

Is an Advanced Degree for You?

Patrick J. Borich, University of Minnesota

In an attempt to identify who and what influences decisions made by Extension professionals in their decision of whether to pursue an advanced degree, the author undertook a nationwide study of male county agents. He found that many personal, administrative (organizational), and economic factors influence such a decision, and these vary by age and the state employing the agent. Are his findings what you'd anticipate?

Extension professionals have been faced with the question, "Should I get an advanced degree or not?" Administrators of the 50 state Extension Services have encouraged advanced study in various ways and with different degrees of intensity. This article summarizes a nationwide study that examined the agent decision-making process relative to pursuing advanced degrees and provides some implications for future actions by all concerned Extension professionals.

The specific purposes of this study were: (1) to identify factors county agents consider in deciding whether to undertake graduate study, (2) to explore how these agents perceive their administrators manipulate these factors, and (3) to determine the relationship among the net economic benefits of these advanced degrees, the agents' perceptions of these costs and benefits,

and the percentage of agents with advanced degrees in each state. Note that emphasis was on agent perception of factors, costs, and benefits relating to graduate study.

Assumptions

In this study,¹ I assumed that an advanced degree signifies professional growth and is a desirable end. This may not be correct. You could argue nonetheless that as a result of recent Extension hiring and promotion practices, a relationship between academic degrees and personal development is assumed by most people, including a majority of Extension professionals.

In the research reviewed, the agents didn't consistently perceive any appreciable administrative influence on their decision to pursue graduate study. I reasoned that this decision therefore may either not

be related to administrative influence or at least perceived by agents not to be directly related.

Financial gain was assumed to be a major factor in the decision-making process. The individual must weigh the perceived added earnings with the perceived costs of added schooling in estimating net financial gain that might result. Actually determining financial gain is a difficult task that has been attempted by many economists.² This study tried to measure if added net financial gain is related to advanced degree decisions by use of models identified by these economists. A preliminary list of other factors was prepared by interviews with agents in Illinois, Indiana, and Wisconsin.

Study Design

Only male agents from the 50 U.S. Cooperative Extension Services were included in the sample because I felt most female agents generally had lower tenure and using the sex variable would have required enlarging the sample.

Twenty respondents were identified in each state having more than 20 male Extension agents. The randomized sample was limited to agents age 25-50 because this is the group most likely to consider graduate studies. The Likert-like³ questionnaire was pre-tested on 10 agents per state from Illinois, Indiana, and Wisconsin, and as a result was revised and shortened. The final questionnaire was determined satisfactory for reliability, validity, and objectivity.

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A total of 926 randomly selected county Extension agents received questionnaires in September, 1969. Of these agents, 388 were thought to have an advanced degree and 538 were not; however, 32 of the latter group requested a different questionnaire because they had recently acquired a degree. By October 15, 1969, 774 or 83.6 percent of the agents (88% of the agents with degrees and 81% of the agents without degrees) had completed and returned the questionnaires. With the exception of Alaska, at least 65 percent of the agents receiving questionnaires in each state returned completed forms.

Findings and Conclusions

Two major statistical methods, factor analysis and regression analysis, were used to analyze my data. Factor analysis primarily identified the factors agents considered in deciding on a degree and the administrative factors agents perceived that were used to influence them. Regression analysis was used to determine relationships among these factors and other variables.

Factors Agents Considered in Advanced Degree Decision

Ten types of agent concerns were identified by agents to be important in the process of deciding on obtaining an advanced degree. These concerns were common both to agents with and without advanced degrees (Table 1).

Table 1. Factors identified by agents as affecting the advanced degree decision.

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1. *Financial Gain*: An increase in income or salary.
 2. *Economic Sacrifice*: The monetary cost of securing an advanced degree.
 3. *Improved Competence*: The agent improves himself to adequately do his job.
 4. *Formal Study Difficulty*: The perceived problems with graduate school or study.
 5. *Prestige*: The recognition from others within and without the Extension Service given to individuals with advanced degrees.
 6. *Administrative Persuasion*: The personal relationship between the administrator and the individual regarding graduate study.
 7. *Permanent Escape*: The opportunity to leave the Extension Service.
 8. *Better Job Opportunity*: The chance to obtain a more desirable position within the Extension Service.
 9. *Supervisor-Peer Support*: The perceived encouragement or discouragement of graduate study by fellow staff members.
 10. *Accessibility of School*: The convenience of graduate study.
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For agents without degrees, five factors, in order of importance, related significantly to their personal degree decision: administrative persuasion, better job opportunities, economic sacrifice, improved competence, and formal school difficulty.

For agents with advanced degrees, however, only two factors were identified as important in the personal degree decision: improved competence and better job opportunities.

When recommending advanced degree acquisition, however, to a new staff member, both agent groups frequently mentioned financial gain and supervisor-peer support as reasons. Agents with advanced degrees also mentioned bet-

ter job opportunities as a factor. The study results suggest these three factors may also be important in the agent's personal degree decision.

Two variables often perceived to be related to the decision are age and the expectation of the Cooperative Extension Service that employs him. In general, the older the agent, the less he planned to pursue graduate work.

Age appears to be specifically important as follows: (1) younger agents perceived a larger number of factors as important in the advanced degree decision than did older agents, (2) older agents regarded administrative persuasion as the most important factor while younger agents were concerned with other factors, (3) financial gain and/or

economic sacrifice entered into almost all personal decisions or recommendations to new agents, (4) younger agents perceived better job opportunities as a major positive factor in their decision to secure an advanced degree, and (5) younger agents considered it important that an advanced degree enabled them to leave CES.

In the state analysis, it appeared that in states where agents received tuition breaks for added schooling, increased earnings, and more desirable working conditions after securing the advanced degree, a higher percentage of agents obtained advanced degrees.

Three major factor categories seem to be significant: (1) *economic* — the apparent financial gain obtainable by securing or forsaking an advanced degree and the

economic sacrifice involved in graduate study; (2) *personal* — the improved competence secured through graduate study, the difficulty perceived in formal study toward a degree, and the ability of an agent to gracefully leave the organization; and (3) *organizational*—the better job opportunities and greater prestige present, the personal administrative persuasion, and supervisor-peer support that influence graduate study. None of these factors appears “most significant” in all cases.

Agent Perception of Administrative Influence

Eight perceived administrative factors were identified much as the personal factors were identified (Table 2).

Table 2. Factors perceived by agents that administrators use to influence agent advanced degree decision.

1. *Economic Advantage*: The additional economic benefits provided to agents with an advanced degree.
2. *Better Working Situation*: The offer of a better position to agents with advanced degrees.
3. *Reduced Degree Costs*: The reduction of immediate economic sacrifice associated with graduate study.
4. *“Revitalization” Leave*: Graduate study as an opportunity to temporarily leave a position.
5. *Informing Clientele*: The explanation of the value of agent graduate study to local clientele.
6. *Participation in Decision Making*: The increased involvement of the agent with an advanced degree in making organizational decisions.
7. *Personal Persuasion*: The relationship of a supervisor on a personal, informal basis with the agent.
8. *Nondegree Learning Experience Provided*: The relative priority of administrators in providing learning experiences other than graduate study.

Four administrative factors seemed to influence the personal advanced degree decision of agents without advanced degrees. They include, in order of importance: (1) a promise of a better working situation, (2) a lack of nondegree learning experiences provided in the organization that compete with graduate study, (3) increased personal persuasion by the administrator, and (4) reduced cost for the advanced degree. These agents, though, when advising new agents on advanced degree acquisition, cited the economic advantage as the only administrative factor involved.

Agents with advanced degrees related only one administrative factor — economic advantage — to their personal degree decision. This same factor occurs predominantly in their recommendation to the new agent regarding acquisition of an advanced degree.

It appears that agents vary by states in their perception of administrative manipulation of factors affecting their degree decision making. Agents in states with a high percentage of staff members with or planning to obtain advanced degrees perceived that their administrators reduced costs and increased earnings to agents with graduate degrees. Agents in low percentage states, however, either failed to perceive administrative manipulation or this manipulation regarding advanced degrees didn't exist.

Because this study only focused on agent perception of administrative influence, I concluded

that agents in low percentage states didn't perceive any systematic advanced degree influence being exerted by the administrators in their state, if, in fact, such influence exists.

Economics of Agent Advanced Degree

Earning streams — expected annual salaries — for each year from age 30 through age 65 were calculated for both agents with and without degrees in 36 state Cooperative Extension Services on which sufficient data were available. Data were obtained from the Extension Service, USDA, and the directors of each of the Cooperative Extension Services. The directors also were asked to estimate the costs involved in added schooling and to describe any financial aids or leave policies available for agents seeking graduate degrees in their states.

Based on discounting the earning streams back to age 30 (or age 40) and including both opportunity (income given up) and direct costs as well as added income from fellowships, sabbaticals, and other sources, I determined the present values of agent income streams both with and without advanced degrees in each of the 36 states.

Sixteen states showed no financial gain for agents with advanced degrees. In these states, an agent without an advanced degree would have lost money by pursuing the degree. These states were found in all areas of the nation. Certainly, the income for agents with advanced degrees was usually larger in a

single year in a particular state than was the salary identified for agents without an advanced degree. However, when added costs and income were considered, a graduate study resulted in an economic loss by current salary standards.

By comparing the two present values in each state discounted back to decision points of age 30 and age 40, it was possible to determine an internal rate of return or measure of interest rates at which the two earning streams were equal. The internal rates of return by state varied from less than 0 percent to over 20 percent. The national average was 13 percent return on investment for agents making the decision regarding added schooling at age 30 and 15 percent for agents making the decision at age 40. The added return for investment at the later age occurred because of the increased difference between salaries paid nationwide for agents with advanced degrees over agents without advanced degrees during the middle years of the professional career (age 40-50).

The present values and internal rates of return for both age 30 and 40 were correlated with the percentage of agents in the sample from each state who either planned to get an advanced degree or who have already obtained one. The correlation was significant at the .05 level (Table 3). It's impossible to determine if high economic benefits predate a large number of agents with advanced degrees or vice versa. The significant relationship that

exists does, however, support the conclusion that added financial benefits and reduced economic cost are of great importance in the school decision-making process of county agents.

The agent's perception of net earnings for advanced degrees when correlated to the present values and internal rates of return by state was also significant at the .05 level (Table 3). Based on this finding, you might conclude that although the rationality of decision making is certainly not perfect, it appears that agents *accurately* perceive net economic benefits available to them by the added investment in graduate study. And based on other analyses, these same agents (at least marginally) make graduate study decisions based on this economic knowledge.

Summary of the Findings

Some important findings include: (1) agents consider a number of different personal factors in making their advanced degree decision, (2) these important factors vary by age and the state employing the agent, (3) the factors thought to be controlled by Extension administrators are also important in the agent advanced degree decision, (4) the net economic benefits associated with an advanced degree in a state is accurately perceived by the agents in that state, and (5) the percentage of agents in a state who receive an advanced degree is positively related to their perception of increased net

Table 3. Correlation matrix of agent degree status, plans for degree decision, perception of economic advantage, present values, and internal rates of return in 36 state Cooperative Extension Services.

	1	2	3	4	5	6	7
1.	1.000						
2.	.682**	1.000					
3.	.377*	.488**	1.000				
4.	.226	.326*	.336*	1.000			
5.	.197	.384*	.313	.681	1.000		
6.	.177	.258	.289	.828**	.723**	1.000	
7.	.166	.325*	.192	.599**	.914**	.653**	1.000

* $p < .05 = .321$

** $p < .01 = .413$

(36 observations)

1 = % of state agents with advanced degree

2 = % of sample in each state with degree or planning to get degree

3 = perception of agents in sample of economic advantage provided for advanced degree

4 = difference between present values discounted at 10% to age 30

5 = difference between present values discounted at 10% to age 40

6 = internal rate of return—age 30

7 = internal rate of return—age 40

economic benefits to agents with advanced degrees in that state. It thus appears that many people and organizational policies influence the advanced degree by a county Extension agent.

Implications

I feel this study has implications for county Extension agents, administrators of Cooperative Extension Services, and researchers of adult education.

Implications for Agents

Agents trying to persuade other agents to obtain advanced degrees could: (1) seek to provide financial aid to reduce economic sacrifice — groups of county agents (such as the National Association of County Extension Agents) could organize to secure fellowships, scholarships, sabbatical leaves, or any type of financial aid to reduce the economic sacrifice of graduate study; (2) request nondegree education (in-service training) that doesn't *replace* graduate study to secure increased competence; and (3) support salary developments that provide financial gains to agents with advanced degrees.

Obviously, salaries in many states are based on factors other than advanced degrees. If, however, the number of agents within a state who have advanced degrees is to be enlarged, differentiating the net incomes by the degrees held appears to be an effective approach to achieving this objective.

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County agents should plan to secure the advanced degree at a young age, if at all possible. A primary reason for this is the fact that the graduate degree can be achieved at less cost at an earlier age due to lower opportunity costs.

Many agents obtain advanced degrees even in states where a financial loss is incurred with an advanced degree. Likewise, some agents don't obtain advanced degrees in states where the return on investment is high.

Obviously, the decision to return for graduate study is a very personal one. If agents reside in states where a different factor is of greater influence than is the case nationwide, efforts at altering this factor may result in more advanced degrees by agents than would a larger salary. For example, if no graduate school curriculum is available within a state that agents think will improve their Extension competence, providing an adequate curriculum may positively influence agent degree-seeking behavior. The formation of such an "adequate" curriculum may be more effective than substantial salary increases based on graduate degrees or reduced study costs in encouraging agents in this state toward graduate degree programs.

Implications for Extension Administrators

Extension Service administrators may want to:

1. Provide more fellowships,

scholarships, or other sources of financial aid for graduate study as an economic incentive. Reduced cost for graduate study seems to influence the advanced degree decision of many agents.

2. Provide differentiated income streams and increased financial gain for staff members with advanced degrees. Agents seem to measure quite accurately the relative return on investment in graduate study. Thus, if advanced degrees have a high organizational priority, some economic evidence is helpful to influence them to graduate study.
3. Reduce the organizational emphasis on in-service training as a substitute for graduate study. Agents seem to look to nondegree learning activities as a method of improving competence. Care should be taken to avoid "competition" between degree and nondegree activities if advanced degree-seeking by agents is to be encouraged.
4. Promote the earning of advanced degrees among Extension agents through the use of personal administrative persuasion. The personal contact of a supervisor appears to legitimize the importance placed within an organization on advanced degree-seeking. The general lack of perception of administrative influence regarding advanced degree-seeking

is evident in some states supports improved goal identification and communication of these goals by administrators. It's apparent that what administrators think is clearly an encouragement to secure an advanced degree may not be clear to the staff members.

Implications for Researchers of Adult Education

This study provides researchers in adult education with a series of concepts to consider in expanding or improving knowledge about the education of both adults and adult educators. These concepts include:

1. The methods used in this study combine the sociopsychological approach often used in educational research with an organizational approach in looking at decision making. Added to these two disciplines is a third — the economics of education — which provides a new method of examining the problem.³ The combination of these approaches allowed conclusions to be reached based on three different systematic observations of the same population.
2. This investigation provides the field of adult education with knowledge of the decision-making process of some of its practitioners toward their own continuing education. The factors identified and ordered

provide a basis for comparison with factors proposed by others when studying adults using adult education opportunities.

3. This study increases the perspective of adult education researchers on how administrators influence staff member decisions within the largest adult education institution in the world. This fact alone provides a basis for further studies of other educational organizations along with providing a base for organizational research to investigators in other disciplines.

Limitations of the Study

Some limitations to generalizing the findings of the study include:

1. The exclusion of part-time graduate study in determining present values and internal rates of return. Bringing in part-time graduate study would have provided a whole host of new variables in the economic analysis.
2. The securing of salary data and the perceptions by written questionnaire from the respondents after a one-year time lag. These limitations weren't thought to alter the results to any great extent.
3. Limiting the sample to male agents. The results aren't necessarily applicable to female agents.

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A Concluding Note

This study has provided a general guide to the decision making of county Extension agents as they face the problem of pursuing an advanced degree. The findings may be interpreted to describe the county agent as a rational individual influenced primarily by financial considerations in deciding whether to pursue in advanced degree.

My experience has revealed many exceptions to this generalization because I've observed that a large number of county agents earn an advanced degree based on what would have to be described as financially unsound reasons. Although these adult educators may be motivated to pursue graduate study for nonmonetary reasons, if the Cooperative Extension Service and other adult education institutions wish to encourage their staff members to upgrade their professional competence through advanced study, this research suggests that financial incentives should be considered first.

Footnotes

1. The research was performed pursuant to Grant No. OEG-5-9-239113-0073 with the Office of Education, U.S. Department of Health, Education, and Welfare.
2. Theodore W. Schultz, "Human Capital Formation by Education," *Journal of Political Economy*, XLVIII (December, 1960), 571-84;

Gary S. Becker, "Underinvestment in College Education," *American Economic Review*, L (May, 1960), 345-46; W. Lee Hansen, "Total and Private Rates of Return to Investment in Schooling," *Journal of Political Economy*, LXXI (April, 1963), 128-40; and Valiern Harvey,

"Economic Aspects of Teachers' Salaries" (Ph.D. dissertation, University of Chicago, Department of Education, Illinois, 1967).

3. Rensis Likert, "A Technique for the Measurement of Attitudes," *Archives of Psychology*, CXL (June, 1932), 52.