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Impact of the Structure of Financial Markets on Rural Economic Development: An Empirical Test of a Decision-Making Approach

Deborah Morentz Markley*

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*Research Associate, Department of Agricultural Economics, Virginia Polytechnic Institute and State University, Blacksburg, Virginia

Biographical Sketch

Deborah Morentz Markley received her BS and MS degrees from Cornell University in 1978 and 1980, respectively. She is currently a Research Associate in the Department of Agricultural Economics, Virginia Polytechnic Institute and State University, Blacksburg, Virginia. In addition, she is enrolled in the PhD program at VPI & SU.

Abstract

Proposed structural changes in banking institutions, i.e., deregulation and interstate branching, could have a potentially great impact on local economic development in rural communities. This paper attempts to identify these potential impacts by looking at the decision-making processes of unit bank presidents and branch bank presidents. The lexicographic ordering technique is contrasted with a Bernoullian approach to eliciting preference orderings of decisionmakers. The lexicographic ordering technique is used to determine differences in the goal hierarchies elicited from unit bank versus branch bank presidents. The technique is then analyzed to determine how well it describes actual portfolio behavior.

Although the importance of financial institutions in the functioning of the national economy is widely acknowledged, the role of these same institutions in the economic growth of rural communities has not been fully explored. Several studies have attempted to evaluate this crucial issue. Sullivan attempted to determine what effect commercial bank support of municipal bonds has had on rural development. His results were inconclusive as to any credit shortage facing rural governments. Shaffer identified the potential role of commercial banks in a community's economic development process. His study of Wisconsin banks concluded that banks play a crucial role in the economic future of communities, yet all too often fail to utilize community funds to create jobs and income for the community. The solution he sees is for commercial bank owners and managers to be more sensitive to community implications of their decision-making. This emphasis on decision-making has important bearing on the present analysis, as discussed later in the paper.

Even as the role of commercial banks in the process of rural economic growth is being analyzed, two major institutional changes in the banking industry are being discussed and implemented. The first major change comes with the Depository Institutions Deregulation and Monetary Control Act of 1980. This act eventually reduces the technical distinctions between commercial banks and nonbank thrift institutions. The changes mandated by the act are to be gradually phased in over a six year period. The second major potential change is the proposed reevaluation of the McFadden Act, passed in 1927, which prohibits interstate branching of commercial bank institutions. A change to enable interstate branching has a potentially great impact on the structure of financial markets in rural areas. According to Rhoades and Savage, such institutional changes will increase competition for small banks from increased numbers of near substitutes, e.g., thrift institutions and from very large banks which could proliferate as a result of a move to allow interstate branching. Interest in potential changes in the bank market structure and the consequent impact on rural economic development motivates this study.

The purpose of this paper is to analyze any differences that may exist in bank decision-making based on whether the bank is classified as a unit bank or a branch bank.[1] The focus on an individual bank's decision-making is an attempt to identify important differences in the way in which banks view their role in a community's economic development process. Preference structures for alternative types of investments and bank operating objectives are elicited to provide a basis for the comparison of decision-making processes across banks in a lexicographic ordering framework. In addition, the analysis is framed in an expected utility context.

This study represents the first step in a more comprehensive investigation of the impact of changes in the structure of financial markets on rural economic development. As such, this paper also serves the purpose of testing the proposed technique for evaluating bank decision-making. The sample for this analysis, therefore, was purposefully chosen to include only one unit bank president and one branch bank president within a single rural community. While such a sample size prohibits any generalization of results, it does serve as an affordable means of testing a time-consuming, but potentially rewarding research technique for future analysis on larger, more representative samples.

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[1] In this study, branch banks include strictly branch banks and those banks that are members of multi-bank holding companies. Unit banks are independent banks, whose policies are established locally.

Eliciting Goals and Preferences

Two techniques were applied to identify the individual banker's preference orderings. First, each banker completed a lexicographic ordering of goals important to the overall operating plan of the bank. The application of this technique is based on the assumption that a banker has multiple goals and that a multiattribute utility function is the best representation of a banker's preferences. However, the lexicographic ordering provides only an approximation to a continuous utility function and should not be classified as a type of utility function. Halter and Dean and Lin, Dean, and Moore describe models which apply lexicographic ordering as representations of lexicographic utility functions. Roumasset notes that such terminology is conceptually incorrect and the lexicographic ordering applied here is not said to yield a utility function, but rather a preference structure underlying decision-making.

The lexicographic ordering technique assumes a set of goals which the decisionmaker can rank as to order of importance, $Z_1, Z_2, \ldots Z_n$, where Z_1 is more important than Z_2, etc. The decisionmaker is then asked to determine a satisfactory level of achievement, $Z_1^*, Z_2^*, \ldots Z_n^*$, for each of the goals in the hierarchy. The objective is to maximize the least important goal, Z_n, subject to achievement of the satisfactory levels of the more important goals, Z_1^*, $Z_2^*, \ldots Z_{n-1}^*$. If no feasible solution exists to this problem, then one formulates the alternative -- maximize Z_{n-1} subject to achievement of satisfactory levels of higher order goals. Several assumptions are implicit in this model. First, marginal utility associated with overachievement, i.e., $Z_i \geqq Z_i^*$, is zero. Second, there can be no tradeoff between goals. One might argue that both assumptions are not met in realistic decision-making situations.