, 2012). These businesses are distributed across 24 countries and most sectors, particularly in insurance (43%), agriculture and food (26%), and consumer and retailing (21%).

Despite their importance to the global economy co-operative and mutual enterprises have not received the same level of attention within the academic literature that has been given to the “investor owned firm” (IOF) or “not-for-profit” (NFP) enterprise. This was recognised by LeVay (1983) who noted the relative lack of follow-up to the few theoretical contributions that had been made to the co-operative enterprise literature to that time. Her explanation was that it was due to “the low priority accorded to co-operative theory in our teaching syllabi and the small number of postgraduate students that the subject attracts” (p. 39). It is interesting to note that little has changed since early 1980s. For example Kalmi (2007) found a clear decline in the mention of co-operatives within the economics textbooks over the course of the 20th Century. According to Levi and Davis (2008) the problem facing co-operatives within academic circles is that they are the “*enfants terribles*” of economics, as they are often too economically rational to fit comfortably into the NFP sector, but too socially focused to gain acceptance within the IOF sector. This view was supported by Whyman (2012) who noted the decline of co-operatives from the centre of economic research and the textbooks. However, he noted that the enmity directed by many classical and neoclassical economists towards co-operatives was more than a century old and yet the co-operative movement continues to thrive.

This lack of appropriate recognition of and attention to the co-operative enterprise within economics is echoed in the field of management science. There is often confusion caused over the dual economic and social function or “symbiosis” of the co-operative, whereby it must operate both as an economically rational business, while also seeking to offer economic and social benefits to its members (Fairbairn, 1994). This makes it difficult to readily classify co-operatives into the more common IOF or NFP categories, yet they are also not easily accommodated into the newly emerging “social enterprise”

category. While co-operatives have some potential to be a “breeding ground” for social entrepreneurship and social innovation (Novkovic, 2008), they are not necessarily created for social purposes. This can make the co-operative and mutual enterprise difficult to readily classify within the existing business models that form the basis of our management theory.

These complexities and the definitional challenges facing the co-operative and mutual enterprise business model are the motivation for this paper. This work is part of a wider examination of the co-operative enterprise business model and its sustainability. Here we examine the co-operative within a systems context exploring its role in the macro economy. A particular focus of this study is the understanding of how the co-operative business model is designed and the essential elements that form and shape it. In this paper our interest is with the systems level and what constitute the key external forces that impact on the co-operative. We also examine the economic and social contribution of the co-operative enterprise to the wider economy. The main research questions being addressed by this paper are: 1) what is the nature of the economic and social capital contribution of the co-operative enterprise to the wider economy? 2) What are the key environmental forces that impact on the co-operative business model within a system’s context? We start with an overview of the co-operative enterprise within the wider systems context and then examine each element of a conceptual model relating to the co-operative in this context. The paper then concludes and offers suggestions for future research. The work is conceptual by nature although it draws on some case examples of co-operatives in order to provide illustrations.

THE CO-OPERATIVE ENTERPRISE IN A SYSTEMS CONTEXT

To understand an organisation requires attention to be given to at least three levels. The first is the macro-level task environment (Dill, 1958). This is the external environment in which the organisation seeks to operate and in particular those elements that are specifically relevant to its operations (D’Amboise and Muldowney, 1988). This is what we will refer to as the “systems level” to denote the economic or market system in which the co-operative enterprise exists. The other two elements comprise the meso or enterprise level within which the organisational configuration of the business model of the co-operative is found, the micro or membership level (Mazzarol, Simmons and Mamouni Limnios, 2011).

Historically, co-operatives have been identified as offering a “middle way” between free market competition and state ownership in an address to the American Institute of Cooperation delivered in 1937 Dr Paul Douglas of the University of Chicago made the following observations:

“In their social aspects cooperatives are obviously democratic and provide for the maximum of local participation and control. They are purely voluntary institutions, which thrive only so long as men wish to sell, borrow or buy through them. They exist only because people want them and only to the extent that they do. They are not implanted from above or forced on people, but grow out of the soil of our common life. They do not confiscate existing capital, but merely aim to build up new social capital. They do not seek to divide classes into rich and poor, owners and workers, but instead to include all classes. Thus they seek to unify social groups on the basis of their common interests. Within their ranks they follow, with rare exceptions, the principle of equality established by political democracy, of allowing each member to vote and only one irrespective of the amount of stock which they may own.” (cited in Lawless, 2003 p. 2).

This strong social role of the co-operative enterprise in conjunction with their rational economic business operations makes them somewhat unique within the broader economy. While not the most

common type of business, a co-operative or mutual enterprise operating within an otherwise open and competitive market often serves as a shock absorber with respect to pricing. In the case of consumer owned co-operatives they tend to help keep prices down, while in the case of producer co-operatives they help to stabilise and maintain better prices for inputs (Novkovic, 2008).

The co-operative and mutual enterprise sector also encompasses a wide range of different organisational and legal structures. For example, Birchall (2011) has developed a taxonomy of “member-owned businesses” that identifies at least eleven different classes grouped by the nature of their ownership and purpose. These include consumer-owned (e.g. retail, financial services, housing, education and utilities), producer-owned (e.g. primary producer, retailer or professional and shared services co-operatives), and employee or worker-owned. This focus on ownership by members is a critical point of definition for the co-operative and mutual enterprise. The difference between these types of enterprise and IOF or NFP organisations is typically described via five characteristics (Birchall, 2004): i) the voluntary nature of their membership; ii) the democratic nature of their governance (e.g. “one-member-one-vote”); iii) their independence from government ownership; iv) the collaborative nature of their ownership structure; and v) their purpose is to deliver benefits to members. As noted by Skurnik (2002):

“The main goal of a co-operative is not in the same sense as a limited company the production of a profit for its owners – although both strive to be economically efficient. On the contrary, the goal of a co-operative is to produce the services required by its members as efficiently and competently as possible. If a profit – or rather a surplus as it is called in the case of co-operatives – is, however, produced after making the reserves necessary to develop the company, it is returned to the members in proportion to their use of the company’s services. Decision making within a co-operative is normally on the basis of one vote per member.” (p. 112)

While these characteristics are broadly true for many co-operative and mutual enterprises there are many exceptions. This makes the co-operative enterprise a somewhat difficult organisation to classify and define which in turn poses potential problems for its study and understanding.

Despite differences in its size, structure, industry and rules of governance the modern co-operative enterprise can trace its origins back to the foundation of the Rochdale Society of Equitable pioneers in 1844 (Fairbairn, 2000). Of particular importance were the principles upon which that co-operative was founded, which despite only minor changes continue to guide such enterprises today. These principles plus the definition and values of co-operative enterprises are outlined in Table 1, where it can be seen that the emphasis for such businesses is on self-help and responsibility, democracy and equity, social justice, collaboration and concern for the community (ICA, 2013).

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We adopt a systems level analysis in order to focus attention on the links between the co-operative enterprise and those systemic factors within the task environment that impact upon it. Classic system-theoretic concepts structurally determine complexity through the investigation of the emergence and interconnectedness of the interrelationships between key elements (see: Simon, 1978; Weaver, 1978; Luhmann, 1984). Systems environments can be complex and uncertain, or stable and benign. A systems level analysis can provide a conceptual lens to analyse and understand the behaviour of the co-operative enterprise from a variety of perspectives. From a societal perspective there are specific patterns, dynamics

and mechanisms that drive change (De Haan, 2006). Interactions also exist within different actors via both formal and informal networks that are driven by overlapping interests and resource dependencies (Jessop, 1997; Klijn and Koppenjan, 2000). Within such networks, decisions and strategies are developed; negotiated and implemented that can lead to changes in the political economy and governance of co-operatives. An illustration of such implementation of changes facilitated by the network nature of co-operatives can be given by the case of the Crémant (white sparkling wine) producers in the Burgundy region of France (see Table 2). This co-operative has been developed around strong inter-professional linkages that enable the producers of Crémant sparkling wines to enhance their overall quality and marketability.

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Building a systems perspective allows us to consider persistent problems that are unstructured and highly complex because they are rooted in different societal domains, occur on varying levels, and involve various actors with dissimilar perspectives, norms, and values (Loorbach, 2010). For co-operatives it is useful to identify the relevant external environmental factors in seeking greater congruence and complementarities and reduced conflict and incompatibilities between technologies, institutions and individuals. The first point of focus is the role of co-operative's in the generation of economic capital.

THE CREATION OF ECONOMIC CAPITAL BY CO-OPERATIVES

A key role for any business enterprise within an economic system is its ability to generate economic capital. Co-operatives have been recognised as playing an important role in the alleviation of poverty in developing economies (Birchall and Simmons, 2008; 2009). However, their economic impact within developed economies is also substantial. For example, there are around 30,000 co-operatives in the United States with combined memberships of around 350 million. These enterprises are estimated to generate over 2 million jobs, US\$75 million in wages and benefits, US\$133.5 billion in value added income and almost US\$79 billion in patronage refunds and dividends to members (Deller, Hoyt, Hueth and Sundaram-Stukel, 2009). In the United Kingdom there are around 5,933 co-operatives with 13.5 million members and annual turnover of £35.6 billion and the sector has grown by around 20% since 2008 (Co-operatives UK, 2012). Australia has around 1,726 co-operatives and 103 financial mutual enterprises (ABS, 2012). The top 100 largest of these enterprises have a combined annual turnover of A\$14.8 billion, employ around 26,000 people and possess over 13 million people (Cooperatives Australia, 2011). New Zealand has fewer than 200 co-operative and mutual enterprises, however, they are found across all industry sectors and the top 40 largest produce 3% of the country's national GDP, provide direct employment for 43,000 people and have a combined revenue of over NZ\$39 billion (NZ Co-ops, 2011). In France cooperatives are also a major presence in the national economy. One of the sectors where there are many is agriculture. According to *Coop de France*, 75% of farmers in that country are members of at least one co-operative (Dedieu, 2011). In 2005 the 2,500 agribusiness co-operatives employ around 65,000 people in France. Together they generate an annual turnover of €47 billion (Ambiaud, 2009). In terms of activities, these co-operatives

have focused on three poles: wholesale, for a little less than half of the companies, wine production for a third, and cheese making for 10% (Ambiaud, 2009).

The Global Financial Crisis (GFC) of 2008-2009 was the most severe economic downturn the world has experienced since the Great Depression of 1929-1931 (Davis and Aliaga-Diaz, 2009). Even before the GFC there was recognition that co-operative and mutual banks were important to the maintenance of the global financial system due to their stability in comparison to conventional IOF banks (Hesse and Cihak, 2007). At the local level these institutions were also important in the economic development of communities (OECD, 2007). However, in the post-GFC environment it was the co-operative and mutual banks and credit societies that weathered the storm most effectively (Bibby, 2009), focused as they were on their members rather than maximising shareholder returns through speculative investments (Jayalakshmi, 2011).

Co-operative and mutual enterprises are therefore an important part of the social economy (Skurnik, 2002; Defourny and Nyssens, 2010; Defourny and Kim, 2011). Their importance as a “middle way” between the often volatile IOF enterprise sector and government ownership and control was highlighted during the 1930s following the Great Depression by Warbasse (1937) who noted that while many “for profit” IOF enterprises had sought assistance from government during that global economic downturn, something that co-operatives did not require. Unlike NFP enterprises or the mendicant IOFs facing bankruptcy, the co-operatives remained independent and self-determined. Further, despite its strong social philosophy, the co-operative movement is highly pragmatic and rational in its activities. According Warbasse (1937 p.14):

“Since cooperation is based upon no preconceived theories, but is experimental and pragmatic, methods sufficiently tried become principles. Every principle of Rochdale origin was once nothing more than a method employed by some societies and unknown or rejected by others. The only essential principles are (1) democratic control, (2) limited interest on capital, and (3) savings return in proportion to patronage.

A later attempt to explain the nature of co-operatives and their role within the broader economy was LeVay (1983) noted that seeking to study these organisations was often difficult due to their complex and differing methods of structure, governance and purpose. Even the Rochdale principles do not provide a definitive guide due to the fact that many co-operative and mutual enterprises adhere to some, but not all. Her analysis examined various theorists who had attempted to define the essence of the co-operative within the broader context of the market economy (e.g. Emilianoff, 1942; Robotka, 1947; Helmberger and Hoos, 1962). She essentially agreed with the view expressed by Warbasse (1937) that the defining features of the co-operative is its democratic control, treatment of share capital and rewards to patronage. However, she also noted that co-operatives offer “another means of providing collective goods”, within a market where government ownership and control is unavailable or undesirable. For this reason governments often treat co-operatives differently to IOF, such as in terms of taxation concessions.

Despite their apparent contribution to the wider economy the measurement of economic capital generation by co-operatives is a potentially complex issue due to the way in which share capital is not openly traded, profits are often reinvested and not paid as dividends to shareholders (Nembhard 2002). This can be of particular concern when applied to more traditional, non-distributing co-operatives which

are either tax exempt or enjoy tax benefits. In this case the wealth generated by the co-operative may be dispersed across the membership base and even to non-members. Conventional forms of economic wealth creation can be measured using simple measures such as wealth creation for both the co-operatives members and the wider community, employment creation that can be attributed to the co-op, and the development of assets in the form of hard and soft infrastructure.

In terms of wealth creation, Ward and McKillop (1997) found that co-operatives and credit unions were more likely to focus on promoting savings amongst members. Krivokapic-Skoko (2002) also suggests that producer co-operatives can provide enhanced financial benefits to farmers due to their ability to offer better farm gate prices or discounts on farm supplies through collective purchasing. In terms of job creation, Bartlett et al (1992) suggest that co-operatives can have higher productivity levels, better industrial relations track records and fewer dichotomies between the remuneration of employees and the senior management. Further, co-operatives are more likely to employ within the local community and seek to offer opportunities to unemployed. In terms of asset formation there are many examples of co-operatives that have created valuable infrastructure that would not have existed had it not been for the co-operative (Birchall 2011). This includes the formation of electricity generating and distribution co-operatives in the United States (Heriot and Campbell 2006).

THE CREATION OF SOCIAL CAPITAL BY CO-OPERATIVES

As noted above the co-operative has been identified as having a dual economic and social role. Of interest is the role played by co-operatives in the generation of social capital. However, measuring the social capital contribution of the co-operative is difficult. Social capital is a complex and ill-defined construct that encompasses a range of disciplines (Fine 2001). It has been defined as incorporating information, trust and norms of reciprocity that occur within a social network (Woolcock 1998). It is often viewed as an asset that is inherent in social relations and networks (Burt 1997; Leana and Van Buren 1999). According to Birch and Whittam (2008) there are four key types of social capital that potentially relate to the 'third sector' or social economy. These are: i) Norms – which are intra-community ties or bonds between individuals; ii) Networks – which relate to the extra-community ties that help to bind the society; iii) Links – which is the difference between communities that might otherwise be diverse; and iv) Holders – who are change agents or 'bridge builders' able to draw the communities together. Birch and Whittam (2008) suggest that social enterprise has the potential to bridge diverse groups and assist in the development of social capital. This is done by binding actors together and spanning social, economic and political boundaries in doing so.

At the centre of the social capital construct is the 'structural hole theory' which suggests that social capital is a function of brokerage opportunities within a network (Burt 1992). The idea of structural hole theory is that while in a perfect market one price clears the market because all participants have perfect information, this is not the case in reality. In most markets there are imperfections with some people unable to take advantage of the benefits available due to a lack of information or access. Interpersonal

connections link people together and those who possess strong networks own a degree of social capital that allows them to bridge the gaps or 'holes' in the market. As Burt (1997: 340) explains:

“The structural hole argument defines social capital in terms of the information and control advantages of being the broker in relations between people otherwise disconnected in social structure. The disconnected people stand on opposite sides of a hole in social structure. The structural hole is an opportunity to broker the flow of information between people and control the form of projects that bring together people from opposite sides of the hole.”

One of the key benefits of co-operatives for members is their ability to provide access to information (e.g. about prices) and to link the member to markets and knowledge that can enable them to overcome these structural holes. The membership of a co-op provides the member with access to resources that would otherwise be difficult or impossible for them to access alone (Leana and Van Buren 1999).

Social capital is an essential element in the formation and sustainability of the co-operative enterprise. As noted by Peredo and Chrismann (2006) it is important for social enterprises to draw upon the trust, norms and networks associated with social capital in order to facilitate their activities. The key components therefore are trust, reciprocity and networks. As they note:

“The elements typically identified in the notion of social capital include densely interlocked networks of voluntary relationships, a high degree of reciprocity in which short-term sacrifices are made with the implicit understanding that they will be repaid over time, trust, or a willingness to take risks with the conviction that others will respond cooperatively, and a broad agreement on social norms” (Peredo and Chrismann 2006: 314).

Trust is an important element in the fostering of cooperation between people and critical to its sustainability. Mayer, Davis and Schoorman (1995) proposed a relationship trust model that identified three factors of perceived trustworthiness: i) ability, ii) integrity; and iii) benevolence. Ability relates to the skills, expertise, strength and capacity of an individual or organisation to do something competently within a certain domain. Integrity relates to the trustee's ability to adhere to a set of principles that are acceptable to the trustor, but there is clearly a two-way relationship of mutual integrity that must work here. Finally, benevolence is a belief that both parties will engage in the relationship for reasons other than a self-interested profit motive.

In addition to trust the foundations of social capital are reciprocity and networks. Reciprocity has been recognised as an important element in motivating the participation of individuals in co-operative enterprises (McCain 2008). This 'tit-for-tat' response to negative behaviour can also be reward for positive behaviour, and one that has been identified as 'reciprocal altruism' in which giving to a network will eventually be returned over time (Trivers 1971; Killingback and Doebeli 2002). Reciprocity can be direct, indirect and spatial in nature, the latter relating to the ability of an individual to avoid negative "tit-for-tat" responses due to distance or transiency. Communities that are stable over time and have durable memberships are generally more able to develop cooperative behaviour than those with highly transient populations and unstable communities (Nowak and Sigmund 2000). The ability for a co-operative enterprise to remain strong and sustainable over time is its capacity to develop strong norms or trust and reciprocity (Fulton, 1999; Pascucci et al, 2011).

Without sufficient social capital the ability of social enterprises such as co-operatives to form and flourish is likely to be limited. Social capital takes two forms: i) bonding – the interconnection between people of a like kind within the immediate community; and ii) bridging – the connection with people from outside the immediate community who are not alike. It is here that networks are important. The co-operative has been described as “coalition” (Staatz, 1983; 1987) and a “nexus of contracts” (Sexton, 1983; 1986). Producer-owned co-operatives formed from small firms are particularly characterised as network organisational forms (Mazzarol, Mamouni Linnios and Reboud, 2013). An example of the creation of both economic and social capital within co-operatives can be found with the cases of the Australian bulk grains handling co-operatives Co-operative Bulk Handling (CBH) from Western Australia and the South Australian Co-operative Bulk Handling (SACBH). Both co-operatives generated significant jobs and turned over billions of dollars while providing substantial financial benefits to grower members as well as regional communities. They also fostered strong social capital between members and provided mutual support and a mechanism for networking for thousands of farmers across Australia (see Table 3).

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SOCIAL COOPERATION

Although the generation of economic and social capital are key outputs from co-operatives one of the key external forces that provides the conditions for their formation and sustainability is the level of social cooperation found within the community. A feature of social capital, social cooperation recognises that the existence of a co-operative or mutual enterprise is contingent on the willingness and ability of the community or society that forms its membership to want to establish and support them. The theory of social cooperation (Birchall and Simmons, 2004) suggests that collaboration between people will occur where there is a strong sense of common or shared goals and values, plus a sense of community identity resulting in mutual trust, respect and care by members for each other. Further, the community must have the necessary resources (e.g. assets, capabilities and skills), mobilisation and motivations to want to collaborate. This is consistent with the theory of community based enterprise (Peredo and Chrisman, 2006), which suggests that there must be a foundation of community skills, a “multiplicity of goals” that include both economic and social objectives, and a willingness to participate before an enterprise of this kind can be established. An example of this social cooperation can be found in the case of the COCEBI organic cereals co-operative in Nitry France (see: Table 4). This co-operative’s founding and overall success would not have occurred had it not been for the collaboration of those farmers who wished to develop organic cereal production and who joined together to form and support the co-operative.

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THE ROLE OF GOVERNMENT

Another important external factor that impacts on co-operatives as well as other types of business is government. The government plays a key role in the regulation of the economy and the setting of the legislative and policy environments in which the co-operative enterprise must operate. Government interest

in the development of the co-operatives sector varies from country to country and across time periods. However, any analysis of the co-operative enterprise must take into account government activity. A recurring theme is the desirability of governments creating an “*enabling*” environment. Different types of public policies shape the institutional environment of co-operatives (Hoyt, 1989; Fairbairn, 2000; Birchall and Simmons 2010). Hoyt (1989) characterises public policy approaches towards co-operatives on a spectrum as follows: i) destructive (government hostile, antagonistic or even violent to co-ops); ii) neutral (no public policy on co-ops); iii) supportive (favourable legislative and regulatory environments for co-ops); iv) participating (active provision of support services); and v) controlling (control over co-op decision-making). However, public policy approaches at either end of Hoyt’s spectrum may be equally destructive. At one end co-operatives may be killed through violence or neglect; at the other left diminished and inert through constant meddling or ‘smothering’ benevolence. This suggests that governments should generally aim for the median of ‘supportive’ interactions, perhaps occasionally erring towards neutrality (standing aside, supporting co-operative autonomy) or participation (synergistically combining resources, rather than interfering) where the situation demands it. This raises a key normative question about the nature and extent government of government involvement.

Key areas of government involvement that can impact on the co-operatives are legislative frameworks that influence incorporation and governance structures for co-operatives. Also of importance is the level of taxation relief that co-operatives can enjoy. Finally, there is the action taken by government to maintain competition with the economy, plus the support they give to the enhancement of the social economy (Spear and Bidet, 2003; Ingram and McEvily, 2007). An example of this role of government can be found in the cases of the bulk grains handling co-operatives Co-operative Bulk Handling (CBH) in Western Australia and the South Australian Co-operative Bulk Handling (SACBH) (see Table 5). Both co-operatives were initially assisted by the passage of state legislation that provided them with monopoly rights within their respective states, and then subsequent changes to federal government legislation resulted in the repeal of these state laws and significantly impacted on the two co-operatives. This saw both co-operatives forced to radically change their organisational strategy and structure, with SACBH eventually demutualising.

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INDUSTRY STRUCTURE

A co-operative enterprise exists within its industry context and as such is not immune from the forces that drive and shape the industry. Porter (1979; 1980; 1981) has drawn upon industrial economic theories to build a widely used framework for understanding the nature of industry structures known as the “5-Forces” model. This considers: i) level of industry rivalry; ii) threats of entry; iii) supplier power; iv) buyer power; and v) threats of substitution. The ability of an industry to generate attractive and sustainable profits will be contingent upon the nature of these factors (Peters 1993). The nature of the industry environment can be an important determinant of the need for a co-operative business model. For example, within conditions of perfect competition there are no barriers to market entry or exit and many small, undifferentiated players. However, such conditions make it difficult to secure premium pricing and force

all market players into a price taking position. There is usually little long-run profit or incentives for innovation. The formation of a co-operative amongst small producers can assist in reshaping the market dynamics in favour of these smaller players.

The history of co-operatives shows that collaborative behaviour amongst small producers or the wider community can overcome many of these barriers and allow them to set up credit unions, building societies, marketing and processing facilities and bulk purchase schemes. In some cases the formation of co-operatives and mutual enterprises has been blocked by the erection of artificial barriers. This was the case in the United States where attempts to establish health co-operatives in the 1930s were blocked in many states by lobbying action from the American Medical Association (AMA) (Birchall 2011). In terms of supplier and buyer power the co-operative (depending on whether it is a producer or consumer owned type) can serve to enhance the bargaining power of small producers such as farmers, small retailers or individual households (see: Gide, 1922; Torgerson, 1977; Lee and Mulford, 1990; Gall and Schroder, 2006; Pascucci, Gardbroek and Dries, 2012). An example of the adaptation of a co-operative to its industry structure can be found in the case of the Union Auloise co-operative in France (see Table 6).

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THE NATURAL ENVIRONMENT

The importance of the natural environment is increasingly recognised and integrated in strategic decision making. The distinction between ethical and utilitarian arguments for doing so is unclear, as altruistic and self-interested motives are commonly mixed (Stark 1993). The challenges of global climate change and the general impact of pollution, loss of biodiversity, fragility of ecosystems including soil, river systems and the marine environment all increase the level of uncertainty for businesses. This can be particularly relevant to producer-owned co-operatives in areas such as agriculture, forestry and fishing, but also those in financial services such as insurance. Environmental uncertainty can emerge from environmental or organisational factors, as well as the lack of knowledge within the enterprise as to how to respond (Busch and Hoffmann, 2009). Corporate environmentalism is driven by regulatory forces, public concern, competitive advantage and top management commitment, while industry type in terms of sector environmental impact has been found to moderate these relationships (Banerjee, Iyer and Kashyap 2003). Environmental uncertainty therefore impacts on managerial decisions as it influences managers' ability to effectively assess the changing business environment and the likely outcomes of potential responses (López-Gamero, Molina-Azorín and Claver-Cortés 2011). Primary industries are greatly impacted, as environmental change and uncertainty directly affect production volumes, costs and quality. Agricultural co-operatives are typical examples of enterprises where the natural environment can be a determining factor of the viability of their business model. An example of this is found in the case of the Mount Barker Co-operative in Western Australia. This co-operative was founded in 1937 as a fruit packing business and developed strongly around that purpose until the 1970s when a change in climatic conditions saw a reduction in fruit production. The co-operative changed its purpose to that of a retail business and continues to operate successfully (see Table 7).

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Organisational response can range from conformance to regulations and standard industry practices to proactive environmental strategies with a strong voluntary component. The choice of strategy is found to be dependent upon managerial interpretation of environmental challenges as threats or opportunities (Sharma 2000). Proactive environmental strategies with both an internal and external focus (corporate and marketing strategies) have gradually evolved and have been supported by large, international organisations, however practitioners are finding that some of these strategies may perpetuate, even increase environmental problems, or have no clear payoffs (Aragon-Correa and Rubio-Lopez 2007). In light of increasing frequency of extreme weather events and their impacts on socio-economic systems, some researchers advocate the need to broaden current organisational adaptation approaches to new conceptual and practical approaches that can develop organisational resilience, enabling firms to reorganize in smaller scales and reduce the risk of organisational collapse (Vogus and Sutcliffe 2007, Linnenluecke and Griffiths 2010).

CONCLUSIONS AND DIRECTIONS FOR FUTURE RESEARCH

Albert Einstein once said that ‘the problems we have in the world will not be solved by the level of thinking that created them’. For this paper it is important to examine this statement in four different ways, two positive (based on complementarities between the co-operative enterprise and wider system levels) and two negative (based on incompatibilities between these two levels). The positive ways of looking at these issues are as follows. First, co-operatives may benefit in important ways from key inputs from government, the industry sectors to which they belong and the level of social co-operation emerging from civil society. There are widespread empirical examples of this that go far beyond the scope of this paper. Second, co-operative enterprises may in turn provide key outputs of economic and social capital that help to: i) enhance the public goods provided by government; ii) keep the industry sectors to which they belong honest and competitive; and iii) strengthen civil society through increased levels of trust, reciprocity and networking. There are numerous empirical examples of each of these benefits that go far beyond the scope of this paper. However, it is not always assured that such complementarities will result from interaction between co-operative enterprises and the wider system. For example, if co-operatives are ‘used’ as a way to solve problems created in the wider system (e.g. government using co-operatives to build social capital, or to organise agricultural production), they are likely to fail. Cooperation cannot be imposed or exhorted; it is dependent on the motivation of members that comes from shared goals, shared values and a sense of community and is enshrined in member ownership, member control and member benefits. If co-operative enterprises are over-protective of their organizational autonomy and do not engage positively with the wider system, they face potential failure resulting from an inability to solve all the problems they face in isolation. It may be important for co-operatives to carefully build relationships with IOFs and with government if they are to survive and thrive. On either side, any unwillingness or inability to address these can result in sub-optimal outcomes. What seems clear is that the nature of the above interactions is complex, and the emergent qualities of the system in relation to particular interventions cannot be

determined in a predictable or linear way. There is much work to be done to consider the ways in which these interactions and interventions serve to influence emergent patterns of complementarities or incompatibilities in different co-operative contexts. Figure 1 illustrates our conceptual model which provides a map for considering these possibilities and how they might play out.

< INSERT FIGURE 1 HERE >

Future research will examine each of the four inputs and two outputs from the conceptual framework using case study data to identify specifically how these elements influence the behaviour of the co-operative enterprise and its performance and sustainability. While it seems that co-operatives do make a significant economic and social capital contribution to the economy the dynamics of how the four “input” factors influence the co-operative business model requires further attention.

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Figures and Tables

Table 1: The Co-operative Identity Values and Principles

Definition
A co-operative is an autonomous association of persons united voluntarily to meet their common economic, social and cultural needs and aspirations through a jointly-owned and democratically-controlled enterprise.
Values
Co-operatives are based on the values of self-help, self-responsibility, democracy, quality, equity and solidarity. In the tradition of their founders, co-operative members believe in the ethical values of honesty, openness, social responsibility and caring for others.
Principles
<ol style="list-style-type: none"> 1. Voluntary and open membership – Co-operatives are voluntary organisations, open to all persons able to use their services and willing to accept the responsibilities of membership, without gender, social, racial, political or religious discrimination 2. Democratic member control – members contribute equitably to, and democratically control, the capital of their co-operative. At least part of that capital is usually the common property of the co-operative. Members usually receive limited compensation, if any, on capital subscribed as a condition of membership. Members allocate surpluses for any or all of the following purposes: developing their co-operative, possibly by setting up reserves, part of which at least would be indivisible; benefiting members in proportion to their transactions with the co-operative; and supporting other activities approved by the membership. 3. Member economic participation – co-operatives are autonomous, self-help organisations controlled by their members. If they enter into agreements with other organisations, including governments, or raise capital from external sources, they do so on terms that ensure democratic control by their members and maintain their co-operative autonomy. 4. Autonomy and independence – co-operatives are autonomous, self-help organisations controlled by their members. If they enter into agreements with other organisations, including governments, or raise capital from external sources, they do so on terms that ensure democratic control by their members and maintain their co-operative autonomy. 5. Education, training and information – co-operatives provide education and training for their members, elected representatives, managers, and employees so they can contribute effectively to the development of their co-operatives. They inform the general public - particularly young people and opinion leaders - about the nature and benefits of co-operation. 6. Co-operation among co-operatives – co-operatives serve their members most effectively and strengthen the co-operative movement by working together through local, national, regional and international structures. 7. Concern for the community – co-operatives work for the sustainable development of their communities through policies approved by their members.

Source: www.ica.coop (2013)

Table 2: Systems Level Case Example – Crémant wine co-operative France

Co-operatives have proved they are an essential link between the inter-professional federation and the wine making cooperatives and a powerful relay regarding the decisions about the regulation and improvement of the production quality that the inter-professional federation wishes to implement. Indeed, co-operatives manage their members and give them advice, especially in the technical field. They played for example a central role in implementing a new regulation measure in grape production (plot allocation) before it became mandatory in the new AOC certified controlled origin label requirements.

Crémant's fast-growing production raises an acute question regarding the grape supply security of its makers. In Burgundy wine making, the superposition of grape growing zones of different appellations (Regional Appellation and Crémant appellation), means that one plot of vines can produce grapes made for the production of both still and sparkling wine. According to the years, the wine grower can direct his/her grape production towards the appellation that will best value his/her product in relation to different parameters (output, grape ripeness, climate conditions, grape prices, etc.). In order to limit opportunistic behaviour of wine growers who wait as long as possible to decide where their grapes will go, the inter-professional crémant federation wanted to use a grape production regulating measure that is applicable to vineyards: a plot allocation early statement.

The method involves a declaration made by wine growers before March 31st to identify which plots will be used to make Crémant de Bourgogne. The inter-professional federation wanted to use the grape production regulating measure to ensure the industry's development as it is faced with a context of substantial restructuring that causes the absence of contracts between the different players. In addition, it aims to avoid individualistic behaviour that in the long run can question the industry's longevity. Co-operatives want to give better value to their members' grapes and have strongly supported the implementation of this regulation. Due to the strong links inside the cooperatives, the measure has been widely accepted and is starting to be implemented.

Table 3: Output Factors Case Example – CBH and SACBH Australia

Co-operative Bulk Handling (CBH) was founded in 1933 and grew steadily throughout the next 80 years into Australia's largest co-operative enterprise and one of the largest integrated grains handling, storage and trading businesses. The South Australian Co-operative Bulk Handling (SACBH) was founded in 1955 and also grew into a major business. Following several restructures and a demutualisation SACBH merged with the Australian Barely Board (ABB) to form ABB Grain Ltd and by 2009 was listed on the Australian Stock Exchange but was taken over by Canada's Viterra the same year.

Economic Capital Creation

CBH and SACBH both created significant economic value for growers. In their early years this involved providing price and market stability during period of depression and war. Significant investments in bulk grain handling and storage infrastructure provided efficient supply chains. From the 1980s the move to create international marketing and offshore joint ventures provides for profits used to under-pinned their domestic handling operations. In 2012 CBH had an annual turnover of A\$1.9 billion and employed around 2,500 people while supporting 4,500 grower members. At its peak in 2009 SACBH, then known as ABB Grain, had 16,300 members, employed 1,100 people and was Australia's largest agribusiness.

Social Capital Creation

The co-operative business structure of CBH and SACBH drew growers together into strong organisations with the ability to ensure individual farmers are able to secure benefits via democratic principles in the governance model "one-member-one-vote". Both SACBH and CBH initially opted for non-distributing tax exempt business models. However, while CBH maintained its "pure" co-operative model, SACBH opted for demutualisation. While CBH continues to provide a social capital creation framework for WA grain producers, the demise of SACBH has left the South Australian growers without a "voice" or coordinating influence in their industry.

Table 4: Social Cooperation Case Example – COCEBI cereals co-operative France

An example of community social cooperation identity and commitment is illustrated in the creation of the COCEBI cereals co-operative in 1983 in Nitry (department of Yonne in France) and today is the leading French organic cereals co-operative. At the time, seven farmers faced with the lack of existing structure and institutions decided to set up a co-operative in order to organize both the offer and the marketing of their organic products with the objective to sell them. At the beginning of the eighties, creating an organic co-operative was an indispensable organisational innovation for these farmers in order to sell their harvests. Indeed, the cereal business and operators (conventional collection cooperatives, mills, etc.) were hostile to the very idea of organic cereal production.

The COCEBI cooperation innovated on an organisational level in order to promote an agricultural and rural eco-development project that did not follow the agricultural production model. To implement the project the co-operative relied on a cooperative ideal organisation different from other co-operative organisations. Therefore there was a strong link between the co-operative and its members; the farmers managed a part of the stockpiling and the transformation in return for financial help. Furthermore, some of the co-operative's activities, such as management, transport and batch identification were done by temporary contract co-operators.

Table 5: Role of Government Case Example – Grains Industry Co-operatives Australia

The bulk grains co-operatives Co-operative Bulk Handling (CBH) of Western Australia, and the South Australian Co-operative Bulk Handling (SACBH) illustrate the influence of government regulation. The formation of CBH and SACBH was made possible by the passing of the Bulk Handling Act WA (1936) and the Bulk Handling of Grain Act SA (1955). The latter being delayed for nearly 20 years due to opposition from within SA Parliament.

Once formed these legislative structures provided the two co-operatives with monopolies over bulk grain handling in their respective states and enabled them to grow strongly. National and international competition was restricted allowing them to offer prices that were stable to their members. However, the move towards market deregulation in the 1980s led to the passage of the federal Wheat Marketing Act (1987). This legislation removed the monopolies previously enjoyed by these two co-operatives and led to the repeal of the two state acts.

The market deregulation triggered by the Wheat Marketing Act (1987) resulted in an opening of the level of competition faced by CBH and SACBH during the 1990s. This resulted in SACBH demutualising in 2000 and CBH nearly demutualising. Both businesses adopted more competitive postures and restructured to meet the new market environment.

Table 6: Industry Structure Case Example – Union Aubeoise wine co-operative France

The Union Aubeoise is a federation of cooperatives created in 1967 by wine grower cooperatives from the Champagne region. The idea at the time was to create a common processing and marketing plan in Champagne and to retain a more substantial part of its added value. Today the Union Aubeoise is one of the major agricultural businesses in the region: 900 members from 12 cooperatives which are independent and carry out complementary activities. In order to be less dependent of wine dealers, the Union Aubeoise has developed its own name (Devaux is its emblematic brand).

The supply race is very competitive in Champagne and its members are very sought-after. Consequently, the Union Aubeoise set up different strategies to maintain member loyalty. Its development department is responsible for increasing membership in the different cooperatives. The technical department offers help to members regarding regulatory, environmental and quality methods of the vineyards. Members accept this help, called Quality Vineyard Approach (DQV) on a voluntary basis. Following a conflict that opposed wine makers and wine dealers, and the 2008 crisis, one of the Union Aubeoise's strategies was to find a differentiation advantage to emphasise its brand policy. The objective was to become an ineluctable partner and to anticipate supply changes at the Champagne houses that buy half of the federation's cooperatives' production.

The objective of the Quality Vineyard Approach is to improve qualitative and environmentally friendly methods and is has been implemented in the volunteer vineyards for the past 10 years; 184 out of the 900 members are concerned for an area of 1,000 hectares in 2010. This approach has been able to bring a competitive advantage to the Union Aubeoise as this quality is perceived and valued by its consumers.

Table 7: Natural Environment Case Example – Mount Barker Co-operative Australia

The Mount Barker Co-operative was founded in 1917 by fruit growers in Western Australia for fruit packing and cool storage facilities. The formal establishment of the co-operative occurred in 1937. It supported the farmers through the Great Depression and was a major exporter of apples, pears and other fruits both fresh and dried from the 1940s to the 1970s. However, climate change leading to a significant reduction in rainfall placed pressure on the production of fruit, which came on top of the loss of export markets due to the UK joining the European Common Market in the 1960s.

Fruit growers were faced with having to address the drying climate through the introduction of deep drainage and more sophisticated irrigation systems. Many chose to abandon their orchards rather than invest in major irrigation infrastructure. Combined with the loss of export markets this triggered a decline in co-operative membership and patronage.

The co-operative had established a general store in 1948 to supply produce to the general public and supplies to its members. As the fruit production declined due to climate change the co-operative shifted from fruit packing and export to consumer retailing. In now operates as an integrated retail co-operative providing supermarket, hardware and farming supplies to the regional community.

Figure 1: The Co-operative Enterprise within a Systems Context

