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Fundamental Principles of Managing Multi-Stakeholder Engagement

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Abstract

This essay examines the following working hypothesis: Multi-stakeholder engagement plays a critical role in value creation when an agri-food business faces strategic decisions in response to a wicked problem. Three issues are addressed: (1) what is multi-stakeholder engagement (MSE); (2) why is MSE particularly useful in the context of wicked problems; and, (3) what are some fundamental principles for managing MSE? The first two issues have been addressed by other authors and are covered quickly by laying a sparse logic for their importance and interdependence. The third issue has not been as widely dealt with, yet needs to be more completely fleshed out if MSE is to be a fully intentional vertical coordination strategy in supply chain management. Case-based research into the 30 practical projects in sustainable development carried out by TransForum will provide the motivation for a list of five fundamental principles for managing MSE: (1) focus on system and process performance, (2) manage initiating conditions, (3) engage the multiple stakeholders throughout the process, (4) practice innovation management, and (5) practice monitoring and reflection.

Keywords: multi-stakeholder engagement, wicked problems, sustainable development.

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Introduction

This essay examines several fundamental issues arising from the following working hypothesis: Multi-stakeholder engagement plays a critical role in value creation when an agri-food business faces strategic decisions in response to a wicked problem. Three issues are framed in particular: (1) what is multi-stakeholder engagement (MSE); (2) why is MSE particularly useful in the context of wicked problems; and, (3) what are some fundamental principles for managing MSE? The first two issues have been addressed by a number of authors, including me, and thus the goal is to cover these quickly and completely in laying a sparse logic for their importance and interdependence. The third issue has not been as widely dealt with, yet needs to be more completely fleshed out if MSE is to be a fully intentional vertical coordination strategy in supply chain management or as Williamson would have called it a hybrid form of transaction governance. Case-based research into the 30 practical projects in sustainable development carried out by TransForum will provide the motivation for a list of five fundamental principles for managing MSE.

MSE and MSC Defined

Multi-stakeholder engagement is a term of theory and practice used across a wide array of disciplines and it is not unique to its use here. Confounding the definition is the apparent general practice of using MSE to refer to both the coalition (alliance, partnership, initiative, etc.) consisting of multiple stakeholders and the process by which such a group of stakeholders functions. So one can talk of “an” MSE in the coalition sense and about MSE in the sense of how the coalition works together. To keep from endlessly tripping over this difference of usage, this article will call the group of stakeholders a multi-stakeholder coalition (MSC) and retain MSE to refer to the process used by an MSC.

One form of MSC specific to the agri-food context is a multi-stakeholder sustainability alliance: a long-term partnership involving multiple participants from two or more categories of stakeholders (government, business, societal organizations, and knowledge institutions) with the objective of jointly defining and reaching sustainability objectives (Dentoni and Peterson 2011). An MSC by its nature is a form of managed or hybrid form of transaction coordination—the multiple stakeholders together define and manage the nature of exchange in regard to (in this case) sustainability objectives rather than rely on open market transactions. It lies somewhere in the middle of the continuum between open market transactions and vertical integration, some form of relation-only alliance as it were (Peterson, Wysocki and Harsh 2002).

What is unexpected in the MSC definition from the perspective of business decision makers is the presence of so many non-business entities in the exchange process. We could imagine that the supply chain or network itself is an MSC representing various and often conflicting interests among businesses. But all of these interests are fundamentally economic and driven predominately by profit (even if corporate social responsibility enters into decision making). Governments, societal advocacy groups and knowledge institutions are not so single-mindedly driven but each has its own motivations and incentives—power and rule making, advocacy and societal influence, knowledge creation and dissemination. Each belongs in an MSC (as argued

herein) precisely because of this diversity of interests and because each can enable or hinder the performance of the supply chain or any firm within it in most profound ways. Consider the record of impacts of Green Peace on supply chains as one quick example. More to the point here is the increasing use of MSCs in the agri-food system. In the last 10 years, 23 of the 50 largest global food and beverage companies created or joined various types of partnerships with heterogeneous stakeholders to address sustainability of the agri-food supply chain and its products (Dentoni and Peterson 2011).

An MSC is defined then by the presence of multiple stakeholders representing businesses, government, societal advocacy groups and knowledge institutions. MSE, the process, is argued to be necessary to the achievement of an MSC's objective—to manage exchange coordination to deliver the attribute in question, such as sustainability. As defined herein, MSE is not about traditional stakeholder participation in group debate and decision making where existing knowledge is exchanged, trade-offs and compromises are made among competing decision criteria (values), and existing best practices are shared. Rather MSE is about having stakeholders engage with each other to co-create new knowledge, connect and enhance values, and collectively learn their way to new practices. This is why the term “engagement” is used and not merely “participation” or any other form of standard group process. If engagement happens, the stakeholders move beyond conflict and compromise to co-creation, learning and action. As argued here, MSE is what matters and not narrowly the composition of an MSC. An MSC is the means of implementing MSE.

Why Use MSE

Major agri-food companies and supply chains have taken on many issues historically (such as, freshness, replenishment, organic) that have enhanced or introduced the production and delivery of many product attributes without the use of MSE. Why is the use of MSE emerging in response to the sustainability attribute? Is this emergence a particular response to sustainability or is it a signal that MSE is a new requirement for many or at least a significant number of future product attributes in the agri-food supply chain?

As already described, MSE potentially results in managed exchange by a multiple stakeholder coalition in ways other than an open market. Markets apparently fail to deliver the product attribute—sustainability—by themselves. Why would coalition members expect that MSE will work when markets do not? Many operational definitions of sustainability include simultaneous demands for economic feasibility (profit), benign environmental impact (planet), and enhanced social outcomes (people)—the so-called triple bottom line or 3Ps. The systemic and complex nature of these three demands likely explains the failure of ordinary markets. All actors in the supply chain would need to manage their exchange efforts to deliver the sustainability attribute from first inputs to the product delivered to the end consumer/customer. Asset specificity, complementarity and strong probably of costly coordination errors make it likely that ordinary markets will not work (Peterson, Wysocki and Harsh 2002).

However, the systemic complexity of sustainability does not necessarily explain the presence of the non-economic actors in MSE. By adding the element of stakeholders with divergent and conflicting values, sustainability moves from being a complexity problem to a messy, value-

laden wicked problem. Authors, Batie (2008); Bitsch (2009); and Peterson (2009) argue that sustainability is a wicked problem. The elements of the argument are presented in Table 1 and will not be elaborated on here.

The key added dimension to complexity is the radically different frames of reference among the stakeholders regarding the problem (third characteristic in the table). Their values and their perceptions of events and facts differ in conflicting ways. These conflicting values drive the various stakeholders to act in ways that veto or enable their own and others’ decisions related to the problem. The inability to define a wicked problem with systemic precision and the value-divergent complexity that arises in its context means that wicked problems are not solved, only managed. It also means that any stakeholder with the power to veto or enable becomes a relevant party to the exchange effort whether a traditional economic actor or not. Businesses can wish them not to engage, but the wish has little promise of influencing these others’ behavior.

Table 1. Defining Sustainability as a Wicked Problem

Wicked Problems (Adapted from Conklin; Ritter & Webber)	Sustainability
No definitive formulation of the problem exists.	Prosperity, People, Planet (aka the 3Ps)
Solutions are not true or false, but better or worse.	Cannot know if truly sustainable; only know trajectory
Stakeholders have radically different frames of reference.	Businesses = prosperity Environmental groups = planet Social justice groups = people
System components and cause/effect are uncertain.	Consider the claim: small scale is sustainable, large scale is not.

If wicked problems are managed (not solved), how does anyone gauge the performance of MSE either as a coalition member inside an MSC or as an outsider potentially interested in innovations arising from MSE? Two types of performance outcomes are intuitively appealing:

1. System outcomes: System components, such as people, planet and profit, within the wicked problem are changed in desirable directions. System outcomes represent the content side of performance—the “real” things that stakeholders want changed in the system. Innovations in technology (hardware), human capacities (software) and organizational/network design (orgware) actually lead to enhanced sustainability or at least changed trajectories in desirable directions.
2. Process outcomes: Divergent stakeholders enable rather than veto system changes in desired directions. Process outcomes represent the ultimate ability to implement system change in order to achieve system outcomes. The stakeholders actually move beyond conflict and compromise to co-creation, learning and action.

On the one hand, if only system outcomes are considered and managed, potential innovation to change the system may never be implemented because of stakeholder vetoes. Government and societal organizations can veto supply chain/network actions. Their differing values and commitment levels create the potential to act. On the other hand, if only stakeholder process matters, potential innovation will never be implemented because of endless debate. The conflicting values are never resolved and thus action is never taken. This bogging down in process is a particular barrier to the presence of businesses in MSE. Only by taking on system outcomes and stakeholder process simultaneously can progress be made in the face of a wicked problem.

This is not to say that such simultaneity is easy. Stakeholders need to come with an “open” mind to allow innovation to be conceived. Experiments in action need to be performed so that the end is not debate and compromise but real innovation in approach and in the system itself. Implementable innovation needs to be the result. Move the sustainability trajectory of people, planet and profit. Gain the support of engaged and initially value-divergent stakeholders.

New knowledge is the key to progress with both system and process outcomes. Each stakeholder brings existing knowledge. However, existing knowledge is deficient in at least two respects. First, the existing knowledge of one stakeholder is suspect to the other stakeholders. Lack of trust, differences in values and perceptions, and fear of strategic behavior with knowledge all contribute to the suspicion. Merely debating existing knowledge or attempting to “prove” one’s knowledge to others is rarely effective in this setting. Second, existing knowledge is deficient because it is the knowledge that led to the existing system tradeoffs that have brought the stakeholders to conflict in the first place. Existing knowledge freezes the tradeoffs in place. It cannot be expected to solve or resolve differences.

Only new knowledge can overcome these deficiencies. If the new knowledge is derived by MSE, then its co-creation brings process legitimacy to the knowledge. It is believable because “we” together created it. Further, new knowledge can lead to system innovation that has the potential to turn tradeoffs into complements in so far as possible. By redesigning the system, stakeholders can break old paradigms and processes and create new ones. To call for system redesign is not to belie the fundamental difficulty of new knowledge creation, innovation and implementation. But without true innovation managing a wicked problem has little hope of success. Diversity among the stakeholders maximizes the chances to create and implement significant system innovation.

The various pieces of analysis can be brought together to answer the question posed in this section—why use MSE? MSE is not needed to solve every supply chain problem or bring every new product attribute to market. MSE is needed however in the context of wicked problems for two reasons: (1) because non-business stakeholders can and do veto or enable business actions, and (2) because non-business stakeholders can and do make essential contributions to the new knowledge and innovation needed in the system.

This conclusion is backed by the logic developed to this point in the paper, and it is also indicated empirically by my research work with 30 practical projects in sustainable innovation conducted over six years (2004-2010) by the Dutch public-private partnership called

TransForum. TransForum developed a set of operating principles for managing innovation projects involving the wicked problem of sustainability. (A version of these operating principles will be presented in the next section.) Twenty-three (23) of the 30 practical projects were managed under the full set of operating principles that evolved from a more basic set established when TransForum first started. In each of these 23 projects, TransForum required the use of MSE within an MSC project team. TransForum project managers were asked to rate the wickedness of these 23 projects; 15 were deemed to be “more wicked” (taking on the core or a more comprehensive piece of the conflicting tradeoffs) and 8 “less wicked” (addressing a more tractable, smaller piece of a wicked problem). Table 2 provides the relative performance quartiles that these cases fell into. Note that the full operating principles mandating MSE were less successful with less wicked projects and more successful with more wicked projects. This result suggests MSE is particularly applicable to wicked problems but is not essential to tamer ones.

Table 2. Relative performance of more and less wicked projects within TransForum

<i>Wickedness</i>	Projects	Top Performance Quartile	Bottom Performance Quartile
More	15	6 (40%)	1 (7%)
Wicked	8	1 (13%)	3 (38%)
Less Wicked			

How is MSE Managed?

The argument so far is that MSE as practiced by MSCs is a managed form of exchange coordination with business and non-business stakeholders involved. Further, MSE is essential to the setting of wicked problems because divergent value-conflicted stakeholders need to co-create new knowledge together and empower system innovation. The next obvious question is how does one manage projects and exchange using MSE. What principles or procedures lead to management effectiveness? This question has to date been less addressed in the literature. My contribution to answering the question is drawn from five findings regarding the management of MSE from my study of the 30 practical projects of TransForum already mentioned.¹

The 30 projects were analyzed as 30 cases in sustainable innovation project management. MSE within the structure of an MSC was highly recommended for the earliest 7 projects and required for the later 23 projects. A set of three “deeply knowledgeable” jurors about each project were used to (1) assess each project’s level of performance in regard to 6 system outcome variables and 8 process outcome variables, and (2) assess the positive and negative influence of a large set of 76 potential explanatory attributes related to performance including a number of attributes consistent with MSE practices. The 30 projects were then sorted into four (4) performance quartiles from high performance to low performance. The influence levels of the various explanatory variables were then examined by performance quartiles with working hypotheses

¹It is beyond our intention here to fully justify the research methods behind the findings. The findings are presented to motivate the emergence of fundamental principles from a grounded theory perspective. See the complete methodology and findings in Peterson and Mager.

being drawn from the influence distribution across the quartiles. As case based evidence, correlations are being observed and not causality directly. Follow-up interviews were conducted with jurors to construct working hypotheses about causality.

Finding 1: *System outcomes and process outcomes are complements in project performance and not substitutes.*

Performance was assessed for each of the 30 projects using Likert scales (5 high to 1 low performance) for the following performance variables:

1. System outcomes were assessed in six areas:
 - a. Impacts were achieved for: (1) profit, (2) planet, (3) people
 - b. The project produced: (4) implementable plan, (5) investments made, (6) returns harvested
2. Process outcomes were assessed in eight areas based on the extent to which each of the following occurred by the end of the project: (1) innovation, (2) action learning, (3) engagement, (4) partner ownership, (5) collaboration, (6) continuation after TransForum, (7) new knowledge, (8) transdisciplinary collaboration

The Likert scores were averaged across the six system outcomes resulting in a system outcome score from 5 to 1 for each project while the scores were likewise averaged across the eight process outcomes for a process outcome score from 5 to 1. When the projects were grouped by performance quartile, system outcome scores averaged 3.6, 3.1, 2.8 and 1.5 from top performance quartile to bottom while process outcome scores averaged 3.9, 3.4, 2.9 and 1.5 from top to bottom. Performance across the 30 projects was highly variable as these averages suggest. Most importantly, high performers did well at both system and process outcomes while low performers did poorly at both. There was no case project that exhibited high performance on one dimension and low performance on the other. These results are consistent with a finding that both system and process outcomes result from effective MSE.

Finding 2: *Initiating conditions appear to have substantial influence on performance.*

The jurors were asked to assess the influence of 76 attributes related to the project cases. The primary scale was -3 (strong negative influence) through +3 (strong positive influence) with zero indicating no influence. In the tables that follow, juror ratings of -3, -2, +2 and +3 were counted as indicating significant influence.

The first group of explanatory variables closely correlated with performance was related to initiating conditions. Table 3 shows evidence of a significant opposite effect for initiating conditions—positive for high performers and negative for low. In follow up interviews with jurors, it became apparent that TransForum staff spent a large amount of time and attention to the initiating conditions of projects.

They examined all projects for the presence of such characteristics as an appropriately diverse set of stakeholders from the start, system and process objectives established early, and project activities that promoted engagement, innovation and learning, to name just a few. As

TransForum refined its processes, staff proactively helped later projects to develop these critical characteristics in initial proposals. Achieving high project performance was correlated with strong initiating conditions—starting with system and process outcomes and with innovation, learning, and collaboration strategies in project goals and in implementation plans.

Table 3. Influence of Initiating Conditions

Initiating Conditions	Influence on Highest Performers (top quartile; 8 cases)	Influence on Lowest Performers (bottom quartile; 8 cases)
• How project initiated	positive in 100%	negative in 75%
• Who initiated project	positive in 100%	negative in 75%
• Why project initiated	positive in 100%	
• How intentionally process was selected	positive in 75%	
• How organically process arose as project unfolded	positive in 63%	negative in 63%
• How process was initially managed	positive in 50%	negative in 75%

Finding 3: *The presence or absence of engaged MSC members appears to have substantial influence on performance.*

This finding may at first seem tautological—manage multi-stakeholder engagement by engaging the multiple stakeholders. But the intention of engagement is distinct from having the stakeholders actually engage in practice. Recall that engagement is not mere participation. So in managing MSE, one must take care that an engaged set of stakeholders is committed to the project and not some form of empty participation. Three variables related to project membership proved very influential to case jurors. Table 4 presents these variables. As expected with MSE, who engaged and perhaps more importantly who did not engage had substantial influence, the former positively and the latter negatively. In follow up discussions, the appropriate “who” included the four key stakeholder types—business, government, societal organizations, and knowledge institutions—in the project management coalition. When one or more of the stakeholder types were not present, those left outside the process did end up having negative influence on project performance. Having a robust set of stakeholders in the coalition is critical from the start. Note that changing the “who” as the project progressed appears to merely reinforce the initial positive or negative influence. Juror interviews also indicated that the mere presence of the multiple stakeholders was not in and of itself enough. Rather the fact that they engaged throughout the project was the more critical source of influence.

Table 4. Influence of Multi-stakeholder Engagement

Project Membership	Influence on Highest Performers	Influence on Lowest Performers
• Who engaged	positive in 100%	
• Who was not engaged		negative in 88%
• How “who” changed	positive in 88%	negative in 50%

Finding 4: *Innovation practices appear to have substantial influence on performance.*

Focus on system and process outcomes, initiating conditions, and having an engaged multi-stakeholder membership have each been shown (for these cases) to be strongly correlated with project performance. The fourth finding addresses how MSE is managed to create innovation. Table 5 presents the influence of seven (7) explanatory attributes regarding the management practices projects used to promote innovation. The seven had strongly positive influence for the high performers while mixed to negative influence for low performers. Follow-up interviews with jurors indicated that a wide variety of specific strategies were used to take on the seven innovation tasks suggested by the explanatory attributes. More research is needed to fully understand why certain of these strategies become more positively influential than others. However, the importance of having effective strategies for these tasks is consistent with the data from the cases.

Table 5. Influence of innovation management practices

<i>Innovation Management Practices</i>	Influence on Highest Performers	Influence on Lowest Performers
How 3Ps considered	positive in 100%	
Reconcile incentives among stakeholders	positive in 50%	negative in 50%
<i>Strategies for:</i>		
Experimentation in action	positive in 100%	
Innovation	positive in 88%	
Action learning	positive in 75%	negative in 50%
New knowledge creation	positive in 88%	
Transdisciplinary collaboration	positive in 100%	negative in 63%

Finding 5: *Process monitoring and reflection have substantial influence on performance.*

The 76 potential explanatory attributes and the in-depth interviews with jurors together led to the first four findings. Juror interviews alone suggested a fifth finding. Although not on the list of original explanatory attributes, process monitoring and reflection was identified by jurors as a critically positive strategy for process management that TransForum ultimately required all later projects to practice. Specifically, a process monitor was appointed to each project. The monitors were charged with safeguarding the innovation process. Monitors worked to keep stakeholders engaged in the tough issues that separated them. They made the obstacles in the innovation process visible to all and carefully helped the project teams overcome the obstacles. Monitors would intervene with soft prompts to keep the teams mindful of why they were doing what they doing and with stronger interventions such as calling “reflection workshops” when teams needed to stop, reflect on what they had learned to date, and then realign the remaining work to stay on the tasks of innovation. This unique role was hailed by jurors as so critical because without these interventions learning would not have occurred or would have been greatly reduced. Learning and reflection appear not to be natural in a project context unless it is explicitly managed.

Managing MSE for Sustainability: Five Fundamental Principles

Figure 1 takes the five findings from the TransForum cases and converts them into five fundamental principles for managing MSE. The TransForum experience was specifically about sustainability, but the principles likely apply to any wicked problem. The claim is not that these principles are an exhaustive list or that they are fully tested by their inductive creation from a set of 30 cases. However, their face validity both conceptually (starting from the definitions of MSE and wicked problems) and empirically (30 diverse cases in sustainable development) is reasonably strong and forms a more than adequate working hypothesis about the application and management of MSE. MSE makes sense in the complex, value-conflicted context of wicked problems, such as sustainability. As a hybrid form of exchange governance, MSE has been shown herein to be no trivial thing to implement and execute successfully. The five fundamental principles are each challenging in their own right. A project team (MSC) creating innovation in the context of a wicked problem needs to manage MSE by (1) focusing on both system and process outcomes, (2) carefully setting initiating conditions so the project starts effectively, (3) actually engaging the multiple stakeholders in the process, (4) practicing a wide array of innovation strategies, and (5) practicing monitoring and reflection in order to keep co-created innovation at the heart of the project work.

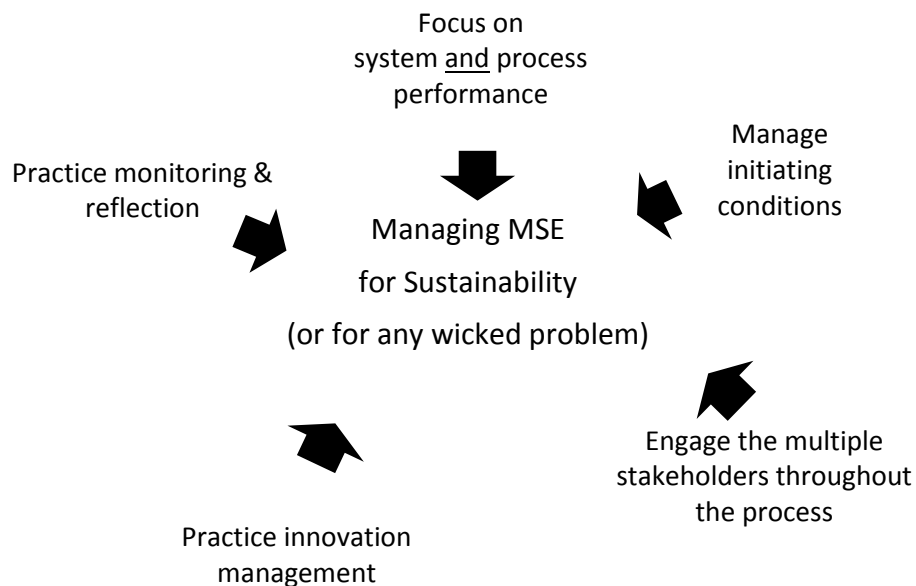


Figure 1. Five Fundamental Principles for Managing MSE

Some may examine the five principles and reflect that any complex project needs most of them anyway. This reflection may hold some truth, but the management of multi-stakeholder engagement has especially unique elements in the context of a wicked problem. Stakeholders start with conflicting values, a strong tendency to veto each other's actions, and deficient sets of existing knowledge. When MSE succeeds, the ending point is effectively implemented innovation where system and process outcomes have been achieved, diverse values are now connected, and new knowledge has been created. Much additional research and practice are needed to see if this working hypothesis about effective MSE proves valid and useful.

References

- Batie, S. 2008. Wicked Problems and Applied Economics, *American Journal of Agricultural Economics* 90(5): 1176-1191
- Bitsch, V. 2009. Grounded Theory: A Research Approach to Wicked Problems in Agricultural Economics. Mini-symposium qualitative Agricultural Economics at the *International Conference of Agricultural Economists* in Beijing, China, 08/16/22.
- Conklin, J.E. 2006. Dialog Mapping: Building Shared Understanding of Wicked Problems. Naps, CA: CogNexus Institute.
- Dentoni, D., and H.C. Peterson. 2011. Multi-Stakeholder Sustainability Alliances in Agri-Food Chains: A Framework for Multi-Disciplinary Research. *International Food and Agribusiness Management Review*. Volume 14(5):83-108.
- Peterson, H.C. 2011. An Epistemology for Agribusiness: Peers, Methods and Engagement in the Agri-Food-Bio System. *International Food and Agribusiness Management Review*. 14(5):11-26.
- Peterson, H.C. and S.E. Mager. 2011. From motivating assumptions to a practical innovation model. In *The TransForum Model: Transforming Agro Innovation Toward Sustainable Development*. Edited by H. van Latesteijn and K. Andeweg. Chapter 6: 97-129. Springer Netherlands.
- Peterson, H.C. 2009. Transformational supply chains and the “wicked problem” of sustainability: aligning knowledge, innovation, entrepreneurship and leadership. *Journal on Chain and Network Science* 9(2): 71-82.
- Peterson, H.C., A. F. Wysocki and S. Harsh. 2002. Strategic Management along the Vertical Coordination Continuum. *International Food and Agribusiness Management Review*. 4(2001):149-166.
- Ritter, H. and M. Webber. 1973. Dilemmas in a general theory of planning. *Policy Sciences* 4(20): 155-169.
- Williamson, O.E. 1975. Markets and hierarchies: analysis and antitrust implications. The Free Press, New York, NY, USA.

