ECONSTOR

Rodgers, Waymond

Working Paper

Image and Reputational Impact on Managers' Assessment of Auditing Activities

Arbeitspapiere der Nordakademie, No. 2010-09

Provided in cooperation with:

Nordakademie - Hochschule der Wirtschaft

Image and Reputational Impact on Managers´ Assessment of Auditing Activities

Prof. Dr. Waymond Rodgers, CPA

September 2010

Image and Reputational Impact on Managers' Assessment of Auditing Activities

by

Waymond Rodgers, Ph.D., C.P.A.
Professor of Accounting and Information Systems
A. Gary Anderson Graduate School of Management
University of California, Riverside
Riverside, CA 92521

and

Occasional Visiting Professor, at Nordakademie University
Gemeinnützige Aktiengesellschaft
Köllner Chaussee 11
25337 Elmshorn

August 2010

Image and Reputational Impact on Managers' Assessment of Auditing Activities

ABSTRACT

The efficient use of knowledge assets allows organizations to compete more effectively in the marketplace. Some of these knowledge assets are embedded in an organization socialization and internalization processes. Image and reputation may better leverage knowledge by strengthening its core capabilities of knowledge assets. Image and reputation is viewed as a collective "perception" pertaining to a person, group, or organization's attributes. We suggest that by combining the use of reputational data and structural equation modeling of narrative analysis, we can build a better process theory along with better explanations in general. *Throughput modeling* techniques are used in this research to capitalize on how line managers' narratives are captured in framing their international environment, the information used, as well as deciding whether audits are assisting them in promoting increase profits or decrease expenses. This model is useful in highlighting the elements that support a view of managers being proactive. This analysis captures forward looking *throughput modeling* techniques whereby in-house managerial procedures can help aid and assist line managers performing their primary functions. Findings indicated that managers' perception of image/reputation influence what they viewed as important knowledge assets relating to productivity and profitability.

INTRODUCTION

Revolutionary changes have taken place globally in financial management in the last decade. For example, the accounting profession is expanding its audit assurance services. Such assurance services are intended to improve the quality of financial information used by individuals in their decision processes. Blending information technology, financial decision-making and new management techniques will enable us to better examine, understand, and predict companies' financial information. The model presented in this paper captures the decision making processes of executives and line managers from one of the largest international financial institution in the world. A detailed survey instrument was developed and administered to 51 executives and line managers from German companies to help depict their use of auditor's assisted financial and non-financial information. The objective was to determine if the expanded role of auditors provided line management with improvement in the areas of business knowledge, innovation, and trust.

Yet another objective of this study builds upon the aforementioned expertise of German managers. Their expertise provides value creation, financial re-engineering and the use of financial and non-financial performance measures to reduce expenses and increase profits (Foss and Rodgers, 2010). That is, the corporate overall business strategy determines how the organization will employ human and financial resources to achieve its objectives. This value system of a business has a profound effect on the implementation of corporate strategy.

The present study also employs a modeling process which combines decision makers' perception of organization and reputation attributes, as well as audit process judgment to illustrate its affect on corporate decision strategy.

A person, group, or organization's reputation is broadly conceptualized as collective "perception" pertaining to their attributes (Anderson and Shirako, 2008). Information that others obtain regarding a person determines the latter's reputation. Hence, people can build their reputations by decreasing "information asymmetry," or uncertainty that others have pertaining to them.

The *Throughput Modeling* process is based upon many years of research; it captures perceptual processing, judgmental analysis, and decision choices in a single comprehensive model (Rodgers, 1997; 2010). The model has been applied to areas in accounting, auditing, information systems, marketing, organizational behavior, and strategy.

In *Throughput Modeling*, an individual has information (**I**) presented to him or her for learning, understanding and/or improving an entity's business practices. A decision maker might or might not create a perception (**P**) of the subject company based on the information received. The double ended arrow connecting perception (**P**) and information (**I**) is key in pinpointing heuristics and/or biases that may be processed in latter judgmental stages. That is, much evidence suggests that an individual's reasoning process connecting perception and information relies on various cognitive shortcuts that often cause biases. In a later stage, a decision maker may use judgment (**J**) and then proceed to making a decision (**D**) or not use any judgment and jump to a decision, or use information, perception, and judgment simultaneously to reach a decision (see Figure 1).
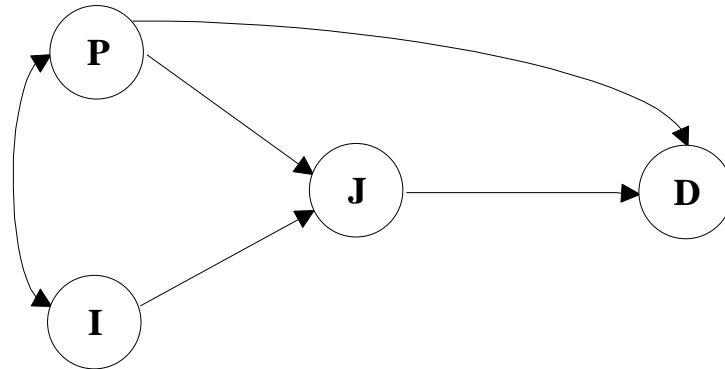
Figure 1.   *Throughput Modeling Process*

where P= perception, I= information, J= judgment, and D= decision choice.

Line Managers' Modeling Process

The *Throughput Model* provides a road map which depicts the various stages that decision makers go through before rendering a decision. Such a model can provide significant insights to decision makers by: (1) capturing expert strategic decision processes, (2) by enabling individuals to track their processes in order to correct or modify information for future decision making, and (3) helping individuals to understand and predict their processes and goals.

Our study illustrates how the process of a line managers' proactive decision is made. Where **role/organization** and **image/reputation** attributes relate to the *perception* construct; **background information** to *information*; **audit process** to *judgment*; and **decision reporting** to *decision choice* (see Figure 1).

The perceptual stage (**P**) highlights a strategic lens that captures two attributes of role/organization and image. That is, global business brings together individuals and countries that have different cultures, values and ethical standards. Since more countries are attempting to industrialize and compete internationally, business people must not only understand the values, culture and ethical standards of their domain but also be sensitive to those of other nations. Further, this new global economy is augmented from advances in communication, technology, and transportation. Therefore, organizational activities become more complex in the way they are define and relate to cultural and ethical situations (Rodgers, Guiral, and Gonzalo, 2009) as well as reputational effects (Anderson and Shirako, 2008).

Culture is a difficult concept to understand and apply to the business environment. Reasons for this include the varying customs, values, and ethical standards from individual to individual. For example, culture relates to language, religion, law, politics, technology, education, social organization, and general values. Cultural differences also include differences in speech and body language. Finally, translations into another language often make it difficult for individuals to express exactly what they mean.

It is important to define and explore the concept of culture as it relates to organizations with global operations in our model. Smircich (1983: 399) indicated that the concept of culture has "been borrowed from anthropology, where there is no concensus on its meaning." Allaire and Firsirotu (1984) categorized eight dominant schools of thought relating to corporate culture, each with its own major theorists and research traditions. The throughput model depicts culture according to the cognitive school of thought. Culture is viewed in the cognitive perspective as "a system of

knowledge, of standards for perceiving, believing, evaluating and acting," (Allaire and

Firsirotu, 1984: 218-219). The first phase of processing in the *Throughput Model* (see

Figure 1) also involves the ***framing*** of the decision environment. This means perceiving

deviations from informational sources in the decision environment. It also includes

internal and external informational factors that could affect decision makers' area of

responsibility.

Research on reputation has indicated that individuals form evaluations about others

utilizing information acquired from personal experience, observation, and/or third parties

(Anderson and Shirako, 2008). Also, previous research on reputation has illustrated that a

person's affiliation with third parties affects that individual's reputation since observers are

likely to evaluate connected people similarity (Wong, 2008).

The double ended arrow connecting perception and information is key in

pinpointing weaknesses or biases in subjective judgments and/or decisions (see Figure 1).

That is, much evidence suggests that an individual's reasoning process connecting

perception and information relies on various decision making shortcuts that often cause

biases. Processing limitations, complexity, and coherence of information are at least three

reasons why this may happen. Therefore, role/organization, image/reputation attributes,

and background information are interdependent. The background information and the line

managers' perceptions of role/organization and image/reputation attributes are relevant to

perceiving the degree of covariation among them. The interdependency of these

perceptual effects and background information have important effects on the kinds of audit

process and reporting strategies by auditors. Arrows from one stage (e.g.,

role/organization) to another (e.g., audit process) indicate the temporal sequencing (flow)

of the operations. Line managers use a two-stage decision making process: the first stage implies an intuitive processing leading to a tentative judgment (i.e., audit process); the second incorporates a more complex analysis.

The *Information* (I) mode in Figure 1 deals with background factors that can influence working memory as well as the storage of informational inputs for later retrieval. The storage requirements at the processing level during comprehension are intuitively obvious. A user of information must be able to retrieve some representation of different parts of the informational inputs to relate them to lets say, later on, an audit report. Storage demands also occur at several other levels of processing. The user must also store the theme of the information, the representation of the situation to which it refers, timing of the information, and the environmental context of an auditable entity.

Background information in this model also affects audit process. That is, experience, location, and type of business of line managers influence their judgments of the audit process. Finally, perception of role/organization and image/reputation attributes, as well as judgment of the audit process can influence their choices regarding reporting. Errors and biases may result from decision processing of which line managers are largely unaware and may have a direct impact on decision choice (Rodgers, 1992). The strategies of judgment that influence decision choice are under an individual's deliberate control. This explanatory and predictive model is ideal for showing the impact of perception-like heuristics and judgment on line managers' choices regarding reporting.

The *Judgment* mode (**J** in Figure 1)   An important aspect of the judgmental phase is the use of auditors' knowledge in memory. This knowledge exists for generalized concepts underlying financial, economic, and management information used in their

judgments. Also, In this mode, the information is analyzed, and weights are placed on key information items in order to compare alternatives or the criteria across the alternatives. Individuals employ investigatory and analytical precepts to diagnose the cause of the problem. Both deductive and inductive reasoning are require for effective diagnosis, and direct data gathering as shown by the direct arrow leading from information to judgment in Figure 1. This phase also includes the development of alternative solutions or courses of action. Decision makers should retrieve from their knowledge bases for ideas and suggestions; examine concepts and pertinent information; and employ ingenuity and creativity. The appraisal of alternatives may be based upon a single criterion or methodology, or a combination of objective criteria or methodologies such as compensatory or noncompensatory weighting schemes.

The model further suggests that the role organization and image/reputation attributes perceptual effects on audit process enable a partial analysis to be formed. Thus the subsequent judgment would not only be dependent on experiences and ability as captured by information evaluation, but also on previously formed opinions. These opinions that are used to shape judgments will depend on the accessibility and diagnosticity of information regarding the work performed by the auditors. Diagnosticity refers to the degree to which some previous opinions concerning auditors' duties are understood to be relevant to subsequent judgments. Accessibility refers to the ease with which knowledge can be brought to attention.

Decision Choice: This phase encompass the selection of the best alternative solution or course of action (see decision choice in Figure 1). Managers emphasize and take into account the previous phases in order to provide them with a predictive model.

Deficiencies or anomalies in these earlier stage can contaminate a predictive choice. The model, however, can serve as a monitoring mechanism that gauges if there are any breakdowns in the decision making phases. This can lead to corrective actions before any serious errors are made. During this phase, decision makers implement their managerial abilities to ensure that the decision is carried out according to directions.

METHOD

Data Collection Instrument

Surveys can render a useful overview of the many factors contributing to line managers using information effectively provided by auditors. A constructive step toward identifying and resolving modeling fitness use is to gather responses from a survey instrument. Similar to Rodgers (1992) and Rodgers and Housel (1987) operationalization of questionnaire information, a 5 point Likert scale questionnaire was prepared that addressed the following constructs: **role/organization** and **image/reputation** (*perception*), **background information**, **audit process** (*judgment*), and **decision reporting**. These constructs represented nineteen questions ranging from strongly agree (5) to strongly disagree (1). The *Throughput modeling* approach is based upon 51 questionnaires that were completed by executive and line managers in German organizations (Table 1).

Insert Table 1 about here

Data Analysis

Maximum likelihood (MLH) was used to estimate the conceptual and measurement systems implemented by the program LISREL 8 (Joreskog and Sorbom, 1993). A major strength of LISREL is its latent-variables approach to covariance structural model testing, whereby multiple indicators of each factor are obtained. Multiple indicators improve construct validity of measurements and reduce measurement errors (Rodgers, 1991).

LISREL also allows the following amenities for model testing: full information (MLH) estimation, statistical assessments of model fit and indications for improving the model, and relaxation of classical regression assumptions (i.e., no error term correlations, no measurement error).

Similar to Rodgers (1992), we assume that the indicators of the dependent and independent constructs measure the unobserved variables of theoretical interest with error. A confirmatory common factor analysis model is used to relate each indicator to an unobservable latent variable; or $\mathbf{Y} = \mathbf{\Lambda_y}\mathbf{\eta} + \mathbf{\epsilon}$ and $\mathbf{X} = \mathbf{\Lambda_x}\mathbf{\xi} + \mathbf{\delta}$, where Y and X are vectors of indicators, $\mathbf{\Lambda_y}$ and $\mathbf{\Lambda_x}$ are matrixes of factor loadings that represent the degree of association between the indicators and the vectors of latent variables $\mathbf{\eta}$ and $\mathbf{\xi}$; and $\mathbf{\epsilon}$ and $\mathbf{\delta}$ are vectors of indicators specificity and random error (or "measurement error"). We further assume that $E(\mathbf{\eta\epsilon'}) = 0$ and $E(\mathbf{\xi\delta'}) = 0$; the matrixes $\mathbf{\epsilon\epsilon'}$ and $\mathbf{\delta\delta'}$ are diagonal.

There is considerable controversy over fit statistics; therefore, we interpreted several measures of model fit (Bollen, 1989). First, a variant of χ^2 that adjusts for degrees of freedom was examined (i.e., χ^2/df). Guidelines for determining good versus poor fit with this ratio has varied from a value of at least two (Carmines and McIver, 1981), and a value at least five (Wheaton, Muthen, Alwin and Summers, 1977). Second, a goodness-of-fit index and a root mean square residual were used to evaluate the efficacy of the

model. When close to 1.00, the goodness-of-fit index indicates that the model has captured most of the information about relationships between the observed variables as given in the sample variance/covariance matrix (Bentler, 1983). These tests were all conducted to measure how well the proposed model matched the data. An acceptable model is one where the GFI value is equal to or greater than 0.9 (Medsker, Williams, and Holahan, 1994). The root mean square residual measures the average of the residual variances and covariances. Values less than 2.00 indicate a good fit of the model.

RESULTS

The chi-squared goodness-of-fit statistic which measures the ability of the hypothesized model to reproduce to observed variance-covariance matrix of indicators was 118 (df=110 p<0.28). Hence, the data fit the model quite well. We also relied upon the goodness-of-fit index (GFI), the root mean square residual index (RMSEA), and the non-normed fit index (NNFI) as proxies for alternative goodness-of-fit indexes. The GFI = 0.80 and the RMSEA= 0.067, and NNFI= 0.92 each displayed reasonable fits.

Model Constructs

For this study, line managers' decision processes are depicted by a two-stage causal model to determine the effects of role/organization, image/reputation attributes, background information, and audit process on decision reporting. All of the relations in the model are significant (at either $p < .05$ or $p < .10$) with the exception of (1) the effects of role/organization on process audit; (2) interdependency of background information with role/organization and of image/reputation attributes (see Table 2).

Line managers' perception of the role/organization did not have a statistical significant impact on their analysis of the audit process or the audit decision reporting. Further, line managers' perception of image/reputation attributes influence both their audit process and decision reporting ($p < .05$). Evidently, image influences should weight into auditors assistance to line managers.

Background information had an impact on line managers' analysis of the audit process ($p < .10$). The background information pathway to audit process accounts for external factors and changes in line managers' expertise and training experiences. However, this background information was not statistically significant in its correlation with either role/organization or image/reputation attributes. This may indicate that the company philosophy and policy may be an overriding factor to environmental concerns.

Finally, the audit process construct did not have a significant influence on decision report. This second stage emphasizes the importance of the proactive nature of the audit process contributing to the decision report may not be deemed as necessary. That is, it drives a better understanding of the business by going through successive model stages.

CONCLUSION

Rapid changes in knowledge assets are affecting the ways decision makers are viewing their responsibilities. Paradigms are changing; management could seek an

expanded role from *Throughput Modeling*. Auditing services are shifting from traditional auditing roles to more expansive and cooperative ones with management. A conceptual model of decision making can be useful in determining the steps and strategies that internal auditors emphasize before they make a judgment or choice. This *Throughput modeling* approach can be described as a broad conceptual framework that enables us to examine mental activity as interrelated processes rather than as final outcomes such as decision choice. The emphasis in this paper is placed on the effects of the line managers' internal processes on their decision choices regarding the audit report.

Knowing the strength placed upon a particular pathway allows us to evaluate role and organizational as well as image and reputation attributes from many different perspectives. The strength placed on different pathways may conflict with other processes, yet all are contributing to the ultimate goal. The auditing function can assist in the way managers are assessed. This may prevent complacency or de-motivation of managers, which can have a negative impact on an organization. Therefore, our study help to identify critical success factors that can aid and monitor managerial performance.

This study demonstrated that techniques are available in explaining a forward looking *Throughput Modeling* whereby the auditing procedures can help aid and assist line managers performing their primary functions. *Throughput Modeling* techniques should also enable auditors to estimate the overall audit risk for product lines or auditable entities. This technique provides for a common measure to consistently and analytically support auditors' judgments before they arrive at an overall consensus regarding resource allocation directed at auditing a product line or auditable entity.

Line managers' knowledge structures captured in the model signify not only the different ways information is processed, encoded and retrieved, but also tell us about the degree of importance the internal auditors assign different weights on information. In this study, *Throughput Modeling* is offered as a particular means to measure auditors providing proactive information. The model takes into background information, captures and encodes line managers' expertise and ability to formally show aspects of explanation in decision making. Simply put, *Throughput Modeling* can offer explanations of employment of auditors' decision rules.

Further, the blending information technology and financial decision-making with new management techniques will enable us to better examine, understand, and predict companies' financial information. Future research implementing *Throughput Modeling* can address the following issues:

1. Providing measures and benchmarks process performance.

2. Documenting the understanding of the client's ability to create value and generate future cash flows using a client business model, process analyses, key performance indicators, and a business risk profile.

3. Comparing reported financial results to expectations and designing additional audit test work to address any gaps between expectations and reported results.

REFERENCES

Allaire, Y., and Firsirotu, M.E. 1984. Theories of organizational culture. *Organization Studies*, 5, 193-226.

Anderson, C. and Shirako, A. 2008. Are individuals' reputations related to their history of behavior? *Journal of Personality and Social Psychology*, 94, 320-333.

Bentler, P. 1983. Simultaneous Equation Systems as Moment Structure Models: With an Introduction to Latent Variables Models, *Journal of Econometrics* (Supplement), 13-42

Bollen, K.A. 1989. *Structural equations with latent variables*. New York: Wiley.

Carmines, E.G., and McIver, J.P. 1981. Analyzing models with unobserved variables: Analysis of covariance structures. In G.W. Bohrnstedt & E.F. Borgotta (Eds.), *Social measurement: Current issues*: 65-115. Beverly Hills, CA: Sage.

Foss, K. and Rodgers, W. 2010. Enhancing Information Usefulness by Line Managers' Involvement in Cross-Unit Activities. Organization Studies (forthcoming).

Joreskog, K.G. and Sorbom, D. 1993. *New features in LISREL 8*. Chicago: Scientific Software.

Medsker, G.J., Williams, L.J., and Holahan, P.J. 1994. A review of current practices for evaluating causal models in organizational behavior and human resource management research. *Journal of Management*, 20: 439-464.

Rodgers, W. 1991. "Evaluating Accounting Information with Causal Models: Classification of Methods and Implications for Accounting Research," *Journal of Accounting Literature*, 10, 151-180.

Rodgers, W. 1992. The effects of accounting information on individuals' perceptual processes. *Journal of Accounting, Auditing and Finance*, 7, 67-96.

Rodgers, W. 1997. *Throughput modeling: Financial information used by decision makers*. Greenwich, CT: JAI Press.

Rodgers, W. 2010. *E-commerce and biometric issues addressed in a Throughput Model*. Hauppauge, NY: Nova Publication, 2010.

Rodgers, W., Guiral, A., and Gonzalo, J.A. 2009. Different pathways that suggest whether auditors' going concern opinions are ethically based, *Journal of Business Ethics*, 86, 347–361.

Rodgers, W. and Housel, T. 1987. The effects of information and cognitive processes on decision making. *Accounting and Business Research*, 69, 67-74.

Smircich, L. 1983. Concepts of culture and organizational analysis. *Administrative Science Quarterly*, 28, 339-358.

Wheaton, B., Muthen, B., Alwin, D. and Summers, G. 1977. Assessing reliability and stability in panel models. In D.R. Heise (Ed.), *Sociological Methodology*. San Francisco: Jossey-Bass.

Wong, S. 2008. Judgments about knowledge importance: The roles of social referents and network structure. Human Relations, 61, 1565-1591.

TABLE 1. SUMMARY OF VARIABLES IN THE MODEL

Role and Organization Concept
1. Corporate Audit should perform ongoing monitoring activities to stay informed about my business.
2. Corporate Audit should provide more consultive type services.
3. Corporate Audit should be independent of the line organizations.
4. Work performed by Corporate Audit should be used by external auditors and regulators to reduce the scope of their work.
5. Selected line personnel should, on a rotational basis, be a part of the audit team.

Image and Reputation Attributes
1. The auditors have sufficient knowledge of my business and do not need to be trained.
2. Corporate Audit provides a valuable service to my business.
3. The auditors are professional in their approach.
4. Corporate Auditors are seen as leaders.
5. Corporate Audit is seen as innovative in its approach.

Background Information
1. How long have you been with the organization.
2. Management level.

Audit Process
1. You are closely involved in Corporate Audit's annual analysis of the risk levels for your entities or businesses.
2. The auditors accurately model the relative risk of my business entity.
3. The time between audits, given the risks of my business, is appropriate.   .

Decision Reporting
1. Auditors fully discuss issues before they are reported.   .
2. The audit recommendations are constructive and feasible.
3. The impact of significant business issues reported is accurate.   .
4. Audit report ratings are essential.

Table 2: *LINE MANAGERS*
PARAMETER ESTIMATES

Causal Model Parameters

	Standard Weight	Critical Ratio
Regression Weights		
Role/Organ →Process Audit	.30	0.75
Image/Reputation →Process Audit	1.29	2.16*
Background →Process Audit	.60	1.70**
Role/Organ →Decision Reporting	.25	0.90*
Image/Reputation →Decision Reporting	.73	2.08*
Process Audit →Decision Reporting	.16	0.71

Correlation of Independent Variables

	Role/Organ	Image/Reputation	Background
Role/Organ	1.00		
Image/Reputation	.95	1.00	
Background	.46	.40	1.00

Chi-square with 143 df = 676
Goodness of fit index (GFI) = 0.80
Root mean square error of approximation (RMSEA) = 0.067
Non-Normed Fit Index (NNFI) = 0.92

---

*p < .05   **p < .10