1-1-1983

Strategy as Goals-Means Structure and Performance: An Empirical Examination

William R. Bigler, Jr.
Southern Methodist University

Banwari L. Kedia
Louisiana State University

Follow this and additional works at: https://scholar.smu.edu/business_workingpapers

Part of the Business Commons

This document is brought to you for free and open access by the Cox School of Business at SMU Scholar. It has been accepted for inclusion in Historical Working Papers by an authorized administrator of SMU Scholar. For more information, please visit http://digitalrepository.smu.edu.
STRATEGY AS GOALS-MEANS STRUCTURE AND PERFORMANCE:
AN EMPIRICAL EXAMINATION

Working Paper 83-116*

by

William R. Bigler, Jr.

and

Banwari L. Kedia

William R. Bigler, Jr.
Department of Organizational Behavior
Edwin L. Cox School of Business
Southern Methodist University
Dallas, Texas 75275

Banwari L. Kedia
Department of Management
Louisiana State University
Baton Rouge, Louisiana 70803

*This paper represents a draft of work in progress by the authors and is being sent to you for information and review. Responsibility for the contents rests solely with the authors. This working paper may not be reproduced or distributed without the written consent of the authors. Please address all correspondence to William R. Bigler, Jr.
This paper conceptually and empirically examines the once heralded, now "revived" Goal Paradigm. Recent research in this area construes Goals-Means structures at the top management level as a component of strategy. This paper, following a different line of argument, argues and tests for the explanatory power of a Goals-Means structure on performance.
One of the prominent interests of strategy researchers is to conceptualize and operationalize strategic variables that explain variation in organization performance. Of many attempts in this regard, the recent work emanating from Industrial Organization (Porter 1980) and multidisciplinary research attempts such as Lenz (1980a, b), Hambrick, (1980), and Miles and Snow (1978, 1981) have made considerable advances. Additionally, there has been a return to the once heralded construct of goals and goal structures in an attempt to add to the explanation of performance. Bourgeois (1978, 1980a, b) and Ramasprasad and Knod (1981) have provided new perspectives in terms of viewing goals and goal structures as strategy.

At the theoretical level, both from conceptual as well as empirical bases, it is important to stipulate the level of strategy at which goal structure is operationalized. Bourgeois (1980b) outlines two levels of strategy making:

1. "Domain definition strategy refers to the organization's choice of domain or change of domain that occurs when, for example, a firm diversifies into or exists from particular products or markets" (p. 27).

2. "Domain navigation strategy refers to competitive decisions made within a particular product-market or task environment" (p. 27).

The first type is primary strategy and sets the industry(ies) in which the firm will compete. The second type is secondary strategy and answers the question of how a firm competes in the chosen industries. It is within this area of second order strategy (Bourgeois, 1978:101) that goals and means ought to be operationally defined.

The purpose of this paper is to test a variation of Bourgeois (1978, 1980a). As such, we are also mainly interested in relating goals-means structure to performance at the level of second order strategy. However, our hypotheses are drawn from a slightly different argument than that of Bourgeois.
Hopefully though, the results of this study can add to the discussion of the effect of goals-means structure as strategy on performance.

**THEORY AND RESEARCH**

The focus and attempts of two groups of scholars have resulted in significant contribution to the theory and research on goals and goal structures. These are (1) Organization theorists, and (2) Strategy researchers. While the organization theorists have argued for and against the existence of goals and whether goals are really efficacious in producing any real effects of guidance, the strategy researchers have been concerned with whether goals can be and are set in a synoptic, consensus filled vision statement or emerge through incremental politicized processes. What follows is a brief review of these contributions.

**Contributions from Organization Theorists**

According to Georgiou, the goal construct is established as a paradigm,\(^1\) (Kuhn 1962) in that:

> the goal paradigm has become a procrustean bed into which all findings are forced and even incipient counter paradigms absorbed, regardless of their promise of greater insight. (Georgious, 1973:292)

As such, the goal construct is one that researchers have repeatedly returned to despite acerbic debate that the goal paradigm is a fiction. This debate has been well chronicled by Georgiou (1973), Hall (1977) and Mohr (1973) and will not be repeated here. However, it will be useful to provide the main points of the arguments that these researchers outline so as to provide an explicit argument for the position of the authors of this paper.

The argument against the goal paradigm (or why goals are difficult to formulate and attain) is supplied by at least four major fronts. First, the
question arises as to whether organizations as units have goals or are in existence to satisfy individual needs, desires and goals (Simon, 1964:2 and Barnard 1938:139). If the position is taken that organizations exist only to satisfy individual goals, it would be ontologically incorrect to speak of an organization goal. If this is the case, no goal directed activity in behalf of the organization could take place. Secondly, this problem is exacerbated by the fact that even if we could speak of the organization as possessing goal directed activity, organizations in practice are seen to exhibit multiple goals (Cyert and March, 1963:28). How then can multiple and sometimes conflicting goals provide for the needed rational guidance so that means can accomplish the goals?

Thirdly, formal goal (or goals) pronouncements, whether by the organization or individuals, can be vague and provide no guidance for action. Perrow (1961:855), in laying a hierarchical formulation for the analysis of goals, distinguished between formal goals which are general, all encompassing goals and operative goals or policies which are concerned with actual, day to day operations. In Perrow's scheme, formal goals can fall prey to vagueness but operative goals will save the day in terms of providing teleological guidance for action. Since no overriding goal has to provide the required guidance and cohesion, adherence to operative goals is accomplished as a result of habit (Hall, 1977:84)

Fourthly, even if organization goal(s) could be established, could provide for guidance, and means could be rationally formulated and allocated to achieve goals, the irrational component in human nature could not be eradicated. Selznick (1948:32) writes, "...organized action cannot escape involvement, a commitment to personnel or institutions, or procedures which qualifies the initial plan." Human inclinations can lay to waste the best laid plans of
organizations (Business Week, 1980). Additionally, goals can be displaced so that observed behavior does not conform to formal announcements for rational reasons (Michels, 1978:378), and goals can be subordinated to means (Merton, 1957) primarily through the mechanism of only rewarding behaviors associated with means.

With such arguments and evidence to the contrary, why do goals seem to continue to titillate the fancy of researchers and certainly practitioners? Perhaps Bourgeois (1980a) is correct when he states that:

> The formulation of goals followed by the identification and choice of means to attain them (the usual prescribed sequence in our normative decision models) is so fundamental to the Western way of thinking, that the circumvention of this order of events is considered a violation of the rational ideal (277, 288).

This underscores the fact that managers do articulate goals, either on behalf of themselves or their organizations, and they do in fact try to accomplish such goals despite all of the arguments above. We would not go so far as Gross (1969:277) who states "...that it is the dominating presence of a goal that marks off an 'organization' from all other forms of systems": this amounts to reifying the goal construct. We would argue though that goals can exist in the minds of top management teams and may be viewed as one of the components of strategy.

**Contributions From Strategy Researchers**

Strategy researchers for the most part take the existence of goals as givens. Andrews (1980) is probably the most eloquent spokesman on behalf of the goal paradigm and Richards (1978) devotes an entire book to explicating goals structures as strategy (Table 2.2 on p. 44 is illustrative of this thrust). Given that goals exist then, strategists argue primarily on the mode of goals formulation. Formulation is the setting of goals and means to attain
goals in one of two modes: a rational comprehensive approach and the political-incremental mode (Bourgeois, 1980a:229). In the former mode, the overall organizational goals are rationally set that describe a vision of the desired future state of the organization (Etzioni, 1964:6). Since participants are held to be rational, presumably some argument is given in the course of formulation that enables choice among alternatives. This would elicit at least acceptance of if not agreement on the chosen goals and means. In the latter mode, formulation takes place via disjointed, incremental, potentially highly politicized processes. This scenario allows for at least acceptance, if not agreement, on means but allows goals to be disagreed upon (Lindblom, 1979; Quinn, 1977, 1978, 1980).

The evidence for which mode is closer to the truth of things or even which one works better in differing conditions is sparse. However, the brief overview given in this section, as in the last, was taken to make a point: that no matter which mode is used to formulate goals and means, goals do exist in organizations. They are conceptualized and articulated (formally or informally) and they are implemented in some fashion so that hopefully some measure of positive performance ensues (Hall, 1977:70).

Bourgeois chose to relate goals-means structure to performance from a certain vantage point. His main hypothesis was the consensus on goals and means by top management teams was a necessary condition for a positive relation of goals-means structure to performance. Bourgeois (1980a:239) found that agreement on means but disagreement on goals was associated with the highest performing firms. While consensus on goals and means undeniably can be an important contributor to explaining performance, we feel that he may have limited the goals construct too severely. One can accept goals and means without agreeing on them. Acceptance without agreement would presuppose some
sort of authority and legitimacy for the independent existence of the goal structure. Accordingly, it can be argued that goals-means structure should, by its presence alone, be able to explain a certain degree of variation in performance. The Goal Paradigm implicitly argues that a goals-means structure should guide organizational strategy and decision making in a manner that would lead to high performance.

Hypotheses

From the above brief arguments that goals-means structures are foundational to organizations, we derive the two main hypotheses for this study:

1. a. There should be a meaningful small number of factors that can parsimoniously account for the important goals and means for the organization. In other words, there should exist a "dominant thrust" for the organization.

b. Certain means should be correlated with certain goals. The concept of equifinality (Kast and Rosenzweig, 1979:103) states that different means items may be responsible for accomplishing a given goal and conversely, a given means item may help to accomplish more than one goal.2

2. The goals-means structure itself should relate significantly to performance. Recall that this is a less restricted position than that taken by Bourgeois (1978, 1980a) who holds that agreement among top management teams must take place before goals-means structures can be significantly related to performance. However, following Bourgeois (1980a), means ought to better explain performance than goals.

Couched in these terms the two hypotheses restate the Goal Paradigm in a testable form which will be considered below.

METHOD

Sample

A modified version of the questionnaire designed by Bourgeois (1978, 1980a) was administered to CEO's or other members of the top management team in 90 banks in Louisiana in September-November 1981 to test the two main hypotheses presented above. This number represents about a third of the banks
in the state (N=264), and of the 90 who agreed to participate in the study, 44 usable questionnaires representing 44 banks were returned. An analysis of the sample showed that adequate size and geographic dispersion relative to the state totals was attained.

Realizing that the meanings attached to the various goals-means items in the questionnaire might vary from industry to industry, we restricted our sample to one industry in one state. To test the hypotheses above, all that is needed is variation in goals-means structure and performance. This requirement was met in this sample.

**Questionnaire**

The Bourgeois (1978, 1980a) Ends-Means Questionnaire, which asks respondents to indicate the importance of goal and means items on a five point Likert scale, was used in the study but was modified slightly in two ways (see these sources for rationale for the scales):

1. After discussions with industry analysts, certain scales were modified to make them appropriate for a service, financial institution industry. These changes were minor in nature; for example, changing the word product to service and price to rate, etc. Four means items had to be dropped because they did not apply either to the sample or to the industry.

2. Certain items were added (six goals and one means) to reflect other goals that are currently appropriate to the industry (Parker, 1981).

These modifications resulted in eighteen goal items (twelve for Bourgeois) and twenty-one means items (twenty-three for Bourgeois). We feel however that the nature and structure of the Bourgeois scales were left intact. (See Appendix 1 for a list of the goals and means items used in this study.)
Statistical Method

To test Hypothesis 1, factor analysis employing varimax rotation was performed. The SPSS algorithm was used for this purpose (Nie, et. al, 1975). This procedure was undertaken for two reasons:

1. The factor analysis performed on goals and means separately was done to search for an underlying structure in the goals and means items that could supply a dominant thrust of goals-means importance for the firms in the sample.4

2. Factor scores were generated for each of the goals and means factors. These factor scores were correlated using the Pearson product moment correlation method. The resulting correlation matrix should have significant correlations between certain means and goals items in order to help confirm Hypothesis 1b.

To test Hypothesis 2, two stepwise multiple regressions were run. These were as follows:

1. A stepwise multiple regression treating all means factors as independent variables was regressed on four year average return on assets (AVRGTASS) as the dependent variable.

2. A multiple regression treating all goals factors as independent variables was regressed on AVRGTASS.

Average return on assets (average return on assets for the years 1977-1980) was used as the dependent variable. The return on assets variable is a commonly used indicator of bank performance (Reed, et. al, 1980:195). Since the effectiveness of goals and means is supposed to be reflected over a period of time, the four year average return on assets was considered more appropriate for performance than return on assets in one particular year.
RESULTS

Test of Hypothesis 1

Table 1 presents the varimax rotated solution for the goal items. Four meaningful factors accounting for a total of 66 percent of the variance in the data emerged. While the Scree test (Cattell, 1960) signified retaining at most three factors, the eigenvalue greater than one rule suggested retaining the four factors. Upon inspection, there appeared to be reason to retain four factors because they supplied "good information" (Kim and Mueller, 1978:44). From inspection of the loadings we see that they are all positive and meet a .50 loading cutoff criteria (Hair, et. al, 1979:234). The four factors retained were then labelled for their apparent "dominant thrust." The four factors for 1) Internal Strength to Meet Service Challenges, 2) Image and Marketing, 3) Power and Strength in the Market, and 4) Profit, seem to account for a reasonable amount of the variance in the goals variables (65.8%) and supply a good, consistent structure of "dominant thrust."

Table 2 presents the varimax rotated solution for the means items. Four factors were retained for the reasons discussed above (even though six factors met the eigenvalue greater than one rule). Here, we see no consistency problems, the communalities for each variable prove to be adequate, and the factors explain a reasonable amount of the variance in the goals variables (59.5%). These four factors for the means items also appear to present an adequate dominant thrust picture.
From the results of Tables 1 and 2, it appears that adequate simple structure exists within the goals and means categories. A dominant thrust of importance of goals and means separately for the banks in the sample can be gleaned from the factors, thus supporting Hypothesis 1a.5

Table 3 shows the bivariate correlation matrix of factor scores between the four goals

Insert Table 3 about here

factors and the four means factors. At this level of aggregation it is interesting to note the significant correlations. The first means factor, The Importance of Service Development and Distinctive Competence, increases as the second goals factor, the Importance of Image and Marketing, increases. The variables which load highly on each of these factors show that as prestige and innovation, etc. become important as goals, such things as low price, friendliness of service, wide service range, new service development, consumer loans (typically a non-desirable loan category) and prediction of customer tastes become important as means.

The second means factor, the Importance of Cost and Safety, increases as the first goals factor, Internal Strength to Meet Service Challenges, increases. Here, as employee and top management development and the penetration of old markets and the development of new markets become important as goals, the variables of financial liquidity, new sources of funds, cost reduction, employee efficiency, employee morale and service quality become important as means. Presumably, the banks in this sample attempt to, across the board, pare down costs and seek new sources of funds to develop management in order to make penetration moves and develop new markets. This would seem to be the epitomy of effective and efficient management.
The second means factor, on the other hand, decreases as the third goals factor, the Importance of Power and Strength in the Market, increases. This inverse relationship shows that as rate of growth, market share, asset reserves and dominance in the market increase in importance, the variables for the Cost and Safety means factor decrease in importance. This is not to say that management is not concerned about these issues. It may be reflective of the argument that short term resources must be consumed for long run position in the market place, and that the importance placed on the Cost and Safety factor must take a lower priority.

Finally, the fourth means factor, the Importance of Tried and True Strategies, is seen to increase as both the first goals factor, the Importance of Internal Strength to Meet Service Challenges and the third goals factor, the Importance of Power and Strength in the Market, increase. As one can see, there is importance placed on the means of commercial and real estate loans (historically a powerful part of the loan portfolio for the banks in this sample), a more narrow service range and old service enhancement when the goals factors of Internal Strengths to Meet Service Challenges and Power and Strength in the Market become more important. This finding would suggest that new strategic thrusts should respect and perhaps be an extension of the older, tried and true strategies.

All of the significant correlations above are crude indicators of validity in the sense that useful relations between goals and means items are present. These correlations would tend to tentatively support Hypothesis 1b. Further research would need to be done stipulating which goals and means items ought to relate and what the causal sequence between them would be.
Test of Hypothesis 2

Table 4 shows the significant results from the regression procedures. The only significant equation to be found was with the goals factor of POWER. The equation is just significant at the .1 level and the R-square is low. However, the sign of the beta, negative, is interesting. It shows that as the importance placed on rate of growth, market share, dominance and assets reserves increases, AVRGTASS decreases. If this is a practically useful equation, it would tend to confirm the PIMS studies (Buzzell, et al.: 1975) that show that attempts to build market share and increase investment intensity (providing more reserves can be thought of analogously) are destructive of return on assets in the short run.

CONCLUSIONS

We cannot categorically state from our study that goals-means structures, by the fact of their existence, guide organizational action in a manner that would lead to high performance. However, from the factor analysis we observe that some meaningful factors which delineate a "dominant thrust" of importance for goals and means are highlighted. This kind of analysis might aid CEO's in focusing their thinking if not their efforts. It is easier to think in terms of eight factors than in terms of 39 variables. The question arises, though: Why do means factors not account at all for variation in performance and a goals factor only slightly explain performance in the regression analysis? The following aspects might represent reasons for such a poor showing. They might also point the way for future research.
1. The effects of goals and means on performance might be diffused by the issues, actions and vicissitudes of the actual implementation of the goals and means. Perhaps the goals-means statements need to be couched in a fashion that would allow almost microscopic inspection. In other words, the goals-means statements as formulated may still be too vague (Perrow, 1961:855-856). In addition, this narrowing in the reference and wording of means statements might also allow for the matching of perceptual responses to objective indicators of the goals-means items in question. In addition, Hall and Clark (1980) develop similar lines of argument by suggesting that inclusion of dominant coalition activity into the study of goals would better get at the implementation issue and would cause goal structure to better correlate with performance. Although they do not stipulate how this would be done, presumably conflict, consensus and power would be involved.

2. In this study, attempt was made to relate the goal structure to only one kind of performance, namely AVRGTASS. Given the concept of stakeholders and multiple criteria for performance, it is possible that the goal structure could best relate (or explain) criteria not selected in the study. Nevertheless, at least for economic institutions, the importance of return on assets cannot be understated.

3. The adequacy of the factor solutions suggest that the structures are at least internally consistent. These structures may be internally consistent, but totally fail to align the firm with the requirements of its environment. Since we did not delve into the environments in which the banks compete in this paper, there was little way to demonstrate if these goals structures were appropriate for the "contingencies" (Hickson, et. al, 1971) of their environments. As such, Hall and Clark (1980:128) call for a model that "... brings resource acquisition... back into the picture." This would presumably
better align the relation of goals and performance or at least show why formal goals have little explanatory power.

These suggestions argue for the direct inclusion of external parameters for goals and the internal processes used to formulate them. If this thrust is valid, it would seem to support a view that the goals and means structure as measured in this study could not explain performance even though we get a good picture of the structure's internal consistency. Perhaps a study of Environment + Goals Process and Content + Performance may provide more fruitful results. However, by this formulation, goals and goals-means structures would then be contingent on contextual influences. This contingency view would not support the pure form of the Goal Paradigm, as presented here. It will remain still for further study to delve into the nuances of the Goal Paradigm before it can be admitted as formal, tested knowledge. Otherwise, it will have to remain as sort of a myth or be struck from our lexicon.
Endnotes

1 The Goal Paradigm sees the organization as "an instrument, a deliberate and rational means for attaining known goals: (Thompson, 1968:397).

2 Since this is really an exploratory study, no attempt is made to hypothesize which means items ought to correlate with given goals items. Indeed, the particular means-goals correlations will probably differ given a particular industry. The procedure outlined below purports to help understand goals-means structures and it may be of use across industry settings.

3 Copies of both instruments can be obtained from the authors.

4 A small sample size precluded a factor analysis of all goals and means items together. This small sample size is a weakness of this study. However, the subsequent correlation of the goals and means factor scores (shown in Table 3) shows that meaningful correlations are present. This face validity ameliorates the problem of small sample size and only within goals and means factor solutions somewhat.

5 A factor structure which is consistent (few variables that load highly on more than one factor) and which explains an adequate amount of variance (greater than 50%) is statistically adequate. This adequacy is really a simple measure of reliability for the entire structure of variables. As always then, reliability is a necessary condition for validity, which is arrived at in the test of Hypothesis 1b. So, an adequate factor structure is a necessary condition to support Hypothesis 1a, which is present here.
### Table 1
Varimax Rotated Factor Solution For Goals*

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>FACTOR 1</th>
<th>FACTOR 2</th>
<th>FACTOR 3</th>
<th>FACTOR 4</th>
<th>COMMUNALITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>NETPROFF</td>
<td>0.12933</td>
<td>-0.00032</td>
<td>-0.12354</td>
<td>*0.87172</td>
<td>0.79189</td>
</tr>
<tr>
<td>RATEGROW</td>
<td>0.09501</td>
<td>0.10402</td>
<td>*0.84790</td>
<td>0.05207</td>
<td>0.74149</td>
</tr>
<tr>
<td>MARKETSH</td>
<td>0.01147</td>
<td>0.08252</td>
<td>*0.83691</td>
<td>-0.09549</td>
<td>0.71648</td>
</tr>
<tr>
<td>EERELENE</td>
<td>*0.65328</td>
<td>0.32660</td>
<td>-0.04127</td>
<td>0.16307</td>
<td>0.56174</td>
</tr>
<tr>
<td>NETPROFY</td>
<td>0.08870</td>
<td>0.11033</td>
<td>-0.03830</td>
<td>*0.88772</td>
<td>0.80955</td>
</tr>
<tr>
<td>PRESTIGE</td>
<td>0.20857</td>
<td>*0.61677</td>
<td>0.37480</td>
<td>0.10887</td>
<td>0.57624</td>
</tr>
<tr>
<td>INNOVATN</td>
<td>0.59514</td>
<td>*0.60816</td>
<td>0.08529</td>
<td>0.02100</td>
<td>0.73177</td>
</tr>
<tr>
<td>ASITRESV</td>
<td>0.64345</td>
<td>0.25528</td>
<td>*0.51000</td>
<td>0.31288</td>
<td>0.61982</td>
</tr>
<tr>
<td>DIVIPAYO</td>
<td>0.09778</td>
<td>*0.75601</td>
<td>0.17098</td>
<td>0.08511</td>
<td>0.61759</td>
</tr>
<tr>
<td>PRICLAD</td>
<td>0.34338</td>
<td>0.38653</td>
<td>0.38246</td>
<td>0.02000</td>
<td>0.41399</td>
</tr>
<tr>
<td>COMUSERV</td>
<td>0.22281</td>
<td>*0.80383</td>
<td>-0.04020</td>
<td>0.77112</td>
<td>0.70336</td>
</tr>
<tr>
<td>EQIPBDG</td>
<td>0.22942</td>
<td>*0.64636</td>
<td>-0.29430</td>
<td>0.08067</td>
<td>0.63240</td>
</tr>
<tr>
<td>PENETRAT</td>
<td>*0.59973</td>
<td>0.49148</td>
<td>0.04931</td>
<td>-0.11881</td>
<td>0.61778</td>
</tr>
<tr>
<td>NEWMARKT</td>
<td>*0.71485</td>
<td>0.04804</td>
<td>0.24715</td>
<td>0.08901</td>
<td>0.58233</td>
</tr>
<tr>
<td>MERAQUI</td>
<td>0.43605</td>
<td>-0.44404</td>
<td>0.38950</td>
<td>0.17245</td>
<td>0.56876</td>
</tr>
<tr>
<td>DOMPOWER</td>
<td>0.16146</td>
<td>0.37833</td>
<td>*0.59197</td>
<td>0.40965</td>
<td>0.68744</td>
</tr>
<tr>
<td>EESATDEV</td>
<td>*0.78361</td>
<td>0.26684</td>
<td>0.07712</td>
<td>0.14385</td>
<td>0.71189</td>
</tr>
<tr>
<td>CRODEVEL</td>
<td>*0.86092</td>
<td>0.06934</td>
<td>0.11968</td>
<td>0.07896</td>
<td>0.76655</td>
</tr>
</tbody>
</table>

Eigenvalue 3.727 3.403 2.764 1.956 11.850

Percent of Variance Explained 20.11 18.91 15.36 10.87 65.80

* Star to the left of variable loadings indicates variables which have met a .50 cut off point.

### Table 2
Varimax Rotated Factor Solution For Means*

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>FACTOR 1</th>
<th>FACTOR 2</th>
<th>FACTOR 3</th>
<th>FACTOR 4</th>
<th>COMMUNALITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>FINLIQUD</td>
<td>0.11562</td>
<td>*0.61453</td>
<td>0.04257</td>
<td>0.24839</td>
<td>0.45452</td>
</tr>
<tr>
<td>NUSRCFUN</td>
<td>0.01072</td>
<td>*0.72223</td>
<td>0.06411</td>
<td>0.35878</td>
<td>0.65456</td>
</tr>
<tr>
<td>ADVREJK</td>
<td>0.05138</td>
<td>-0.01760</td>
<td>*0.84901</td>
<td>-0.01673</td>
<td>0.72405</td>
</tr>
<tr>
<td>ADVQUAL</td>
<td>-0.30852</td>
<td>0.02843</td>
<td>*0.91654</td>
<td>0.08022</td>
<td>0.86704</td>
</tr>
<tr>
<td>COSTREDCC</td>
<td>0.07285</td>
<td>*0.80669</td>
<td>-0.05215</td>
<td>-0.22575</td>
<td>0.70973</td>
</tr>
<tr>
<td>EEEPCYCC</td>
<td>0.28020</td>
<td>*0.75669</td>
<td>0.05510</td>
<td>0.05018</td>
<td>0.67035</td>
</tr>
<tr>
<td>EEMORALE</td>
<td>0.37595</td>
<td>*0.65465</td>
<td>-0.03382</td>
<td>0.04188</td>
<td>0.57254</td>
</tr>
<tr>
<td>LOWPRICE</td>
<td>0.49901</td>
<td>0.21466</td>
<td>-0.19093</td>
<td>0.22529</td>
<td>0.38230</td>
</tr>
<tr>
<td>HIGPRICE</td>
<td>-0.57590</td>
<td>-0.06548</td>
<td>0.10034</td>
<td>-0.09804</td>
<td>0.35563</td>
</tr>
<tr>
<td>FIRMINAG</td>
<td>0.47570</td>
<td>0.37412</td>
<td>0.03078</td>
<td>0.10132</td>
<td>0.37746</td>
</tr>
<tr>
<td>CONSLON</td>
<td>*0.57807</td>
<td>0.16913</td>
<td>0.05396</td>
<td>-0.47610</td>
<td>0.59235</td>
</tr>
<tr>
<td>SERQVIAL</td>
<td>0.34659</td>
<td>*0.67739</td>
<td>0.05018</td>
<td>0.30740</td>
<td>0.67059</td>
</tr>
<tr>
<td>REALLOAN</td>
<td>0.00928</td>
<td>0.37688</td>
<td>0.03503</td>
<td>*0.62331</td>
<td>0.53186</td>
</tr>
<tr>
<td>CUSTSERV</td>
<td>*0.60638</td>
<td>0.46042</td>
<td>0.07484</td>
<td>0.03262</td>
<td>0.58636</td>
</tr>
<tr>
<td>WIDESERV</td>
<td>*0.76313</td>
<td>0.04731</td>
<td>0.03985</td>
<td>-0.00968</td>
<td>0.58629</td>
</tr>
<tr>
<td>NARGESOV</td>
<td>0.03388</td>
<td>0.21800</td>
<td>-0.30599</td>
<td>*0.74255</td>
<td>0.69590</td>
</tr>
<tr>
<td>NUSERDE</td>
<td>*0.82257</td>
<td>0.20999</td>
<td>0.26840</td>
<td>0.11702</td>
<td>0.80274</td>
</tr>
<tr>
<td>OLSVNET</td>
<td>0.47714</td>
<td>0.07896</td>
<td>0.23921</td>
<td>*0.58854</td>
<td>0.63751</td>
</tr>
<tr>
<td>LOBSDAC</td>
<td>0.34112</td>
<td>0.20037</td>
<td>*0.60216</td>
<td>-0.29733</td>
<td>0.60481</td>
</tr>
<tr>
<td>CUSTTAST</td>
<td>0.59751</td>
<td>0.30787</td>
<td>0.23007</td>
<td>-0.05839</td>
<td>0.48727</td>
</tr>
<tr>
<td>COMPACTN</td>
<td>0.36531</td>
<td>-0.06649</td>
<td>0.43016</td>
<td>0.46495</td>
<td>0.53909</td>
</tr>
</tbody>
</table>

Eigenvalue 3.962 3.828 2.462 2.250 12.503

Percent of Variance Explained 18.87 18.23 11.72 10.71 59.54

* Star to the left of variable loadings indicates variables which have met a
### Table 3

**GOALS–MEANS FACTOR SCORE CORRELATIONS***

<table>
<thead>
<tr>
<th></th>
<th>Internal Strength to Meet Service Challenges (G1)*</th>
<th>Image and Marketing (G2)</th>
<th>Power and Strength in the Market (G3)</th>
<th>Profit (G4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Development and Distinctive Competence (M1)</td>
<td>.24 (.1219)</td>
<td>.56 (.0001)</td>
<td>.18 (.2402)</td>
<td>.01 (.9268)</td>
</tr>
<tr>
<td>Cost and Safety (M2)</td>
<td>.61 (.0001)</td>
<td>.20 (.1961)</td>
<td>-.28 (.0706)</td>
<td>-.01 (.9560)</td>
</tr>
<tr>
<td>External Relations (M3)</td>
<td>.15 (.3362)</td>
<td>.12 (.4290)</td>
<td>.05 (.7416)</td>
<td>-.02 (.8973)</td>
</tr>
<tr>
<td>Tried and True Strategies (M4)</td>
<td>.35 (.0222)</td>
<td>-.04 (.8098)</td>
<td>.28 (.0655)</td>
<td>.17 (.2764)</td>
</tr>
</tbody>
</table>

*G = Goals Factor, M = Means Factor

Source: Primary

### Table 4

**SIGNIFICANT STEPWISE REGRESSION SOLUTION FOR AVRGTASS**

Model: 

AVRGTASS = 1.205 - .103 (POWER)

\[ F = 3.00 \text{ Significance } F = .0904 \]

\[ R^2 = .07 \]

Source: Primary
Appendix 1

LIST OF THE GOALS-MEANS ITEMS*

<table>
<thead>
<tr>
<th>Variable Prefix</th>
<th>Variable Description</th>
<th>Means</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>NETPROFF</td>
<td>Net Profit Over Five Years</td>
<td>4.810</td>
<td>.397</td>
</tr>
<tr>
<td>RATEGROW</td>
<td>Rate of Growth</td>
<td>3.976</td>
<td>.897</td>
</tr>
<tr>
<td>MARKETSH</td>
<td>Market Share</td>
<td>3.976</td>
<td>.869</td>
</tr>
<tr>
<td>EEREBENE</td>
<td>Employee Rewards and Benefits</td>
<td>3.810</td>
<td>.917</td>
</tr>
<tr>
<td>NETPROFY</td>
<td>Net Profit Over The Coming Year</td>
<td>4.738</td>
<td>.544</td>
</tr>
<tr>
<td>PRESTIGE</td>
<td>Company Prestige</td>
<td>4.071</td>
<td>.808</td>
</tr>
<tr>
<td>INNOVATN</td>
<td>Innovation</td>
<td>3.571</td>
<td>.941</td>
</tr>
<tr>
<td>ASETRESV</td>
<td>Assets and Reserves</td>
<td>4.286</td>
<td>.708</td>
</tr>
<tr>
<td>DIVIPAYO</td>
<td>Dividend Payout</td>
<td>3.310</td>
<td>1.115</td>
</tr>
<tr>
<td>PRICELEAD</td>
<td>Price Leadership</td>
<td>3.548</td>
<td>.889</td>
</tr>
<tr>
<td>COMUSERV</td>
<td>Service to Community</td>
<td>4.000</td>
<td>.883</td>
</tr>
<tr>
<td>EQUIPBLDG</td>
<td>Employment and Building Modernization</td>
<td>3.548</td>
<td>.968</td>
</tr>
<tr>
<td>PENEATRAT</td>
<td>Increase Current Value of Business</td>
<td>4.190</td>
<td>.671</td>
</tr>
<tr>
<td>NEWMARKI</td>
<td>Attract New Customers</td>
<td>4.143</td>
<td>.751</td>
</tr>
<tr>
<td>MERGAQUI</td>
<td>Merger and Acquisition Activity</td>
<td>2.000</td>
<td>1.082</td>
</tr>
<tr>
<td>DOHPOWER</td>
<td>Dominance in the Market</td>
<td>3.524</td>
<td>1.018</td>
</tr>
<tr>
<td>EESATDEV</td>
<td>Employee Satisfaction and Devel.</td>
<td>4.214</td>
<td>.682</td>
</tr>
<tr>
<td>CEODEVEL</td>
<td>Top Management Devel.</td>
<td>4.429</td>
<td>.737</td>
</tr>
<tr>
<td>FINLIQUD</td>
<td>Financial Liquidity</td>
<td>4.390</td>
<td>.666</td>
</tr>
<tr>
<td>NUSRCFUN</td>
<td>New Sources of Funds</td>
<td>4.049</td>
<td>.740</td>
</tr>
<tr>
<td>ADVFREQ</td>
<td>Advertising Frequency</td>
<td>2.878</td>
<td>.781</td>
</tr>
<tr>
<td>ADVQUAL</td>
<td>Advertising Quality</td>
<td>3.463</td>
<td>.925</td>
</tr>
<tr>
<td>COSTREDCC</td>
<td>Cost Reduction</td>
<td>4.073</td>
<td>.685</td>
</tr>
<tr>
<td>EEEFICCY</td>
<td>Employee Efficiency</td>
<td>4.341</td>
<td>.617</td>
</tr>
<tr>
<td>EEMORALE</td>
<td>Employee Morale</td>
<td>4.171</td>
<td>.738</td>
</tr>
<tr>
<td>LOWPRICE</td>
<td>Low Interest Charged</td>
<td>2.805</td>
<td>.954</td>
</tr>
<tr>
<td>HIGPRICE</td>
<td>High Interest Charges</td>
<td>3.585</td>
<td>.865</td>
</tr>
<tr>
<td>FIRIMAG</td>
<td>Firm Image</td>
<td>4.195</td>
<td>.641</td>
</tr>
<tr>
<td>CONSLON</td>
<td>Consumer Loans</td>
<td>3.293</td>
<td>.901</td>
</tr>
<tr>
<td>SERVQUAL</td>
<td>Service Quality</td>
<td>4.098</td>
<td>.625</td>
</tr>
<tr>
<td>REALLOAN</td>
<td>Commercial and Real Estate Loans</td>
<td>4.024</td>
<td>.758</td>
</tr>
<tr>
<td>CUSTSERV</td>
<td>&quot;Friendliness of Service&quot;</td>
<td>4.390</td>
<td>.703</td>
</tr>
<tr>
<td>WIDESERV</td>
<td>Wide Service Range</td>
<td>3.732</td>
<td>.923</td>
</tr>
<tr>
<td>NAROSERV</td>
<td>Narrow Service Range</td>
<td>2.878</td>
<td>.980</td>
</tr>
<tr>
<td>NUSERVDE</td>
<td>New Service Development</td>
<td>3.415</td>
<td>.894</td>
</tr>
<tr>
<td>OLSRVBET</td>
<td>Existing Service Improvement</td>
<td>3.927</td>
<td>.648</td>
</tr>
<tr>
<td>LOBBACT</td>
<td>Lobbying Activity</td>
<td>3.000</td>
<td>.894</td>
</tr>
<tr>
<td>CUSTTAST</td>
<td>Prediction of Customer Tastes</td>
<td>3.415</td>
<td>.805</td>
</tr>
<tr>
<td>COMPACTN</td>
<td>Prediction of Competitor Action</td>
<td>3.537</td>
<td>.711</td>
</tr>
<tr>
<td>AVRGTTASS</td>
<td>Four Year Average (1977-1980)</td>
<td>1.198</td>
<td>.407</td>
</tr>
</tbody>
</table>

* Items NETPROFF to CEODEVEL are Goals; FINLIQUD to COMPACTN are Means.

** A senior executive at each bank was asked to respond on a five point Likert scale as to the importance of each of the goals-means items (1-Not at all important to 5-Extremely important).
References


The following papers are currently available in the Edwin L. Cox School of Business Working Paper Series.

79-100 "Microdata File Merging Through Large-Scale Network Technology," by Richard S. Barr and J. Scott Turner

79-101 "Perceived Environmental Uncertainty: An Individual or Environmental Attribute," by Peter Lorenzi, Henry P. Sims, Jr., and John W. Slocum, Jr.


80-100 "Implementing the Portfolio (SBU) Concept," by Richard A. Bettis and William K. Hall

80-101 "Assessing Organizational Change Approaches: Towards a Comparative Typology," by Don Hellriegel and John W. Slocum, Jr.

80-102 "Constructing a Theory of Accounting—An Axiomatic Approach," by Marvin L. Carlson and James W. Lamb

80-103 "Mentors & Managers," by Michael E. McGill

80-104 "Budgeting Capital for R&D: An Application of Option Pricing," by John W. Kensinger

80-200 "Financial Terms of Sale and Control of Marketing Channel Conflict," by Michael Levy and Dwight Grant


80-301 "Controlling the Performance of People in Organizations," by Steven Kerr and John W. Slocum, Jr.

80-400 "The Effects of Racial Composition on Neighborhood Succession," by Kerry D. Vandell


80-801 "Comparison of the EEOCC Four-Fifths Rule and A One, Two or Three σ Binomial Criterion," by Marion Gross Sobol and Paul Ellard

80-900 "Bank Portfolio Management: The Role of Financial Futures," by Dwight M. Grant and George Hempel
80-902 "Hedging Uncertain Foreign Exchange Positions," by Mark R. Eaker and Dwight M. Grant


80-111 "Sources of Performance Differences in Related and Unrelated Diversified Firms," by Richard A. Bettis

80-112 "The Information Needs of Business With Special Application to Managerial Decision Making," by Paul Gray

80-113 "Diversification Strategy, Accounting Determined Risk, and Accounting Determined Return," by Richard A. Bettis and William K. Hall

80-114 "Toward Analytically Precise Definitions of Market Value and Highest and Best Use," by Kerry D. Vandell

80-115 "Person-Situation Interaction: An Exploration of Competing Models of Fit," by William F. Joyce, John W. Slocum, Jr., and Mary Ann Von Glinow

80-116 "Correlates of Climate Discrepancy," by William F. Joyce and John Slocum

80-117 "Alternative Perspectives on Neighborhood Decline," by Arthur P. Solomon and Kerry D. Vandell

80-121 "Project Abandonment as a Put Option: Dealing with the Capital Investment Decision and Operating Risk Using Option Pricing Theory," by John W. Kensinger

80-122 "The Interrelationships Between Banking Returns and Risks," by George H. Hempel

80-123 "The Environment For Funds Management Decisions In Coming Years," by George H. Hempel

81-100 "A Test of Gouldner's Norm of Reciprocity in a Commercial Marketing Research Setting," by Roger Kerin, Thomas Barry, and Alan Dubinsky

81-200 "Solution Strategies and Algorithm Behavior in Large-Scale Network Codes," by Richard S. Barr

81-201 "The SMU Decision Room Project," by Paul Gray, Julius Aronofsky, Nancy W. Berry, Olaf Helmer, Gerald R. Kane, and Thomas E. Perkins

81-300 "Cash Discounts to Retail Customers: An Alternative to Credit Card Performance," by Michael Levy and Charles Ingene

81-400 "Merchandising Decisions: A New View of Planning and Measuring Performance," by Michael Levy and Charles A. Ingene

81-501 "Job Redesign: Improving the Quality of Working Life," by John W. Slocum, Jr.
81-600 "Managerial Uncertainty and Performance," by H. Kirk Downey and John W. Slocum, Jr.
81-601 "Compensating Balance, Rationality, and Optimality," by Chun H. Lam and Kenneth J. Boudreaux
81-800 "The Chinese-U.S. Symposium On Systems Analysis," by Paul Gray and Burton V. Dean
81-900 "Forecasting Industrial Bond Rating Changes: A Multivariate Model," by John W. Peavy, III
81-110 "Improving Gap Management as a Technique for Reducing Interest Rate Risk," by Donald G. Simonson and George H. Hempel
81-112 "The Significance of Price-Earnings Ratios on Portfolio Returns," by John W. Peavy, III and David A. Goodman
81-113 "Further Evaluation of Financing Costs for Multinational Subsidiaries," by Catherine J. Bruno and Mark R. Eaker
81-114 "Seven Key Rules for Successful Stock Market Speculation," by David Goodman
81-115 "The Price-Earnings Relative as an Indicator of Investment Returns," by David Goodman and John W. Peavy, III
81-117 "Sequential Information Dissemination and Relative Market Efficiency," by Christopher B. Barry and Robert H. Jennings
81-118 "Modeling Earnings Behavior," by Michael F. van Breda
81-120 "The Price-Earnings Relatives - A New Twist to the Low-Multiple Strategy," by David A. Goodman and John W. Peavy, III
82-100 "Risk Considerations in Modeling Corporate Strategy," by Richard A. Bettis


82-103  "A Typology of Small Businesses: Hypothesis and Preliminary Study," by Neil C. Churchill and Virginia L. Lewis

82-104  "Imperfect Information, Uncertainty, and Credit Rationing: A Comment and Extension," by Kerry D. Vandell

82-200  "Equilibrium in a Futures Market," by Jerome Baesel and Dwight Grant

82-201  "A Market Index Futures Contract and Portfolio Selection," by Dwight Grant

82-202  "Selecting Optimal Portfolios with a Futures Market in a Stock Index," by Dwight Grant

82-203  "Market Index Futures Contracts: Some Thoughts on Delivery Dates," by Dwight Grant

82-204  "Optimal Sequential Futures Trading," by Jerome Baesel and Dwight Grant

82-300  "The Hypothesized Effects of Ability in the Turnover Process," by Ellen F. Jackofsky and Lawrence H. Peters

82-301  "Teaching a Financial Planning Language as the Principal Computer Language for MBA's," by Thomas E. Perkins and Paul Gray

82-302  "Put Budgeting Back Into Capital Budgeting," by Michael F. van Breda

82-400  "Information Dissemination and Portfolio Choice," by Robert H. Jennings and Christopher B. Barry

82-401  "Reality Shock: The Link Between Socialization and Organizational Commitment," by Roger A. Dean

82-402  "Reporting on the Annual Report," by Gail E. Farrelly and Gail B. Wright

82-403  "A Linguistic Analysis of Accounting," by Gail E. Farrelly


82-601  "Optimal Land Use Planning," by Richard B. Peiser

82-602  "Variance and Indices," by Michael F. van Breda

82-603  "The Pricing of Small Business Loans," by Jonathan A. Scott

82-604  "Collateral Requirements and Small Business Loans," by Jonathan A. Scott

82-605  "Validation Strategies for Multiple Regression Analysis: A Tutorial," by Marion G. Sobol
82-700  "Credit Rationing and the Small Business Community," by Jonathan A. Scott
82-701  "Bank Structure and Small Business Loan Markets," by William C. Dunkelberg and Jonathan A. Scott
82-800  "Transportation Evaluation in Community Design: An Extension with Equilibrium Route Assignment," by Richard B. Peiser
82-801  "An Expanded Commercial Paper Rating Scale: Classification of Industrial Issuers," by John W. Peavy, III and S. Michael Edgar
82-802  "Inflation, Risk, and Corporate Profitability: Effects on Common Stock Returns," by David A. Goodman and John W. Peavy, III
82-803  "Turnover and Job Performance: An Integrated Process Model," by Ellen F. Jackofsky
82-806  "Analytical Review Developments in Practice: Misconceptions, Potential Applications, and Field Experience," by Wanda Wallace
82-807  "Using Financial Planning Languages for Simulation," by Paul Gray
82-808  "A Look at How Managers' Minds Work," by John W. Slocum, Jr. and Don Hellriegel
82-900  "The Impact of Price Earnings Ratios on Portfolio Returns," by John W. Peavy, III and David A. Goodman
82-901  "Replicating Electric Utility Short-Term Credit Ratings," by John W. Peavy, III and S. Michael Edgar
82-902  "Job Turnover Versus Company Turnover: Reassessment of the March and Simon Participation Model," by Ellen F. Jackofsky and Lawrence H. Peters
82-903  "Investment Management by Multiple Managers: An Agency-Theoretic Explanation," by Christopher B. Barry and Laura T. Starks
82-904  "The Senior Marketing Officer - An Academic Perspective," by James T. Rothe
82-905  "The Impact of Cable Television on Subscriber and Nonsubscriber Behavior," by James T. Rothe, Michael G. Harvey, and George C. Michael
82-110  "Reasons for Quitting: A Comparison of Part-Time and Full-Time Employees," by James R. Salter, Lawrence H. Peters, and Ellen F. Jackofsky
82-111  "Integrating Financial Portfolio Analysis with Product Portfolio Models," by Vijay Mahajan and Jerry Wind
<table>
<thead>
<tr>
<th>Page</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>82-112</td>
<td>&quot;A Non-Uniform Influence Innovation Diffusion Model of New Product Acceptance,&quot;</td>
<td>Christopher J. Easingwood, Vijay Mahajan, and Eitan Muller</td>
</tr>
<tr>
<td>82-113</td>
<td>&quot;The Acceptability of Regression Analysis as Evidence in a Courtroom - Implications for the Auditor,&quot;</td>
<td>Wanda A. Wallace</td>
</tr>
<tr>
<td>82-114</td>
<td>&quot;A Further Inquiry Into the Market Value and Earnings' Yield Anomalies,&quot;</td>
<td>John W. Peavy, III and David A. Goodman</td>
</tr>
<tr>
<td>82-120</td>
<td>&quot;Compensating Balances, Deficiency Fees and Lines of Credit: An Operational Model,&quot;</td>
<td>Chun H. Lam and Kenneth J. Boudreaux</td>
</tr>
<tr>
<td>82-121</td>
<td>&quot;Toward a Formal Model of Optimal Seller Behavior in the Real Estate Transactions Process,&quot;</td>
<td>Kerry Vandell</td>
</tr>
<tr>
<td>82-123</td>
<td>&quot;Compensating Balances, Deficiency Fees and Lines of Credit,&quot;</td>
<td>Chun H. Lam and Kenneth J. Boudreaux</td>
</tr>
<tr>
<td>83-100</td>
<td>&quot;Teaching Software System Design: An Experiential Approach,&quot;</td>
<td>Thomas E. Perkins</td>
</tr>
<tr>
<td>83-102</td>
<td>&quot;An Interactive Approach to Pension Fund Asset Management,&quot;</td>
<td>David A. Goodman and John W. Peavy, III</td>
</tr>
<tr>
<td>83-105</td>
<td>&quot;Robust Regression: Method and Applications,&quot;</td>
<td>Vijay Mahajan, Subhash Sharma, and Jerry Wind</td>
</tr>
<tr>
<td>83-106</td>
<td>&quot;An Approach to Repeat-Purchase Diffusion Analysis,&quot;</td>
<td>Vijay Mahajan, Subhash Sharma, and Jerry Wind</td>
</tr>
<tr>
<td>83-200</td>
<td>&quot;A Life Stage Analysis of Small Business Strategies and Performance,&quot;</td>
<td>Rajeswararao Chaganti, Radharao Chaganti, and Vijay Mahajan</td>
</tr>
<tr>
<td>83-201</td>
<td>&quot;Reality Shock: When A New Employee's Expectations Don't Match Reality,&quot;</td>
<td>Roger A. Dean and John P. Wanous</td>
</tr>
<tr>
<td>83-202</td>
<td>&quot;The Effects of Realistic Job Previews on Hiring Bank Tellers,&quot;</td>
<td>Roger A. Dean and John P. Wanous</td>
</tr>
<tr>
<td>83-204</td>
<td>&quot;Differential Information and the Small Firm Effect,&quot;</td>
<td>Christopher B. Barry and Stephen J. Brown</td>
</tr>
</tbody>
</table>
"Constrained Classification: The Use of a Priori Information in Cluster Analysis," by Wayne S. DeSarbo and Vijay Mahajan


"Small Businesses, the Economy, and High Interest Rates: Impacts and Actions Taken in Response," by Neil C. Churchill and Virginia L. Lewis


"A Closer Look at Stock-For-Debt Swaps," by John W. Peavy III and Jonathan A. Scott

"Small Business Evaluates its Relationship with Commercial Banks," by William C. Dunkelberg and Jonathan A. Scott


"Differential Information and the Small Firm Effect," by Christopher B. Barry and Stephen J. Brown

"Accounting Paradigms and Short-Term Decisions: A Preliminary Study," by Michael van Breda


"Initial Observations from the Decision Room Project," by Paul Gray


83-800 "Multiple Key Informants' Perceptions of Business Environments," by William L. Cron and John W. Slocum, Jr.


83-803 "Business Synergy and Profitability," by Vijay Mahajan and Yoram Wind

83-804 "Advertising, Pricing and Stability in Oligopolistic Markets for New Products," by Chaim Fershtman, Vijay Mahajan, and Eitan Muller

83-805 "How Have The Professional Standards Influenced Practice?," by Wanda A. Wallace

83-806 "What Attributes of an Internal Auditing Department Significantly Increase the Probability of External Auditors Relying on the Internal Audit Department?," by Wanda A. Wallace

83-807 "Building Bridges in Rotary," by Michael F. van Breda

83-808 "A New Approach to Variance Analysis," by Michael F. van Breda


83-810 "Taxes, Insurance, and Corporate Pension Policy," by Andrew H. Chen


83-900 "Networks with Side Constraints: An LU Factorization Update," by Richard S. Barr, Keyvan Farhangian, and Jeff L. Kennington

83-901 "Diversification Strategies and Managerial Rewards: An Empirical Study," by Jeffrey L. Kerr


83-903 "Network Generating Models for Equipment Replacement," by Jay E. Aronson and Julius S. Aronofsky

83-904 "Differential Information and Security Market Equilibrium," by Christopher B. Barry and Stephen J. Brown

83-905 "Optimization Methods in Oil and Gas Development," by Julius S. Aronofsky

83-907 "Security Price Reactions Around Corporate Spin-Off Announcements," by Gailen L. Hite and James E. Owers


83-110 "Microcomputers in the Banking Industry," by Chun H. Lam

83-111 "Current and Potential Application of Microcomputers in Banking -- Survey Results," by Chun H. Lam and George H. Hempel


83-114 "The Effect of Stock-for-Debt on Security Prices," by John W. Peavy, III and Jonathan A. Scott

83-115 "Risk/Return Performance of Diversified Firms," by Richard A. Bettis and Vijay Mahajan