

# New Generation Cooperatives: The Potential of an Innovative Institutional Arrangement for Mediterranean Food Supply Chains

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## 1. Introduction

An institution of collective entrepreneurship, agricultural cooperatives are user-owned, user-controlled, and user-benefited businesses which have helped farmers around the world for more than a century in many ways (Knapp, 1969; Lockart, 1967). Provision of services, procurement of inputs and marketing/processing of food products are just a few of them. In 1996, agricultural cooperatives in Mediterranean European Union member countries (Portugal, Spain, Italy and Greece) commanded considerable market shares in both the farm input and food industries (Table 1). Similar statistics have been reported for the new Mediterranean EU-members, Malta and Cyprus (e.g. Rizzo, 1994; Theophanous, 1994).

In this paper I introduce a unique type of producer-owned, -controlled and -benefited business organization, the New Generation Cooperative (NGC), and proffer an evaluation of its potential for Mediterranean food supply chains. First, I describe the evolution of traditional agricultural cooperatives and provide a taxonomy of Mediterranean agricultural cooperatives. In the same section, I describe five problems that inhibit offensive cooperative investment in capital-intensive industries, and discuss possible solutions. Subsequently, I present the unique organizational characteristics of NGCs and their consequences. In the penultimate section the potential of the NGC model for

## Abstract

During the last century, traditional agricultural cooperatives have been instrumental to the survival and well being of Mediterranean farmers. However, due to the vaguely defined property rights structure they face five unique investment and collective decision making constraints. This paper introduces an innovative producer owned, controlled and benefited institutional arrangement, the New Generation Cooperative, that emerged in order to ameliorate the aforementioned constraints. The potential of the New Generation Cooperative model for the Mediterranean food supply chains is analyzed and prerequisites for its success are identified. It is concluded that farmers and their communities would benefit from the adoption of this model but some modifications to it might be necessary. Scholars and practitioners need to invest resources in studying the particular problems that might be encountered in case this new schema of collective entrepreneurship is adopted.

## Résumé

*Au cours du siècle dernier, grâce aux coopératives agricoles traditionnelles, les agriculteurs méditerranéens ont réussi à assurer leur survie et leur bien-être. Toutefois, à cause de la structure des droits de propriété un peu vagues, ces coopératives doivent faire face à cinq contraintes d'investissements et de prise de décision collective. Ce travail présente un accord institutionnel novateur géré et contrôlé par le producteur et à son avantage, à savoir, la Coopérative de Nouvelle Génération qui est née pour faire face aux contraintes susdites. On analyse les potentialités de la Coopérative de Nouvelle Génération pour les chaînes d'approvisionnement alimentaire méditerranéennes après avoir identifié les conditions nécessaires pour son succès. Il en résulte que les agriculteurs et leurs communautés bénéficieraient de l'adoption de ce modèle, mais des modifications pourraient se rendre nécessaires. Les scientifiques et les opérateurs ont besoin d'investir des ressources pour étudier les problèmes particuliers qui se poseraient au cas où ce schéma d'entrepreneuriat collectif serait adopté.*

the Mediterranean food supply chains is analyzed. In the last part of the paper, I provide concluding remarks and outline a future research agenda.

## 2. The Evolution of Traditional Agricultural Cooperatives

Most agricultural cooperatives in the northern part of the Mediterranean basin originated in the late 1800s and early 1900s due to a combination of economic, farm organization, and public policy reasons. During the next years, their degree of success varied by country, region, and industry. These traditional agricultural cooperatives are producer-owned, and -controlled organizations

with open membership, risk capital generated primarily by means of retained earnings from member patronage, and illiquid equity ownership rights.

The evolution of the Mediterranean agricultural cooperatives can be usefully conceived as a five-stage model (Cook, 1995).

### 2.1 Stage I: Cooperative Formation

Agricultural cooperatives are formed at the end of the 19th, beginning of the 20th century mainly because of:

1. The desire to avoid the negative consequences of market power exerted by either a monopolist or a monopsonist.
2. The need to attain scale economies in the procurement of inputs and/or services, and the marketing of agricultural products.
3. The attempt to reduce the risk facing individual producers.

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Table 1. Market Shares of Agricultural Cooperatives in the Mediterranean EU-member Countries 1996, (%)

COUNTRY	INDUSTRY				
	Dairy	Fruit & Vegetables	Meat	Grains	Farm Inputs
Greece	20	12-51	5-30	49	
Italy	38	41	10-15	15	15
Portugal	83-90	35	--	--	--
Spain	35	15-40	--	20	--

4. The quest to provide missing services.

5. The drive to achieve additional margins.

Such cooperatives fall in one of the following categories:

1. Local Multipurpose Cooperatives—Local in scope, these multifunctional agricultural cooperatives were formed in order to provide their members with a diverse set of services (e.g. input procurement, marketing of produce, credit, bargaining). In some cases, such cooperatives started as single purpose organizations (e.g. credit, or insurance cooperatives).
2. Regional Multipurpose Cooperatives—in order to achieve economies of scale and improve their bargaining position in the market, local multipurpose cooperatives formed secondary level associations with a regional (and sometimes national) business focus.
3. Production Cooperatives—Usually, these were local associations of agricultural workers or farmers with small-sized agricultural holdings, whose primary goal was to lease land and share the costs and benefits of collective production. Historically, this type of cooperatives has been the least successful.
4. Processing and/or Marketing Cooperatives—Single commodity cooperatives formed to process agricultural commodities past the farm gate. However, not many of them were engaged in marketing products to final consumers.
5. Mandatory Marketing Cooperatives—During the early stages of cooperative development, the governments of some Mediterranean countries (e.g. Greece) used the cooperative as a policy tool. Governments formed mandatory marketing cooperatives in an attempt to ensure that the farmers of a region producing a single product had the bargaining power necessary to deal with middlemen and the food industry. Laws were voted which required that farmers of a product in a particular region could not sell their products unless they were members of the local marketing cooperative.
6. Cooperative Joint Ventures—Tertiary level business organizations that were formed to achieve national level economies of scale in the procurement of inputs or processing and marketing of agricultural products.
7. Cooperative Companies—Investor-oriented firms owned by cooperative associations; mainly formed to overcome barriers in capital acquisition posed by cooperative principles and/or national laws and regulations.

## 2.2 Stage II: Winnowing

Only those cooperatives that were formed to correct market failures survived past the infant stage. On the other hand, cooperatives formed to combat reduced prices due to excess supply were usually less successful.

## 2.3 Stage III: Emergence of Vaguely Defined Property Rights

The survivor cooperatives of Stage II, succeed in correcting market failures. Subsequently, their competitors (Investor-oriented firms-IOFs) modified their strategies and reduced prices. Trying to minimize their costs and invest in capital-intensive industries, in order to be competitive and thus better serve their members, cooperatives are faced with two sets of problems: (a) Investment constraints, and (b) Collective decision-making constraints. The first set of constraints includes the free rider, the horizon and portfolio problems, while the latter refers to the control and influence costs problems (Cook, 1995). These five problems we call “Vaguely Defined Property Rights Constraints” (VDPRCs).

The VDPRCs are generated by a vaguely defined “user versus investor” set of property rights. The adoption of cooperative principles makes cooperatives complex organizations whose residual claims are restricted to the agent group that supplies patronage under the organization’s nexus of contracts (i.e. the member-patrons) and whose board of directors is elected by this same group (Vitaliano, 1983). Such restrictions create not fully delineated property rights that give rise to the aforementioned constraints.

Property rights are defined as a socially and legally enforceable right to select uses of an economic good. Thus, property rights give owners claim to the residual returns of the firm and a part in the decision process. Legal constraints regarding the asset use or the assignment of rights to others through contracts prevent the owner from exercising all the rights associated with ownership of an asset. Fundamental contracts within an organization specify 1) the nature of the residual claims, and 2) the allocation of the steps of the decision process among agents (Fama and Jensen, 1983). Since “contracting man” is limited in foresight, knowledge, skill and time, and displays opportunistic tendencies, contracts are incomplete (Williamson, 1985). It becomes impossible to construct a contract *ex ante* that accounts for every possible future event, determines how each party will respond and divides any net income resulting from the event. The costs involved in monitoring and enforcing these contracts become considerable as well.

Therefore, it becomes critical to determine who receives the residual property rights, which are rights not specified in a contract. The transaction cost school of economics argues that clearly defined, enforceable and tradable property rights produce a socially efficient outcome. In fact, “If no

one clearly owns a valuable asset, then no one has an incentive to guard its value properly. If property rights are not tradable, then there is little hope that assets will end up with those people who can make best use of them and so value them most. If property rights are not secure, then owners will not invest great amounts in assets that they may lose with no compensation, or they may sink valuable resources in protecting their claims" (Milgrom and Roberts, 1992, p. 294). Vaguely defined property rights create losses in efficiency because the decision-maker no longer bears the full impact of his or her action. Cooperative scholars have identified and analyzed the following property rights-related organizational limitations in traditional agricultural cooperatives (Vitaliano, 1983; Cook, 1995; Staatz, 1987; Porter and Scully, 1987; Iliopoulos and Cook, 1999).

### **2.3.1 Investment Constraints**

This generic type of problems result in the dilution of members' incentives to invest in their cooperative; they include the free rider, the horizon and portfolio constraints.

#### **2.3.1.1 The Free Rider Constraint**

The external free rider constraint is a common-resource problem, which arises when property rights are non-tradable, insecure, or unassigned. Cooperative property rights are not well suited and enforced to ensure that current member-patrons, or current non-member-patrons, bear the full costs of their actions and/or receive the full benefits they create. This situation occurs particularly in open membership cooperatives. An example would be when a pear producer refuses to join the membership of a pear bargaining association but captures the benefits of the negotiated terms of trade. A more complex type of free rider problem occurs when dealing with the common property problem (or insider free rider problem). This occurs when new members obtain the same patronage and residual rights as existing members and are entitled to the same payment per unit of patronage. This set of equally distributed rights combined with the lack of a market to establish a price for residual claims that reflects accrued and present equivalents of future earnings potential creates an intergenerational conflict. Because of the dilution of the rate of return to existing members, a disincentive is created for them to invest in their cooperative.

#### **2.3.1.2 The Horizon Constraint**

The horizon problem refers to the disincentive for cooperative members to invest in long-term projects. Benefits flowing to the patron instead of the investor is the genesis of this cooperative investment problem also. Specifically, the horizon problem occurs when a member's residual claim on the net income generated by an asset is shorter than the productive life of that asset (Porter and Scully). This problem is caused by restrictions on transferability of residual claimant rights and the lack of liquidity through a secondary market for the transfer of such rights. The hori-

zon problem creates an investment environment in which there is a disincentive for members to contribute to growth opportunities. The severity of this problem intensifies when considering investment in research and development, advertisement, and other intangible assets. Consequently, there is pressure on the board of directors and management to (a) increase the proportion of the cooperative's cash flow devoted to current payments to members relative to investment, and (b) accelerate equity redemptions at the expense of retained earnings.

#### **2.3.1.3 The Portfolio Constraint**

The portfolio constraint can be viewed from the cooperative firm's point of view as another equity acquisition problem. The lack of transferability, liquidity, and appreciation mechanisms for exchange of residual claims prevents members from adjusting their cooperative asset portfolios to match their personal risk preferences. The cause of this problem is again the tied-equity issue—the investment decision is "tied" to the patronage decision. Therefore, members hold suboptimal portfolios, and those who are forced to accept more risk than they prefer will pressure cooperative decision-makers to rearrange the cooperative's investment portfolio, even if the reduced risk portfolio means lower expected returns (Vitaliano, 1983).

Traditionally, cooperatives have attempted to mitigate the investment problems by retaining earnings as member equity. But in cooperatives, members demand that earnings retained for investment must eventually be returned to the member-patrons. Consequently, cooperative equity capital might be viewed as a form of debt. The redemption of this equity-quasi debt eventually places a burden on the cooperative's asset base and leads to slower growth. For members, this equity is usually returned at book value regardless of the value of the cooperative business itself. Hence, members do not receive a return on their investment reflecting firm growth value unless the cooperative is dissolved or sold (Cook, 1995).

### **2.3.2 Collective Decision-Making Constraints**

Collective decision making constraints refer to the extra costs incurred by cooperatives in making collective business decisions; they include the control and influence costs constraints.

#### **2.3.2.1 The Control Constraint**

The control constraint refers to the agency costs arising from the divergence of interests between the principals (membership and board of directors) and the agent (manager) in agricultural cooperatives (Cook, 1995). Since the information provided and external pressures exerted by publicly traded equity instruments (stock market) is not present in cooperatives, and the members serving on the Board of Directors may have little or no experience in effectively exercising control, governance bodies operate with a handicap. Two major categories of such costs exist; the costs of

**Table 2 . Types of Influence Costs in Agricultural Cooperatives**

Opportunity costs of cooperative stakeholders' time	
Costs of monitoring and enforcing decisions that create quasi-rents	
Costs of delayed decisions :	i) coordination costs ii) measurement costs
Costs of discretionary authority	
Costs of wrong or no decisions	
Costs of policies designed and implemented in order to avoid influence costs	

monitoring the manager, and the costs of managerial opportunism that result from the failure to monitor the manager with perfect effectiveness (Hansmann, 1996). Monitoring costs for cooperative principals can further be divided into three types: (1) the costs of informing themselves about the operation of the firm, (2) the costs of communicating among themselves for the purpose of exchanging information and making decisions, and (3) the costs of bringing their decisions to bear on the firm's management (Hansmann 1996, p.36).

### 2.3.2.2 The Influence Costs Constraint

Influence activities arise in organizations when organizational decisions affect the distribution of wealth, or other benefits among members or constituent groups of the organization. The affected individuals or groups, in pursuit of their self interests, attempt to influence the decision to their benefit. The influence costs problem can be viewed as a collective decision making problem. Because shares in most cooperatives are neither transferable nor tradable, members that cannot exit the cooperative are left with only one option: voice<sup>1</sup>. Especially if the cooperative is engaged in a wide range of activities, then diverse objectives among its members can lead to damaging influence activities that increase transaction costs within the cooperative, lead to wrong or no decisions at all, and finally, may lead to the dissolution of the cooperative.

A single pool system can generate conflict among various groups of members within the cooperative. As each of these groups tries to influence the decisions of the Board and the management to its benefit, the cooperative firm incurs high costs that may take many forms: delayed business decisions, wrong decisions, and many others. The vaguely defined property rights in cooperatives, especially when accompanied by highly heterogeneous membership, can lead even to the dissolution of the organization. The diversity of the set of customers would cause problems in agreeing on the policies to be followed. The rules for cost allocation and the determination of prices for each of the various groups of members would create conflicts endangering the survival of such a cooperative.

How might each of these constraints be ameliorated? The

free rider and horizon constraints require a solution that aligns members' investments with their level of patronage (Cook and Iliopoulos, 1999). These investments must also reflect changes in the values of the cooperative's current and future cash flows (Staatz, 1987). On the other hand, a solution to the portfolio problem must align members' investment with their preferred level of risk and reward (Cook, 1995). To correct the control problem, a vehicle must be designed that reduces the agency problem and permits the board of directors to oversee management's performance without costly monitoring and enforcement measures (Vitaliano, 1983). Finally, mitigating the influence costs problem requires the adoption of decision-making processes and cost/benefit allocation rules that result in members bearing the full impact of their actions (Iliopoulos and Cook, 1999)

### 2.4 Stage IV: Restructuring Analysis

Cooperative decision-makers become aware of the VD-PRCs and conclude that their options are three: (i) exit, (ii) continue, or (iii) transition.

### 2.5 Stage V: Restructuring Choice

The cooperative leadership chooses between the aforementioned options of (i) exit, (ii) continue, and (iii) transition.

(i) Exit: In this option, cooperative leaders decide to either (a) liquidate, or (b) restructure as an investor-oriented firm.  
 (ii) Continue: Cooperatives attempt to ameliorate the VD-PRCs and, particularly, the investment constraints, by either seeking outside capital through some form of strategic alliance or implementing a proportionality strategy of internally generated capital.  
 Farmer cooperatives across the US and parts of Western Europe, faced with the five property rights problems described above, have tried to find solutions compatible with the cooperative principles. Traditional agricultural cooperatives have tried to solve these problems by adopting strategies designed to minimize conflicts among their membership and generate capital for future growth. Such strategies include, among others, the creation of subsidiaries, joint ventures with other cooperatives and/or IOFs, in order to access capital; the use of marketing contracts with the members, to ameliorate the free rider problem; the implementation of base capital plans that achieve the proportional investment by members according to their level of patronage, to address the horizon problem; proportional voting, to address the control problem; and multiple pool systems, to address the portfolio problem. Some of these strategies have also been adopted by Mediterranean agricultural cooperatives.

(iii) Transition: Some cooperatives decide to switch to a new organizational form, the new generation cooperative (NGC). A NGC is a value-added marketing cooper-

<sup>1</sup> According to Hirschmann (1970), when the members of an organization are dissatisfied with their organization's policies, they have one of the following options: Voice, Exit, or Loyalty. Voice in this context is a means of dynamically demonstrating their dissatisfaction, in order to achieve a change in the organization's policies

ative that has been successful in ameliorating the five vaguely defined property rights constraints.

### **3. Organizational Characteristics of New Generation Cooperatives and Their Consequences**

New generation agricultural processing cooperatives (NGCs) were first organized by farmers in the Upper Great Plains of the US in the early 1990s, as an attempt to deal with external pressures such as reduced commodity margins and increased income volatility. At the same time, this new organizational form was an effort by producers to solve the problems associated with the property rights structure of traditional cooperatives. NGCs focus on offensive value-added processing of their members' products rather than on commodity marketing, which was the drive behind the formation of defensive traditional agricultural cooperatives. NGCs have been active in many food and agribusiness industries. The major organizational characteristics of New Generation Cooperatives include (Cook and Tong, 1997).

#### **3.1 Defined membership**

Instead of acting as clearinghouses for raw commodities, NGCs are restricted membership cooperatives that accept only a predetermined quantity of a specific product from each member. The number of members depends upon the proposed capacity of the cooperative's operations. One of the key features of NGCs is their ability to ameliorate the free rider problem and thus control supply or access to the cooperative's operations. In traditional cooperatives, members can enter and exit as they please, and cooperatives operating without marketing contracts with their members have no way to guarantee a specific operating capacity at any one time. By limiting membership to those producers who buy the right to supply the cooperative, the NGC is able to ensure a steady supply of the agricultural inputs required for running operations at the most efficient scale. In a NGC, the membership is generally not permanently closed. If the cooperative decides to expand production, for example, it could seek equity from producers outside the initial membership.

#### **3.2 Transferable and appreciable delivery rights**

Once members contribute equity toward their NGC, they receive the right, as well the obligation, to deliver a specific amount of the commodity each year. If they cannot deliver that quantity or if the commodity does not meet the quality standards set forth in the marketing agreement (analyzed below), the cooperative may have the right to buy the commodity on the producer's behalf and charge them for the difference in price.

The delivery right is similar to a share of corporate stock because it represents a firm's permanent equity. As with a share of corporate stock, the value of a delivery right will depend on the firm's profitability. If a NGC is successful

and provides value for its members, the delivery right may appreciate in value. If the NGC does not provide value to its members, the value of the delivery right may decrease. Unlike stock in a public corporation, however, the delivery right has a very limited resale or trading market. To comply with antitrust, securities, tax and incorporation statutes, NGC bylaws limit transfer to other producers and usually require the board of directors to approve any transfer.

#### **3.3 Upfront equity**

Adding value to agricultural commodities is a capital-intensive endeavor. Usually, members provide up to 30-50% of the total project cost. As a way to tie members' use to the total project equity required, the total amount to be raised is broken into smaller units. These units are tied to the amount of product required to be delivered. A market feasibility study will help determine the most economically efficient size for the processing facility. Then the NGC determines how to allocate this amount into a specific number of shares. To determine the specific number of shares it will issue, a NGC needs to set upper and lower limits to the amounts of delivery rights to be purchased. This is done by balancing the number of producers who want to be involved in the project and what is financially viable for the producers to commit.

#### **3.4 Legally binding delivery contracts or uniform grower agreements**

Upon purchasing delivery rights, members are required to sign a marketing contract outlining the duties of both the members and the cooperative toward each other with respect to the delivery, quality, and quantity of producers' commodities. These contracts are usually evergreen contracts, meaning their duration is specified (from one to five years). They are renewed automatically unless either party gives notice to the other within a window of time specified in the agreement. This binding agreement often specifies the high quality standards required of members' products, especially in cooperatives integrated downstream.

#### **3.5 Traditional cooperative principles retained**

Even though NGCs adopt an innovative organizational structure, they retain the most fundamental cooperative principles. Control of the cooperative is exercised through the democratic principle of 'one-member, one-vote' as in traditional agricultural cooperatives. Also, the board of directors is elected from the membership by the membership, and any excess earnings are distributed among members as patronage refunds (dividends).

These organizational features result in three benefits to the producer-member of a NGC. First, members are paid for the commodities they deliver to the cooperative. Second, members are entitled to receive the value added to their commodity. The value-added payment is paid on a patronage basis, i.e. producers' payments are based on the number of delivery rights they own. Members may also receive extra value for their investment in a NGC in case the

value of their delivery rights appreciates. Because delivery rights are transferable and appreciable, their value may increase (or decrease) if the NGC has good prospects, as is the case with corporate stock.

Several scholars of agricultural cooperatives have hypothesized that NGCs have been successful in solving the property rights problems of traditional cooperatives (e.g. Harris et al., 1996). Recent empirical results suggest that, indeed, NGCs have been successful in ameliorating the five VDPRCs; particularly the equity acquisition constraints (Cook and Iliopoulos, 2000). Farmers-members of NGCs adopting the aforementioned organizational features invest significantly more than members of traditional cooperatives.

The transferability and appreciability of delivery rights provides a means of controlling management, thus eschewing the negative impact of the control constraint. Also, the focus of NGCs on a limited line of related products results in lower influence activities by the various cooperative stakeholders.

Furthermore, NGCs have had an important side effect; they have contributed significantly to the development of large parts of the Upper Midwest of the US. Some of these areas have been depopulated in the 1980s as a result of the severe economic crisis. NGCs have attracted farmers back to their lands and created jobs for workers and other personnel in the plants and offices of the cooperatives (Egerstrom, 1994). The role of local and federal governmental agencies has been highlighted as a success factor in developing new generation cooperatives (Stefanson et al., 1995).

Despite the positive features of NGCs, several difficulties have been encountered in forming such collective endeavors; table 3 includes the most important.

Critics of the NGC model have observed that in some cases the NGC has not been successfully implemented thus resulting in cooperative practices that need to be carefully scrutinized (e.g. Torgerson, 2001). While such problems do not seem to be intrinsic to the NGC model, additional research is required in order to identify potential shortcomings of this new institutional arrangement.

#### **4. The Potential of New Generation Cooperatives for the Mediterranean Food Supply Chains**

Mediterranean countries share similar environmental and struc-

tural conditions (Caraveli, 2000). Accordingly, producer owned and controlled food supply chains in these countries face analogous problems and opportunities. Declining EU subsidies in light of the new Common Agricultural Policy, intensified international competition in the food and agribusiness supply chains, and increased consumer demand for local, high-quality food products all beg for enhanced coordination and motivation of the various supply participants (Bijman et al., 2004).

Given the structural characteristics of Mediterranean agriculture and the aforementioned trends, entrepreneurial collective action in the form of cooperatives or other hybrid institutional arrangements is a prerequisite for survival and success (Ollila and Nilsson, 1997). Another necessity is that farmers market their products directly to consumers at downstream supply chain stages far ahead of the farm gate. In order to reach such consumers, the collective businesses of farmers need to invest in capital-intensive industries, in which intangible assets (e.g. advertisements and R&D) play a significant role. However, traditional agricultural cooperatives face the five VDPR constraints. New Generation Cooperatives seem to provide an alternative organizational form able to ameliorate these constraints and provide Mediterranean farmers with a Trojan horse in order to get into the supply chain era of food production and distribution.

The experience of NGCs thus far implies that many Mediterranean agricultural products could be marketed through this type of collective entrepreneurship. Such are the commodities that through processing and marketing become value-added products. By eliminating layers of the food supply chain, NGCs would increase the income of their members and boost the economic growth of local communities. However, the adoption of the NGC model by farmers in Mediterranean countries may require appropriate modifications. National and regional cultures, traditions, customs, and regulations create unique economic and institutional environments that differ significantly from that of the northern US. Therefore, caution is needed in spreading the NGC model in the Mediterranean. Furthermore, changes in laws and regulations should be planned and executed carefully.

Government support is yet another success factor in developing NGCs. According to the US experience, governmental support should focus on three areas: (1) initiation of the required law and regulation amendments, (2) provision of secure access to favorable credit, and (3) provision of technical support and dissemination of knowledge.

#### **5. Concluding Remarks and Future Research**

During the last 150 years, traditional agricultural cooperatives have been the primary form of producer owned and controlled business in the Mediterranean countries. Such cooperatives were formed mostly for defensive purposes. However, the five vaguely defined property rights constraints facing them create a handicap that inhibits the adoption of offensive strategies. New Generation Cooperatives were founded in order to solve these equity acquisition and collective decision-making problems.

Mediterranean farmers may adopt the NGC model for most of their products. Yet, modifications to the basic NGC model are necessary so that it fits the needs of each different group and prod-

Table 3. Difficulties Encountered in Forming Successful New Generation Cooperatives

1. Plant specifications are not met
2. Construction contract problems such as delays and overruns
3. Lack of owner commitment
4. Noncompetitive business location
5. Overly optimistic market projections
6. Unrealistically low operating cost projections
7. Faulty government-based marketing assumptions
8. Management problems
9. Excessive debt-to-equity ratio
10. Outside promoter rather than producer leadership

Source: Minnesota Association of Cooperatives, *Financing New Wave Cooperative Ventures*, [www.mncoop.org](http://www.mncoop.org)

uct. Research towards analyzing and understanding such modifications is necessary. The following research topics/questions are particularly important:

- Is the NGC model applicable to each of the various Mediterranean regions?
- What are the necessary changes in laws, regulations and other institutions so that the NGC model is successfully adopted by Mediterranean producers?
- Is the NGC model applicable to remote, mountainous and disadvantaged regions?
- Which are the necessary steps that the European Union, national and regional governments should take in order to facilitate the development of NGCs?
- Does the new Statute for the European Cooperative Society facilitate or inhibit NGC development?
- How is culture affecting the acceptance of innovative organizations of collective entrepreneurship?
- How do we identify local leaders that will promote the NGC model?

While attempting to address these topics, scholars and practitioners will come up with additional questions. Universities, research centers and cooperative leaders in the Mediterranean countries have to invest in this fruitful research area.

## References

- Bijman J., Chaddad F. R., Cook M. L., 2004. How Strengthening Vertical Coordination May Lead to Restructuring of Macrohierarchies. In Bremmers H. J., Omta S. W. F., Trienekens J. H., Wubben E. F. M. eds., Dynamics in Chains and Networks, Wageningen Academic Publishers, Wageningen, the Netherlands, 252-262.
- Caraveli H., 2000. A Comparative Analysis on Intensification and Extensification in Mediterranean Agriculture: Dilemmas for LFAs Policy, Journal of Rural Studies, 16, 231-242.
- Cook M. L., 1995. The Future of US Agricultural Cooperatives: A Neo-Institutional Approach, American Journal of Agricultural Economics, December 1995, 1153-1159.
- Cook M. L., Iliopoulos C., 1998. Solutions to Property Rights Constraints in Producer-Owned and Controlled Organizations: Prerequisite for Agri-Chain Leadership? In Ziggers G. W., Trienekens J. H., Zurbier P. J. P. eds., Proceedings of the Third International Conference on Chain Management in Agri-Business and Food Industry, Wageningen Agricultural University, Wageningen, The Netherlands, 541-553.
- Cook M. L., Iliopoulos C., 1999. Beginning to Inform the Theory of the Cooperative Firm: Emergence of the New Generation Cooperative, Finnish Journal of Business Economics, 4/1999, 525-535.
- Cook M. L., Iliopoulos C., 2000. Ill-defined Property Rights in Collective Action: The Case of US Agricultural Cooperatives, In Menard C. ed., Institutions, Contracts, and Organizations: Perspectives from New Institutional Economics, Edward Elgar Publishing, London, 335-348.
- Cook M. L., Tong L., 1997. Definitional and Classification Issues in Analyzing Cooperative Organizational Forms, In Cook M. L., Torgerson R., Sparreder T., Padberg D. eds., Cooperatives: Their Importance in the Future Food and Agriculture System, FAMC 97-1, Texas A&M University, Texas.
- Egerstrom L., 1994. Make no Small Plans: A Cooperative Revival for Rural America, Lone Oak Press, Rochester, Minnesota.
- Hansmann H., 1996. The Ownership of Enterprise, The Belknap Press of Harvard University Press.
- Harris A., Stefanson B., Fulton M., 1996. New Generation Cooperatives and Cooperative Theory, Journal of Cooperatives, 11, 15-28.
- Hirschman A. O., 1970. Exit, Voice, and Loyalty—Responses to Decline in Firms, Organizations, and States, Harvard University Press, Cambridge, MA, USA.
- Iliopoulos C., Cook M. L., 1999. The Efficiency of Internal Capital Markets in Customer-Owned Firms: The Influence Costs Problem, 3rd Conference of the International Society for New Institutional Economics, Washington D.C., USA, September 1999. Available at: <http://www.isnie.org/ISNIE99/Papers/Iliopoulos>.
- Iliopoulos C., Cook M. L., 1999. The Internal Organization of the Cooperative Firm: An Extension of a New Institutional Digest, Journal of Cooperatives, 14, 77-86.
- Lockart J., 1967. The Institution of Agricultural Co-operatives in the European Economic Community, Studies Series, DG Agriculture, EEC, Brussels.
- Merrett C. D., Holmes M., Waner J., 1999. Directory of New Generation Cooperatives, Illinois Institute for Rural Affairs, Western Illinois University, USA.
- Milgrom P., Roberts J., 1992. Economics, Organization and Management, Prentice Hall, New Jersey.
- Missouri Department of Agriculture, 2004. New Generation Cooperatives: A Primer for Missouri Agricultural Producers, A Publication of the Agriculture Business Division of the Missouri Department of Agriculture. Accessed on May 17, 2004 at: <http://www.mda.mo.gov/>
- Ollila P., Nillson J., 1997. The Position of Agricultural Cooperatives in the Changing Food Industry in Europe. In Nillson J., Van Dijk G. eds., Strategies and Structures in the Agro-Food Industries, Van Gorcum & Company B. V., Assen, the Netherlands, 131-150.
- Rizzo S., 1994. The Maltese Cooperative Movement: A Historical Outline. In Baldacchino G., Rizzo S., Zammit E. L. eds., Cooperative Ways of Working, Gutenberg Press, Zabar, Malta, 115-125.
- Staatz J. M., 1987a. The Structural Characteristics of Farmer cooperatives and Their Behavioral Consequences. In Royer J. ed., Cooperative Theory: New Approaches, USDA ACS Service Rep. 18, July, Washington, D.C., 33-60.
- Staatz J. M., 1987b. Farmers' Incentives To Take Collective Action Via Cooperatives. In Royer J. ed., Cooperative Theory: New Approaches, USDA ACS Service Rep. 18, July, Washington, D.C., 87-107.
- Staatz J. M., 1987d. Recent Developments in the Theory of Agricultural Cooperation, Journal of Agricultural Cooperation, 2, 74-95.
- Stefanson B., Murray F., Harris A., 1995. New Generation Co-operatives: Rebuilding Rural Economies, Centre for the Study of Co-operatives, University of Saskatchewan, Saskatoon, Canada.
- Theophanous A., 1994. The Role of the Cooperative Movement and the Trade Unions in Addressing the Current Socio-economic Challenges: The Case of Cyprus. In Baldacchino G., Rizzo S., Zammit E. L., eds. Cooperative Ways of Working, Gutenberg Press, Zabar, Malta, 57-98.
- Torgerson R., 2001. A Critical Look at New Generation Cooperatives, Rural Cooperatives Magazine, January/February 2001 Issue, United States Department of Agriculture, Accessed on May 18, 2004, at: <http://www.rurdev.usda.gov/pub/jan01/critical.htm>
- Van Bekkum O. F., van Dijk, G., 1997. Agricultural Co-operatives in the European Union, Van Gorcum, Assen, the Netherlands.
- Vitaliano P., 1983. Cooperative Enterprise: An Alternative Conceptual Basis for Analyzing a Complex Institution, American Journal of Agricultural Economics, December 1983, 65, 1078-1083.