

Economic Concepts Guiding Minnesota Extension's New Regional and County Delivery Model

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Abstract

In response to a state budget deficit, the University of Minnesota Extension restructured its field staff, establishing a new regional and county delivery system, shifting all supervision of field staff to campus faculty, and encouraging greater field staff specialization, program focus, and entrepreneurial efforts. Nine economic concepts and numerous business principles influenced the creation of the new model. This article outlines the problems facing Extension in Minnesota as it reacted to budget cuts and the nine economic principles that helped Extension sort out the alternative courses of action and their consequences. By applying these principles, Extension was able to maintain a higher number of field staff than it might have otherwise, and effectiveness has in some respects increased despite reductions in the number of personnel.

*"There is nothing more practical than a good theory."—
Kurt Lewin*

Introduction

In January 2004 the University of Minnesota Extension (Extension) restructured its field staff in response to a state budget deficit. In restructuring, we first identified the problems that Extension faced, then identified promising theories or concepts for solving them.¹ A section of this article is devoted to each of these problems.

1. How should Extension deal with county funding cuts?
2. How can Extension do more with less?
3. How can counties select the types of extra services they want?
4. How can Extension maintain political support?

The following economic theories and principles provided guidance in addressing these questions: (1) free rider concept, (2) club theory, (3) comparative advantage, (4) specialization, (5) economies

of scale, (6) consumer sovereignty, (7) public value, (8) benefit-cost analysis, and (9) business planning concepts.²

1. The Problem: How Should Extension Deal With County Funding Cuts?

The Practical Theory: Free Rider Concept and Club Theory: As a result of a \$4.5 billion state budget deficit announced in November 2002, county governments in Minnesota faced very large losses in state aid. While counties deliver many programs mandated by the state, extension is not one of them. As a result, a number of counties indicated they might not be able to fund their historical share of local extension positions. In early 2003, an Association of Minnesota Counties survey of the eighty-seven counties found that twenty might need to stop funding extension completely. The key question for Extension administration became: How do we deal with a county that does not provide any funding for extension?

Three options were given the most consideration.

1. Using state and federal funds, cover the cost of maintaining as many staff members as possible in the counties that do not pay.
2. When a request comes in from the county, politely point out that the county had not paid for any extension personnel and thus no assistance is available to this county.
3. Create a mixed regional and county model based on club theory.

Option 1: cover costs of reduced staff in counties. The *free rider* concept suggested that if we used the first approach, the twenty counties that had indicated they could not fund extension would accept the lower level of local extension staff. A free rider is an entity (in this case, a county) that participates in an activity without paying any dues or fees (*Frank and Bernanke 2007; Wheelan 2002*). For example, those who listen to public radio without pledging are free riders.

We anticipated that if Extension offered to cover the expenses in these twenty counties, other counties would try to shift their expenses to Extension, too. If enough counties became free riders, the size of the field operation would decline by nearly one-third (*Morse and O'Brien 2006*). With its own budget cuts, Extension clearly could not support this scenario.

Option 2: deny service to counties not contributing. The second option was a common suggestion. We did not feel this approach was fair since people in these counties pay for extension through state and federal taxes. In addition, if we did this, the political backlash could have resulted in significant losses in our state and/or federal funds.

Option 3: create a mixed regional and county delivery system. Since neither option 1 nor option 2 was satisfactory, we asked the University of Minnesota's Department of Applied Economics to help us think through this question. Department Head Vernon Eidman proposed that Extension use *club theory* to design a response. In club theory, members of the "club" pay a fee and receive certain privileges and benefits (*Buchanan 1985*). If they want additional benefits, they pay an additional fee. Examples are health clubs and cable TV. In both arrangements consumers can buy a standard package for the base fee and then select additional services at additional cost.

Since the people in counties already pay state and federal taxes, we assumed that every county had already paid the base fee. What could we guarantee to the people in a county for the base fee? What would be the extra services and their costs?

The baseline service. To cover basic services to all counties, we established eighteen regional centers with 130 field staff members—as many as state and federal funds could support. These regional extension educators (REEs) work on programs in any county, regardless of whether the county provided local funding. They work over large regions, or even the entire state, and specialize in relatively narrow areas of expertise. Together with campus faculty, they design and deliver educational programs with clearly articulated and measurable educational outcomes. The programs are directed to communities of interest with the recognition that people often will cross county boundaries to participate, as they do for work and other activities.

The extra service. Counties that wish to have local staff members can purchase them. As we expected, almost all counties (84 of 87) purchased 4-H program coordinators, and many counties (41 of 87) purchased agricultural technical assistants. These staff members, housed in county offices, are generalists who focus on technical assistance, service, and assisting in local delivery of regional or state programs.

In an organization in which nearly 85 percent of the expenditures are for personnel, a drop in state and county funds results

Table 1: Change in Minnesota Extension Field Staff with and without Restructuring, FTEs, 2003 and 2005

Type of Staff	2003 (Actual)	2005 without Restructuring (Estimated) ²	2005 with Restructuring (Actual)
Educational Staff ¹	369	254 (-31%)	333 (-10%)
Field Administration	228	228 (0%)	185 (-19%)
Total Field Staff	597	482 (-19%)	518 (-13%)

¹ Includes Extension educators, program coordinators, nutrition education assistants, and county-funded positions

² See Morse and O'Brien (2006) for details on estimation procedures

in fewer positions. Table 1 shows how restructuring changed the number of educational and field staff members from 2003 to 2005. While there was an overall reduction of 13 percent (corresponding to the percentage of revenue lost due to the fiscal crisis), the cuts were proportionately much higher for field administration (19%) than for educational staff (10%). The largest cuts came from county support staff, as counties opted to fund 4-H program coordinators and agricultural technical advisors.

If Extension had not restructured, we estimate that the educational staff cuts would have been much higher, running over 30 percent (table 1; Morse and O'Brien 2006). This estimate is based on the assumption that counties would have used their funds to cover county support staff first and county extension directors second, then (following the free rider concept) would have accepted whatever number of educational staff Extension could fund from state and federal funds. The only way to have learned if the estimates for this scenario were accurate would have been to not restructure and see what happened. However, that course of action, while initially easier politically, would have been irresponsible. To achieve the level and type of engagement advocated by Peters and colleagues (2005), it was essential to keep field staff numbers as high as possible.

2. The Problem: How Can Extension Do More with Less?

The Practical Theory: Comparative Advantage, Specialization, and Economies of Scale: While extension in Minnesota and nationally has seen declining real resources over the past thirty years, there are demands to extend the extension concept to others (McDowell 2001). Yet there is strong evidence that extension has not been doing very well in reaching its traditional audiences,

with farmers increasingly seeking information and educational programming from other sources (Ford and Babb 1989; Patrick and Ullerich 1996). There is clearly a need to reach new audiences and to improve the quality and credibility of all programs even while available resources are declining. How can extension do more with less? Many economists would suggest it focus on its comparative advantage, and ask its staff to focus on their comparative advantages—to specialize (Hoag 2005).

Comparative advantage is a key economic concept that suggests that everyone benefits most when people specialize in areas in which they are relatively most productive (Frank and Bernanke 2007; Wheelan 2002).³ Comparative advantage depends on the relative efficiency with which an individual can do two or more tasks. Consider the situation illustrated by table 2. The program leader has an absolute advantage over the junior staff member on both tasks because she can do both of the tasks shown in the table in less time than he can. However, the program leader has a comparative advantage (i.e., is relatively more efficient) over the junior staffer on the staffing plans. Likewise, the junior staffer has a comparative advantage on the new

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Web sites. As a team they can achieve more when the program leader concentrates on the staffing plans and the junior staffer concentrates on the Web sites. Given that the program leader cannot do all of both, she should focus on the staffing plans even though she could do the Web sites faster than the junior staffer. In other words, both will *specialize in their area of greatest comparative advantage*.

Increasing specialization as a means of enhancing productivity and quality has been a general theme among extension leaders for many years (Bartholomew and Smith 1990; Borich 1998; Gibson and Hillison 1994; Harriman and Daugherty 1992; Rauschkolb 1988; Thompson and Gwynn 1989). However, specialization has proven very difficult with the county model because people expect their extension educator to be able to respond to a wide range of questions.

Starting in 1987, Minnesota Extension explored clustering as a way to increase field staff specialization. Unfortunately, clustering had mixed success (Hutchins 1992). It did not lead to specialization

Table 2: Productivity Data on Program Leader and Junior Staff Member¹

Person	Draft New Staffing Plan for an Area of Expertise ²	Develop New Web Site for Each Program ³
Program Leader	10 days	5 days
Junior Staff Member	60 days	10 days

¹*The same quality standards must be met by both individuals*

²*Plans needed for 18 areas of expertise*

³*Web sites needed for 54 programs*

in a significant way. The move to the mixed regional and county model required much more specialization among field staff. In this model, starting in 2004, REEs were specialized in the following ways:

1. REEs have advanced degrees in their area of expertise. The educational background of field staff hired has changed from M.S. degrees in any field or in adult education to advanced degrees in their assigned area of expertise.
2. REE job descriptions cover a much narrower set of responsibilities than previously. Educators are no longer hired as “agricultural educators” but as “livestock” REEs or “horticultural” REEs. Educators outside 4-H contribute to the 4-H program, but for most this is not a major part of their work, whereas in the past some community development specialists were expected to work three or four days per week on 4-H.
3. REEs are supervised by tenured faculty members or campus-based specialists in their area of expertise. Gone are the days when one person supervised people in fields from family development to community vitality to agriculture. Some have wondered about the distance between the campus supervisors and the REEs. Our belief is that physical distance is less important in a world of e-mail and cell phones than is disciplinary distance.
4. REEs’ work is focused on development of proactive educational programs with clearly defined educational objectives. Each program team (consisting of both REEs and campus faculty and sometimes county-based educators) has selected the focus of its work based on the size of

the need and the team's comparative advantage relative to other potential providers.

5. REEs cover a much larger geographic area than before 2004, often the entire state. For example, agricultural REEs moved from serving one county (in 2000) to an average of fifteen counties (in 2002) to the entire state (in 2004).

Greater specialization has yielded the following advantages:⁴

1. Recruitment of highly qualified candidates is easier because they know they can work in their area of expertise. For example, seven of the thirteen REEs hired in the agriculture, food, and environment program area since January 2004 have Ph.D. degrees.
2. REEs have greater incentives for developing human capital in their area of expertise. For example, in two capacity areas, the REEs willingly contribute about 30 percent of their program's net earnings to the program leader for staff and professional development.
3. Campus faculty members are more willing to work closely with REEs because the REEs now have a solid background in an area of expertise and focus on this in their work. For example, in one department where only one of four faculty members was actively engaged with field staff, all of the extension faculty members and even two faculty members without extension appointments are now actively engaged. As one faculty member told us: "The field staff now have the background and time to really do something."
4. The credibility of field staff members has increased because they are able to focus tightly. For example, a number of farmers have indicated that our REEs are much more useful to them than they were before. This is very consistent with the earlier survey work (*Ford and Babb 1989; Patrick and Ullerich 1996*).
5. The credibility of local extension educators (LEEs) has increased because they can tap into a large pool of mid-level specialists. For example, the pesticide applicator training has been redesigned and training provided to some LEEs so they can do this on their own. In another case, a crops REE is helping an LEE run demonstration plots on organic crops.

6. Both program quality and delivery efficiency have increased because REEs can afford to invest more in developing new programs and presentations and in evaluations and continuous improvement. For example, one team was able to reduce the number of presenters from four to two because the specialized team members could handle questions on any aspect of their topic. Thus, with the same number of staff, they were able to run twice as many meetings and reach more people.

The last point is also related to the concept of *economies of scale* (Frank and Bernanke 2007). In the past, when they were delivering programs on a wide variety of topics and largely on a reactive basis, most educators could not afford to invest much time and energy in the fixed costs necessary for high-quality programs (e.g., detailed literature reviews to ensure that efforts reflect the latest research, market research or needs assessment, elaborate curriculum or presentation development, and careful evaluations of alternative delivery methods). Now program teams have the time and expertise to do all of these. As educators offer the same program, or very similar programs, around the state, the average cost per participant falls because the fixed costs are spread over more people. Specialization of REEs is helping us achieve greater impacts and reach more people even though we have 10 percent fewer educators.

3. The Problem: How Can Counties Select the Types of Extra Services They Want?

The Practical Theory: Consumer Sovereignty: When Extension tried clustering as a means of achieving specialization (1987 to 2004), there often was not clarity about which customers educational efforts were to serve. Educators were expected to allocate 75 percent their time to their home county and 25 percent to the cluster of four to five other counties, a situation that created conflicts (Hutchins 1992). Some local leaders were not certain they got their 75 percent. The educators felt torn between local expectations and Extension expectations. Before 2004, several educators told us: “Yes, I do cluster work, but I don’t tell anyone in my home county.” These educators essentially had to deliver 100 percent in their home county as well as do their work in their cluster.

Consumer sovereignty is the concept that the “customer is king” or that “he who pays the piper calls the tune” (Frank and Bernanke 2007; Wheelan 2002). In the extension context, consumer

Table 3: Local Extension Positions, 2005

Type of Local Position	Funded Entirely by	FTEs	Counties Served (87 total)
Nutrition Education Assistant	Federal Grant	89	83
4-H Program Coordinator	County	80	84
Agricultural Technical Advisor	County	34	41
Master Gardener	County	7	12
Community Vitality	County	2	3
Family Development	County	2	2
Natural Resources	County	4	4
Support Staff (County Employees)	County	104	86

sovereignty means that counties, or other funders of local positions, would have the power to name the type and number of the positions that they wanted. Consumer sovereignty is a very powerful form of public engagement that can be measured by the number of positions purchased.

Starting in 2004, counties were allowed to select any type of local position rather than sometimes have to accept a certain type of educator because Extension needed a portfolio of different areas of expertise. Local positions (except nutrition education positions) were funded entirely by counties (table 3). While many people think that with the adoption of the new model all positions went to regional centers, this is far from the case. In fact, more than 60 percent of field staff members are in county offices (*Morse 2006*).

4. The Problem: How Can Extension Maintain Political Support?

The Practical Theory: Public Value and Benefit-Cost Analysis: For many years Extension has depended on close relationships between local educators and county commissioners for its political support. Even with the county-based system, this source of political support had been declining; as counties hired professional administrators, demands for accountability in terms of program impacts increased. The shift to the mixed regional and county delivery mode is increasing public expectations for accountability. Minnesota Extension has taken several steps to address these accountability and political support issues.

McDowell (1985) suggested that political support for a program depends not only on existence of a benefit but also on participants' ability to attribute this benefit to extension. He also argued that we need an efficient process for collecting political support and for participants to take political action. The new system makes it easier to work on this because a state specialist supervises each area of expertise and program teams are much more focused and specialized.

To build political support we first asked all program teams to develop program business plans so teams of field and campus faculty could concentrate on areas in which we have a comparative advantage in delivering the greatest impacts (*Klein and Morse 2006*).⁵ Second, we provided training to program teams in the development of public value statements that clearly articulate why the public sector should support this work (*Kalambokidis 2004*). Third, we have hired three new program evaluation specialists. These are embedded within capacity areas but work as a cohort.

Fourth, we are starting an aggressive expansion of both outcome evaluation and benefit-cost analysis (*Frank and Bernanke 2007; Loomis 2005*), using three alternative approaches for estimating benefits of educational programs: (1) outcome-based (*Reynolds et al. 2002*), (2) travel cost (*Loomis 2005*), and (3) contingent valuation (*Roe, Haab, and Sohngen 2004*). Thirty programs applied to be part of the benefit-cost analysis pilot studies. Although these studies are still under way, a number of the program team leaders already are using the tools for other programs. Further, the contingent valuation results have suggested to some teams that they can charge more for their programs.

Fifth, we are working on a variety of tools to help program teams communicate their stories and achieve political support. A good example of this is the work by our Government and Constituents Relations Unit and the regional directors to build social capital with county and state leaders. To reinforce that social capital, our Communications Unit publishes the *Source* magazine,⁶ which goes to key influence leaders.

All five of these efforts are more feasible than they would have been under the old system because REEs report to a single person in their area of expertise. In the old system, in order to get a program team to participate in an organizational initiative, it was necessary to first convince the teams' multiple bosses of the merits of the idea. Since a team of eight REEs often had nine bosses (one district director each REE and a program leader for the team), the transaction costs were very high.

Summary

A number of economic concepts were considered in the process of identifying options to handle cuts stemming from Minnesota's \$4.5 billion state budget deficit. These economic concepts included the free rider concept, club theory, comparative advantage, specialization, economies of scale, consumer sovereignty, public value, benefit-cost analysis, and business planning concepts.

Whether the changes that followed would work in other states is difficult to say. They appear to be working well for Minnesota and were the right thing to do, given the context of a major budget crisis and need for greater specialization. However, Extension would never have made these changes but for the budget crisis.

If the changes outlined in this article had not been made, the level of engagement with Minnesota citizens would have declined with deep cuts in the number of field staff. As a result of this sound conceptual framework and talented staff with outstanding dedication, the new system is working very well. The results confirm the adage, "There is nothing more practical than a good theory."

Endnotes

1. Just as many economic concepts guided the changes in Minnesota, concepts from political science, sociology, and communication sciences guided our interactions with Extension's many internal and external stakeholders. These noneconomic concepts from other disciplines merit another full article. This article illustrates these economic concepts within the Minnesota context; however, it is intended to describe how we used economic principles as part of our guide for problem solving, not to showcase Minnesota's success. Evidence for the impact of the model is being collected, but the validity and shortcomings of the new Minnesota delivery system will not be known for several years due to the lag time for new systems to yield major impacts and because of the time required for careful research and analysis.

2. A companion article (*Klein and Morse 2006*) focuses on one of these, program business planning.

3. David Ricardo first suggested the concept of comparative advantage in 1817; however, these two books provide a more accessible summary of the concept for non-economists.

4. These examples of anecdotal evidence for the effectiveness of the new system are included to more clearly illustrate the concepts. Several ongoing research projects are intended to provide more systematic evidence of what is and what is not working.

5. An example of a business plan is available at <http://www.extension.umn.edu/administrative/information/components/RADBizplan-11-15-06.pdf>.

6. Available online at <http://www.extension.umn.edu/source/>.

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