

Resource Dependence Patterns and Organizational

Performance in Nonprofit Organizations

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A Dissertation Presented in Partial Fulfillment
of the Requirement for the Degree
Doctor of Philosophy

Approved October 2011 by the
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December 2011

ABSTRACT

Achieving high performance is a crucial issue in modern organizations including public, for-profit, and nonprofit even though there is no consensus about what performance means. How to obtain resources is important for boosting organizational performance. Furthermore, resource acquisition capacity is closely associated with the survival of modern nonprofit organizations. Resource Dependence Theory (RDT) notes that dependence on critical resources influences diverse actions and behavior of organizations.

The study examines the relationship among Resource Dependence Patterns (RDPs), organizational behavior, and organizational performance in nonprofit organizations. This study introduces five dimensions of RDPs (the appearance of the resource inflow): resource dependency, resource diversity, resource uncertainty, resource abundance, and resource competitiveness. This research suggests that a nonprofit's RDPs affect its behavior, performance, and survival. A main research question can be phrased as: How are RDPs of nonprofit organizations related to organizational behavior and performance? Data are mainly gathered from financial officers, managers, and directors in the nonprofit sector. Multivariate data analytic techniques including factor analysis, multiple regression analysis, and path analysis are used for testing the proposed hypotheses and answering research question.

This study of RDPs, behavior, and performance contributes practically to the effective management of nonprofit organizations and contributes to consolidating and expanding Resource Dependence Theory (RDT). In addition, the information about resource dependence patterns will help funders including governments, foundations, and individual donors to understand the fiscal environment that an organization faces.

TABLE OF CONTENTS

	Page
LIST OF TABLES.....	vi
LIST OF FIGURES.....	ix
CHAPTER	
1. INTRODUCTION.....	1
Background.....	1
Purpose of the Study.....	4
Research Question	7
Significance of the Study.....	9
Research Strategy.....	11
Outline of the Study.....	12
2. LITERATURE REVIEW.....	14
Explaining Nonprofit Organization	14
Resource Dependence Perspective.....	25
Conceptualization of Resource Dependence Patterns.....	27
Definition of Organizational Behavior and Actions	31
Bridging Resource Dependence and Organizational Behavior ...	34
Resource Dependence and Organizational Performance.....	37
3. MODEL AND HYPOTHESIS DEVELOPMENT.....	41
Research Framework for Data Analysis.....	41

CHAPTER	Page
Impact of Resource Dependence Patterns on Organizational Behavior, Managerial Factors & Organizational Performance.....	44
Impact of Organizational Behavior and Managerial Factors on Performance.....	56
Summary.....	59
4. DATA COLLECTION AND MEASUREMENT.....	62
Sampling Strategy.....	62
Survey Design.....	64
Measurement of Variables.....	65
Data Analysis Procedures.....	75
5. FINDINGS AND ANALYSES.....	78
Descriptive Statistics.....	78
Reliability Test.....	85
Factor Analysis.....	88
Multiple Regression Analysis.....	102
Path Analysis.....	135
Summary.....	155
6. CONCLUSIONS AND DISCUSSION.....	157
Brief Overview.....	157
Findings.....	158

CHAPTER	Page
Implications (Contributions).....	167
Limitations of the Study.....	173
Future Research.....	175
REFERENCES	
APPENDIX	
A. RECRUITMENT SCRIPT.....	193
B. SURVEY COVER LETTER.....	195
C. SURVEY QUESTIONNAIRE FOR THE RESOURCE DEPEDENCE PATTERN.....	198
D. APPROVAL DOCUMENT BY THE INSTITUTINAL REVIEW BOARD.....	205
E. REGRESSION ANALYSIS RESULT FOR THE EFFECTS OF THE RESOURCE DEPEDENCE PATTERN ON THE SIZE OF ORGANIZATION.....	207
F. VITA.....	209

LIST OF TABLES

TABLE	Page
2.1. Classification by the EKA (2009).....	18
2.2. Number of Korean Nonprofit Organizations.....	21
2.3. Financial Support by Central Governmental Agencies/Departments.....	23
3.1. Hypotheses on Relationship between RDP & Organizational Behavior.....	60
3.2. Hypotheses on Relationship between Organizational Behaviors and Organizational Performance.....	61
4.1. Funding Sources for Nonprofit Organizations.....	67
4.2. Resource Uncertainty in the Nonprofit Sector.....	69
5.1. Survey Respondents by ICNPO Classification.....	79
5.2. Age & Work Years of Survey Respondents.....	80
5.3. Respondents' position.....	81
5.4. Age of the Organization.....	82
5.5. Number of regular staff.....	83
5.6. Resource type nonprofits use.....	84
5.7. Reliability Test for the Surveyed Items.....	87
5.8. Principal Component Analysis of Organizational Performance.....	90
5.9. Factor Loadings and Communalities for Organizational Performance.....	91
5.10. PCA for Organizational Performance.....	93
5.11. Factor Loadings and Communalities for the Revised Model.....	94
5.12. Initial Eigenvalues for Organizational Behavior.....	95

TABLE	Page
5.13. PCA for Organizational Behavior without the Hie3.....	96
5.14. Factor Loadings and Communalities for OB Variables.....	98
5.15. Eigenvalues of the Revised Model.....	99
5.16. Factor Loadings and Communalities for the Revised Model.....	100
5.17. Descriptive Statistics of Multiple Regression and Path Analysis.....	101
5.18. Correlations among Variables.....	104
5.19. Detecting Outliers by Standard Deviation.....	105
5.20. Detecting Extremity by the Three Regression Diagnostic Tools in Models 1, 2, and 3.....	108
5.21. Detecting Multicollinearity by VIF & Tolerance.....	109
5.22. Checking Autocorrelation.....	112
5.23. Checking Homoscedasticity.....	113
5.24. Testing Normality of the Error Term.....	116
5.25. Regression Analysis for Hie/For on RDP (Model 1.1).....	119
5.26. Results of Regression Analysis (Model 1.2).....	120
5.27. Regression Analysis for Goal Displacement on RDP (Model 1.3).....	122
5.28. Results of Decision Making on the RDP Variables (Model 1.4).....	123
5.29. Model for Communication on the RDP Variables (Model 1.5).....	125
5.30. ANOVA Results for the Second Model.....	127
5.31. Results of the Linear Model & the Quadratic Model (Model 2).....	129

TABLE	Page
5.32. Results of ANOVA (Model 3).....	130
5.33. Results of the Linear Model & the Quadratic Model (Model 3).....	132
5.34. Direct Effects of the RDP on Organizational Performance.....	135
5.35. Model Fit Information for the Initial Model.....	141
5.36. Correlations & Covariances among the Observed Exogenous Variables...	141
5.37. Variances of the Observed Exogenous Variables and Disturbances.....	144
5.38. ML Parameter Estimates for the Initial Path Model.....	147
5.39. Modification index (Regression Weights - Initial Model).....	149
5.40. Modification index for the Second and Third Changes.....	149
5.41. Model Fit Information for the Revised Path Model.....	150
5.42. Changed Disturbance Variances in the Revised Model.....	151
5.43. ML Parameter Estimates for the Revised Path Model.....	153
5.44. Decomposition of Causal Effects for the Exogenous Variables on Performance.....	155
6.1. Summarized Results of Hypothesis Tests for RDP and OB.....	161
6.2. Summary of Hypothesis Tests for OB and Organizational Performance.....	165
6.3. Size of Organization and the Resource Dependence Patterns.....	166

LIST OF FIGURES

FIGURE	Page
3.1. Basic Framework.....	42
3.2. Quadratic Effect of Formalization/Hierarchy on Performance.....	57
4.1. Basic Formula for Resource Diversity.....	68
5.1. Different types of financial resources of the surveyed organizations.....	85
5.2. Scatterplot of Hierarchy/Formalization vs. Organizational Performance....	126
5.3. Basic Paths of Initial Path Model.....	140
5.4. Path Diagram for the Initial Model.....	146
5.5. Path Diagram for the Revised Path Model.....	152

Chapter 1

Introduction

Background

The study examines the relationship among resource dependence patterns, organizational behavior, and organizational performance in (Korean) nonprofit organizations. The study mainly depends on survey data reported by financial (business) officers, managers, and directors to get the information about organizations' resource dependence patterns, behavior, and performance.

Today, nonprofit organizations enjoy a great deal of academic attention in public administration. Traditionally, many public administrators and theorists were just concerned about the distinction between public and private domains even though since the 1960s nonprofit organizations have expanded their role in the United States' economy (Boris, 1999; Frank, 2002; Hall, 1992). Since the 1990s (after the democratization of the Korean political system), the Korean nonprofit sector dramatically expanded, both in its numbers and functions (Lim, 2009; Kim and Moon, 2003; Jung and Moon, 2003). The decreased roles of government and citizens' increased demands on diverse social services have caused the expansion and development of nonprofit organizations¹.

¹ Salmon and Anheier (1998) explain why we need nonprofits and how nonprofits develop through the following theories (pp. 211-225):

- (1) *Government/market failure: "the unsatisfied demand for public goods left by failures of market and state" promotes creation and expansion of nonprofit organizations;*
- (2) *Supply-side theory: nonprofits are a product by people with an incentive to create them;*
- (3) *Trust theories: contract failure or information asymmetries explain the creation and development of nonprofit organizations;*

Achieving high performance is a crucial issue in modern organizations including public, for-profit, and nonprofit even though there is no consensus about what performance means. However, high organizational performance is implicitly or explicitly associated with the success or failure of contemporary organizations. Many theorists and experts who study the characteristics, structures, and actions of modern organizations see external factors as important elements for understanding organizations (Rainey, 2003; Scott and Davis, 2003, 2003; Mizruchi and Schwartz, 1987 et al.). Until the early 1970s, many researchers and experts paid much attention to internal dynamics of organizations between managers and employees – i.e., internal efficiency - in order to understand organizational actions, choices, and structures. However, the open systems approach such as contingency theories or resource dependence perspectives believe that organizational management is affected by the contexts of organizations and various constraints from those external contexts. Together with leadership, organizational culture, strategies, and internal managerial values, environmental factors are also crucial for understanding organizational behavior and structures (Pfeffer, 1987). The environment in which organizations operate is perceived to be “the ultimate source of materials, energy, and information, all of

(4) *Welfare state theory: the decrease of state-provided social welfare services is related to the creation and expansion of nonprofit organizations, and ;*

(5) *Interdependence theory: conflicts of theories or paradigms are important elements for explaining expansion and creation of nonprofit organizations.*

which are vital to the continuation of organizations” (Scott and Davis, 2003, p. 106) in the open systems perspective.

The public’s strong demands on boosting accountability and improving performance justify a more visible performance management system in the organization. The governments’ efforts for building performance management systems or performance-based budgeting appropriately have reflected on the citizens’ demands irrespective of the success or failure. In recent years, many nonprofit organizations have also been required to verify their high performance and effectiveness (Carman and Fredericks, 2008). Nonprofits have to show the government agencies, foundations, and individual funders certain evidence of performance to get adequate resources and political support. For example, this trend is well reflected in the increase of performance-based contracting and quantitative (objective) performance indicators between governments and nonprofit organizations (Smith, 2010; Heinrich and Choi, 2007).

Getting resources and how to acquire resources are vital elements for enhancing organizational effectiveness and efficiency. Resources generally include various assets, capabilities, organizational processes, information, and knowledge that contribute to improved organizational efficiency and effectiveness (Daft, 2001; Barney, 1991). Furthermore, resource acquisition and resource-getting capacity are closely associated with the survival of modern organizations. Resource dependence theory (RDT) notes that there are various internal or

external factors that affect an organization's resource acquisition. RDT assumes that dependence on critical resources influences the diverse actions of organizations. This dependency creates risks and uncertainty that is related to organizational efficiency and effectiveness (Hillman, 2005, p. 465).

Purpose of the Study

Since the end of the 1980s – i.e., the democratization of the Korean political system, South Korean nonprofit organizations have become important sociopolitical actors in the civil society. In particular, Korean nonprofit organizations significantly help to consolidate the democratization and the settlement of grassroots democracy in local communities. However, the public now requires more transparent administration and effective management of the Korean nonprofit sector even though they acknowledge nonprofits' great dedication and efforts to the civil society. The Nonprofit sector should make an effort to build an efficient and effective organization for insuring the citizens' trust.

The current emphasis on economic value and the introduction of market systems are more likely to promote competition with the Korean nonprofit sector. In particular, how and where nonprofits get resources is more critical as nonprofit organizations compete with others in the limited funding pools. Currently, nonprofit organizations are also required to monitor their activities such as input, output, and outcome to their funders, regulatory agencies, and the citizens. They

should demonstrate their efficiency and effectiveness for their survival. This study explains nonprofits' efficiency/effectiveness (performance) and survival/success through the lens of the resource dependence perspective.

The appearance of the resource inflow – “Resource Dependence Patterns (RDP)” (Lan, 1991; Pfeffer and Salancik, 2003) – is a primary interest of this study. Specifically, the study examines the relationship among resource dependence patterns, organizational behavior, and organizational performance in (Korean) nonprofit organizations. The study mainly depends on survey data reported by financial (business) officers, managers, and directors to get the information about organizations' resource dependence patterns, behavior, and performance. Financial information is acquired from each nonprofit's website, business reports, newspapers, and other data sources to accurately understand each organization.

One purpose of the study is to explore the different organizational behavior related to the resource dependence patterns in nonprofit organizations. Pfeffer and Salancik (2003) argue that an organization's efforts for “ensuring the continuation of needed resources is the focus of much organizational action” (p. 258). Specifically, organizations obtain critical resources through exchange with the environment. Such resource dependence shapes the activities and structure of formal organization (Pfeffer and Salancik, 2003; Pfeffer, 1987). Generally, organizations try to minimize their dependence on the outside. For example,

many nonprofits are now developing business ventures in their own operations because it is relatively free from regulatory bodies' controls or restrictions (Dees, 2004).

Second, this study conducts both theoretical and empirical analysis to understand the relationship between resource dependence patterns and organizational performance. In the past, managing and measuring performance was thought of as an internal issue for an organization and its members; therefore, performance information was shared only with organizational members. However, modern organizations allow the stakeholders such as customers, market, other organizations, and political parties to access their performance information. The concept of performance is multidimensional because a variety of stakeholders see organizational performance from their own criteria or perspectives; therefore, the research pays attention to the multidimensionality of organizational performance. In nonprofit organizations, resources are frequently scarce because they have a huge range of service in the community (Berman, 2006, p. 9) and government support and private donations remain sluggish. Nonprofits seek adequate resources from stakeholders and furthermore, "where and how to get resources" is likely to significantly influence their performance activities.

Third, the study also empirically investigates the similarities and differences of resource dependence patterns in the process. Nonprofits generally provide community members with various services and goods. There are many

different types of nonprofit agencies including housing, preventive services, health, social services, and environment, etc. The study assumes that there are some differences in resource dependence patterns based on “what nonprofits do” and describes today’s Korean nonprofit organizations.

Research Question

This study argues that a nonprofit organization’s resource dependence patterns affect its behavior, performance, and survival. A main research question can be phrased as: How are resource dependence patterns of nonprofit organizations related to organizational behavior and performance? The study is first concerned about the following questions for the appearance of the resource inflow (resource dependence patterns) of nonprofit organizations:

- *Where and how do nonprofits obtain their needed resources?;*
- *Are there difficulties, obstacles, and competition with other organizations for acquiring resources?;*
- *Do nonprofit organizations have adequate and stable financial resources for their success and survival?*

Second, this study pays attention to how nonprofits’ resource dependence patterns influence organizational behavior and actions. The study assumes that resource dependence patterns directly affect nonprofits’ behavior and actions. The study observes decision making, communication, formalization, hierarchy, and goal setting and displacement as organizational behavior on resource dependence patterns. Third, ‘how the appearance of the resource inflow affects organizational

performance' is important. The study assumes that the effect of resource dependence patterns on performance is carried by nonprofits' behavior and actions. Performance as a multidimensional concept is operationalized by: effectiveness; efficiency/productivity; responsiveness, and; citizen (customer) satisfaction.

The interrelations with outside social actors for obtaining resources lead to heterogeneous actions and behavior among the nonprofit organizations (Neinhuser, 2008; Granovetter, 1985). Furthermore, the appearance of the resource inflow – that is, resource dependence patterns – partially affects the improvement of organizational efficiency and effectiveness. There are five dimensions of resource dependence patterns:

- 1) *Resource dependency* – “where resources come from” (Lan, 1991);
- 2) *Resource diversity* – “the degree of centralization or decentralization of the resource inflow” (Lan, 1991; Pfeffer and Salancik, 2003);
- 3) *Resource uncertainty* – “the degree of predictability of the resource inflow” (Lan, 1991) or how much organizations have budget change;
- 4) *Resource abundance (scarcity)* – the degree of abundance or scarcity of an organization's resources (Guo and Acar, 2005; Pfeffer and Salancik, 2003);
- 5) *Resource competitiveness* – the perception of competitiveness for obtaining resources from in-and-outside the organization.

In short, the study is an attempt to understand how the changes in resource dependence patterns - resource dependency, diversity, uncertainty, abundance, competitiveness - affect or correlate with organizational behavior and performance in different types of Korean nonprofit organizations. The study has the following assumptions:

- *Resource dependence patterns affect organizational behavior, and actions.*
- *Organizational behavior and actions influence organizational performance.*
- *Resource dependence patterns also affect organizational performance.*

Significance of the Study

The study about RDP, behavior, and performance can help effective management of nonprofit organizations and contribute to consolidating and expanding Resource Dependence Theory (RDT). The information about resource dependence patterns will help funders including governments, foundations, and individual donors understand the fiscal environment that an organization faces. In both Korea and America, government, funders, and the general public have questions about nonprofits' management and financial transparency because of inappropriate conduct and scandals (Park, 2008; Gollmar, 2008). In addition, today's economic situation makes funders more conservative. Under this circumstance, information on the appearance of the resource inflow could be one

good indicator for determining whether funders invest money in a nonprofit organization.

By knowing the impact of RDP on organizational behavior and performance, stakeholders such as governments, corporations, and clients can determine which nonprofit organizations are more effective and efficient. For example, government agencies (one of the outside stakeholders) that relinquish their role to nonprofits may explore “the potential of exerting their influence without actually spending more funds” (Lan, 1991, p. 18) and monitor nonprofits’ activities through seeing the impact of resource dependence patterns.

Understanding the impact of resource dependence patterns on organizational behavior and performance will help organizational members recognize various problems their organizations face such as internal management, external relations, leadership, providing services, and finances.

Lastly, there is plenty of room for theoretically investigating the concept of RDP. Public administrators have hardly been concerned about RDP and the existing studies have barely empirically tested the influence of RDP in organizations². Pfeffer and Salancik note that organizations use diversification of resources as a survival strategy. They also suggest that uncertainty and scarcity of important resources could threaten the continued existence of organizations

² Lan (1991) empirically studied the impact of resource dependence patterns on public and private university based R & D labs in the US.

(Pfeffer and Salancik, 2003, p. 47). However, they mainly focused on theoretical discussion and did not empirically test their arguments.

Research Strategy

The main purpose of this study is to explore: 1) how resource dependence patterns (RDP) affect organizational behavior – formalization, hierarchy, decision making, and goals; 2) how organizational behavior affect performance, and; 3) how RDP affects performance. The study is concerned about RDP, behavior, and performance at the organizational level – i.e., unit of analysis of the study is an individual nonprofit organization. Online survey procedures are a major tool for obtaining information and the main survey target is regular staff including financial (business) officers and managers/directors in Korean nonprofit organizations. The sampling data are basically obtained from Korean nonprofit organizations that are controlled under the ‘Korean Nonprofit Organizational Support Act’ and are registered in central departments/agencies and local governments. Also, this research controls the geographical factor – i.e., the targeted area of survey is Seoul and Gyeonggi province in Korea.

This research adopts quantitative research methods. In the quantitative method category, this study carries out a two-stage survey – i.e., a preliminary (pilot) test and the main survey procedure. The pilot test helps to check both reliability and validity. After collecting the survey data, multivariate data analytic methods including factor analysis, multiple regression analysis, and path analysis

are used for testing the proposed hypotheses and answering research questions. Before using multivariate analytic techniques, this research conducts Cronbach's Alpha test for internal consistency (or reliability) of survey items and descriptive statistics provides preliminary information on the collected data.

Outline of the Study

The first chapter provides the overall introduction to this study – the background, purpose, and significance of the study and overview of the research strategy.

The second chapter reviews the extensive literature on resource dependence theory, organizational behavior, and organizational performance by providing theoretical background and main research trends. Chapter two also provides definition of key terms including resource dependence pattern, nonprofit organization, organizational behavior, and organizational performance.

The third chapter presents the theoretical and empirical framework and develops hypotheses for understanding organizational behavior (hierarchy, formalization, decision making, goals/missions), size of organization, and performance on five dimensions of RDP. The model of resource dependence patterns provides comprehensive insight into nonprofits' behavior and performance at the organizational level.

The fourth chapter provides a detailed description of sampling procedures and measurement strategies including the data collection process, the contents of

questionnaires and validity and reliability of survey questionnaires, operationalization of variables, and the procedures of data analysis.

The fifth chapter conducts an empirical analysis for answering the research question using multiple regression analysis and path analysis. This chapter presents and analyzes the empirical findings.

The last chapter presents conclusions and implications of this study. The chapter will discuss theoretical and practical implications for public administration and management. The limitations of this study and the directions of future study are included in this chapter.

Chapter 2

Literature Review

Theories of resource dependence, organizational behavior, and performance are important for conducting this study. Relationships and interactions among a variety of variables based on these three theories are investigated in this study. This part touches the following contents:

- 1) *explaining nonprofit organizations and outlining the Korean nonprofit sector;*
- 2) *exploring resource dependence theory (RDT);*
- 3) *defining Resource dependence patterns (RDP);*
- 4) *defining organizational behavior and performance;*
- 5) *bridging RDP and organizational behavior, and;*
- 6) *resource dependence and organizational performance.*

Explaining Nonprofit Organizations

- Defining Nonprofit Organizations

It is difficult to define the concept of nonprofit organization exactly because various types of nonprofit organizations exist in the world and their roles are diverse. However, nonprofit organizations can be generally described as private organizations that provide the public with social services and goods without profit distribution to organizational members. Nonprofits use their profits for their goals, expansion, survival, and future plans while they do not seek

individual profits. The United Nations (2003) presents the eight common features for nonprofit organization³ (p. 15):

- 1) *The prohibition of the distribution of profits from their operations;*
- 2) *Their involvement in the production of public goods;*
- 3) *A revenue structure that generally includes substantial voluntary contributions of time and money;*
- 4) *The use of volunteer as well as paid staff;*
- 5) *Limited access to equity capital because of the prohibition on their distribution of profits;*
- 6) *Eligibility for special tax advantages;*
- 7) *Special legal provisions pertaining to governance, reporting requirements, political participation, and related matters;*
- 8) *The lack of sovereign governmental powers despite their involvement in public goods provision.*

In the United States, nonprofit organizations are often conceptualized as any organization covered under section 501(c) of the IRS's Internal Revenue Code – that is, organizations that have received tax-exempt status from the Internal Revenue Service. As of 2010, about 825,000 nonprofit organizations

³ Salamon and Anheier (1998) present the five common features that are shared by nonprofits: *self-governing, voluntary, being organization, private (separate from government), and not profit distributing* (p. 216).

were registered in the IRS⁴ and account for approximately 10 percent of the gross national product (Wing, Roeger, and Pollak, 2010; Gollmar, 2008).

- Types of Nonprofit Organizations

Exploring differences in RDP based on role and function of nonprofits is an important purpose of this research. Classification of nonprofit organizations is a prerequisite for observing RDP. “Comprehensiveness” and “distinctiveness” are important for classifying nonprofit organizations (Cho et al., 2010). A classification tool can include almost all types of nonprofit organizations – comprehensiveness. Simultaneously, it can sort nonprofit organizations by clear criteria – distinctiveness. This study introduces three classification tools by a typology for developing countries (Salamon and Anheier 1998), the *Encyclopedia of Korean Associations - EKA (2009)* and the UN (2003). Salamon and Anheier(1998) present three types of nonprofit organizations by conducting comparative studies among five developing countries⁵ - specifically, service-oriented, market-oriented, and advocacy. Providing various social services to the community is the main function of both service-oriented and market-oriented type nonprofits. They frequently build networks or partnerships with private corporations and governments for promoting their activities. On the other hand, advocacy nonprofits are concerned about political issues including

⁴ As of 2010, the total number of nonprofit organizations is 1,514,530 in the United States and about 50 percent of these organizations were registered in the IRS (National Center for Charitable Statistics, 2010)

⁵ Five developing countries are: Brazil, Ghana, Egypt, Thailand, and India.

democratization, equity, civil rights, citizen participation, and enlightenment.

Therefore, these organizations often are in conflict with the public sector.

The EKA classification system groups nonprofit organizations into 20 major activity groups. As of 2009, the EKA provides information on about 7,570 nonprofit organizations by classification⁶.

⁶ The number of the Korean nonprofits that the EKA analyzed and the total number of the Korean nonprofits is not same because some registered nonprofits do not provide information to the EKA.

Table 2.1.

Classification by the EKA (2009)

Group	Number of KNPO (2009)
<i>Environment</i>	955
<i>Human Right</i>	218
<i>Unification/Peace</i>	318
<i>Women</i>	503
<i>Government Monitoring</i>	104
<i>Politics/Economics</i>	811
<i>Education/Research</i>	342
<i>Culture/Sports</i>	302
<i>Welfare/Social Services</i>	1,511
<i>Youth/Adolescent</i>	703
<i>Customer Rights</i>	69
<i>Urban/Family Affairs</i>	256
<i>Labor/Poverty</i>	243
<i>Alien/Foreigner</i>	105
<i>Fundraising</i>	30
<i>Volunteer</i>	609
<i>International Affairs</i>	119
<i>Alternative Society</i>	116
<i>On-line Activity</i>	102
<i>Other</i>	154

The International Classification of Nonprofit Organizations (ICNPO) was developed by the Johns Hopkins University Comparative Nonprofit Sector Project (UN, 2003). The ICNPO system categorizes nonprofit organizations into 12 major

activity groups and these 12 groups are further grouped into 24 subgroups. The twelve ICNPO major groups include:

- 1) *Culture and recreation;*
- 2) *Education and Research;*
- 3) *Health;*
- 4) *Social services*
- 5) *Environment;*
- 6) *Development and Housing;*
- 7) *Law, Advocacy, and Politics;*
- 8) *Philanthropic Intermediaries and Voluntarism Promotion;*
- 9) *International;*
- 10) *Religion;*
- 11) *Business and Professional Associations, Unions;*
- 12) *Not Elsewhere Classified.*

Many countries currently adopt the ICNPO system and it is one of three classification systems⁷ that is often used in the United States. This study adopts the ICNPO system for understanding the role and function of Korean nonprofit organizations.

⁷ In addition to the ICNPO, the National Taxonomy of Exempt Entities-Core Codes (NTEE-CC) and the North American Industry Classification System (NAICS) are often used in the United States.

- Korean Nonprofit Organizations

Korean nonprofit (or nongovernmental) organizations⁸ carry out similar functions to those in the U.S. and other countries' nonprofit organizations.

However, the range of the Korean nonprofit sector is rather narrow compared to the U.S. nonprofit sector. According to the 'Korean Nonprofit (or Nongovernmental) Organizations Support Act', hospitals, community welfare centers, political parties, and private schools are not included in nonprofit organizations. The Korean nonprofit organizations are described as private organizations that carry out public activities, not making profits. They are prohibited from supporting specific political parties or elected officials like the U.S. nonprofit organizations.

Until the 1980s, the role of Korean nonprofits mainly focused on movements for human rights, social justice, and democracy against authoritarian regimes (Jung and Moon, 2003). The number of registered nonprofits was only 773 in the 1980s (Kim and Moon, 2003). However, since the 1990s, democratization of the political system, settlement of grassroots democracy, and consolidation of the market economy have led to quantitative and qualitative growth of the Korean nonprofit sector. According to the *Encyclopedia of Korean Associations* (2009), more than 65 percent of Korean nonprofit organizations were established after 1990. As of 2010, 9,432 entities were registered in 33

⁸ There are various titles about the Korean charitable, giving, and volunteer organizations including nonprofit organizations (NPO), nongovernmental organizations (NGO), and civil society organizations (CSO), etc. This study uses "nonprofit organizations (NPO)".

central government departments/agencies and 16 local governments, an increase of more than 3,000 entities between 2005 and 2010 (see Table 2.2).

Table 2.2.

Number of Korean Nonprofit Organizations

Year	Central Gov.	Local Gov.	Total
2005	653	5,260	5,913
2006	716	5,774	6,490
2007	790	6,451	7,241
2008	845	7,330	8,175
2009	980	7,753	8,733
2010	1,182	8,250	9,432

Source: Website of Ministry of Public Administration and Security (MOPAS)

In the past, activities of the Korean nonprofits were overly weighted toward sociopolitical issues such as human rights, democratization, and social justice. Since the end of the authoritarian regime, nonprofits function as a guardian of democracy and social justice is more systemized and strengthened. For example, the establishment of the Citizen’s Coalition for Economic Justice (CCEJ) and the People’s Solidarity for Participatory Democracy (PSPD) reflects such a trend. Currently, the Korean nonprofit sector plays an important role as a good alternative for healing market/government failure and also provides a variety of social services for socially underprivileged people and minority groups including women, the disabled, and needy families.

The growth of nonprofit organizations is closely related to the changing of economic and political environments. After democratization of the Korean political system, depoliticization of nonprofits' activities has been encouraged and local communities have required diverse service programs. Kang's (2001) typology well reflects the developmental process of Korean nonprofit organizations (Kang, 2001). He classifies the KNPO as a service-oriented and voice-oriented organization. The former includes nonprofits related to education, research, social services, health, culture, recreation, and voluntary activities. The latter is closely associated with social (political) reforms, environment, civil rights, labor, poverty, women, youth, and consumer movements. In other words, voice-oriented organizations make an effort to politicize social problems; on the other hand, service-oriented organizations mainly focus on developing strategies for providing social services. In the past, the role of the KNPO mainly focused on voice-oriented activities; the sphere of the KNPO's activity has now expanded from voice-oriented to service-oriented (Kang, 2001; Mhin, 2003).

The Korean central government mainly uses the following methods for supporting nonprofit organizations financially (Park, 2005; Mhin, 2003): (1) a competitive open bid; (2) exclusive contract with a single organization; (3) special funding; (4) financial support for establishing a new organization, and; (5) indirect support through special revenue funds. Some governmental agencies such as the Ministry of Culture, Sports, and Tourism (MCST) and the Ministry of

Public Administration and Security (MOPAS) provide financial support based on a competitive open bid for nonprofit organizations. Second, a nonprofit obtains financial support by an exclusive contract with a governmental agency/department. Third, a government sometimes provides financial resources for establishing a new nonprofit for responding to public needs⁹. Fourth, governmental agencies have fully supported government-friendly nonprofit organizations – what we called quasi-autonomous NGOs (QUANGOs) – by special funds. For instance, QUANGOs include the Korea Saemaul Undong Center, Korea Freedom Federation (KFF), and Korea Veterans Association (KorVA). Lastly, governmental agencies indirectly provide financial resources for nonprofit organizations through special revenue funds – e.g., the development fund for women under the Ministry of Gender Equality and Family (MOGEF) is used for nonprofits related to women’s movements and rights.

Table 2.3.

Financial Support by Central Governmental Agencies/Departments

Agencies/Department	N of Projects	Sum (\$)	% of Money	Mean	Stdev.
<i>Fair Trade Commission</i>	7	1,161,600	.4	165,943	291.6
<i>M. of Education, Science & Technology</i>	18	4,357,040	1.4	242,058	454.7
<i>M. of Patriots & Veterans Affairs</i>	13	895,200	.3	68,862	102.3

⁹ For example, Korea NGO’s Energy Network (ENET) was established by the Minister of Knowledge Economy (MKE) and Korea Zero Waste Movement Network (KZWMN) was established by the Ministry of Environment (ME).

<i>Civil Rights Commission</i>	33	220,000	.1	6,666	1.2
<i>M. of Land Transport & Maritime Affairs</i>	12	954,400	.3	79,534	179.6
<i>M. of Employment & Labor</i>	52	12,017,866	3.8	231,113	657.0
<i>M. for Food Agriculture, Forestry & Fisheries</i>	157	91,481,840	29.3	582,687	2,876.5
<i>Rural Development Administration</i>	20	1,475,200	.5	73,760	47.4
<i>Cultural Heritage Administration</i>	82	15,093,600	4.8	184,068	868.3
<i>M. of Culture, Sports & Tourism</i>	34	7,679,650	2.5	225,872	484.5
<i>Broadcasting & Communications Commission</i>	54	33,925,464	10.9	628,250	2,703.7
<i>M. of Justice</i>	1	360,000	.1	360,000	-
<i>M. for Health & Welfare</i>	56	45,677,603	14.6	815,671	2,693.1
<i>Korea Forest Service</i>	1	149,600	.1	149,600	-
<i>Korea Food & Drug Administration</i>	3	3,632,000	1.2	1,210,666	1,135.3
<i>M. of Gender Equality & Family</i>	104	3,220,800	1.0	30,970	118.6
<i>M. of Foreign Affairs & Trade</i>	114	7,443,251	2.4	65,292	186.4
<i>Small & Medium Business Administration</i>	7	71,080,000	22.8	10,154,286	9,432.8
<i>M. of Knowledge Economy</i>	1	720,000	.2	720,000	-
<i>M. of Unification</i>	65	3,612,800	1.2	55,582	316.3
<i>Korean Intellectual Property Office</i>	2	1,229,600	.4	614,800	846.8
<i>M. of Public Administration & Security</i>	162	3,920,000	1.4	24,918	12.4
<i>Ministry of Environment</i>	10	2,040,000	.7	204,000	277.1
Total	1,008	312,347,515	100.0	309,893	1,857.6

Note: M. = Ministry

Source: Cho et al., 2009, p. 65.

However, Korean central government's financial support for nonprofit organizations is very small in spite of the qualitative and quantitative growth of the Korean nonprofit sector. In 2009, financial support by the central government departments and agencies was approximately \$312 million dollars (see Table 2.3). The mean of an individual organization or an individual project was about \$.31 million dollars and the standard deviation was \$1,858 dollars as shown in Table 2.3. The budget for nonprofits' support explains just about 0.0016 percent of the total budget of the Korean central government in FY 2009 (Cho et al., 2010). This amount includes the following limits: 1) it does not include financial support by local and city governments; 2) it does not include central government's financial support for universities/colleges, hospitals, and community welfare facilities¹⁰. The role or function of the Korean nonprofit sector is minor compared to that of U.S. nonprofit organizations.

Resource Dependence Perspective

The open systems approach pays attention to organizational environments and interdependency with contexts as a major mechanism for understanding organizational actions and structures (Katz and Kahn, 1966). For example, the "systems resource approach" focuses on the ability to obtain scarce and valued resources rather than to attain the organizational goals and to boost organizational functionality (Yuchtman and Seashore, 1967; Gollmar, 2008). In other words, the

¹⁰ Cho and his colleagues (2010) note that these organizations are excluded from the analysis in that these are not nonprofit organizations according to the 'Korean Nonprofit (or Nongovernmental) Organizations Support Act'.

acquisition of valued resources means the success or high effectiveness of an organization in the systems resource approach. From the organizations as open systems, the environment is thought of as an important factor in the continuation of the organization (Scott and Davis, 2003, p. 106) even though the closed-rational system perspective is mainly concerned with internal activities, internal operations, and the behavior of individuals for maximizing organizational efficiency on economic rationality (Pfeffer and Salancik, 2003; Scott and Davis, 2003; Ulrich and Barney, 1984).

Resource Dependence Theory (RDT) as an open systems approach postulates that organizations are embedded in networks and relations of diverse social actors (Granovetter, 1985) and such networks and relations can be understood as a product of patterns of interorganizational dependence and constraints (Pfeffer, 1987, p. 40). Under the RDT, organizational behavior, actions, and performance (effectiveness) are partially explained by the environments or contexts which provide critical resources to organizations. In this venue, organizations are not “internally self-sufficient” (Pfeffer, 1982, p. 40). An organization makes an effort to exchange resources which are needed for its success or survival. Specifically, organizations obtain the critical resources through adapting to contexts or environments, reducing uncertainty for minimizing their dependence on outside organizations, and maximizing the

dependence of other organizations on them¹¹ (Pfeffer and Salancik, 2003; Lan, 1991; Ulrich and Barney, 1984). From this perspective, Lan (1991) notes that the resource dependence relationship is important “in shaping the behavior of organizations and the goal of the organization to survive” (p. 25).

Conceptualization of Resource Dependence Patterns

Resource could be described as tangible or intangible something that organizations need for interactions with the environment and something that organizations get in an exchange with others in the RDP. Sheppard (1989) defines resource as “any inducement it can provide to others in order to get them to contribute to the organization” (p. 59). In addition to financial resources (money), an organization depends on a variety of resources for their survival, success, or high performance: e.g., reputation of individuals or groups, information, political support, legitimacy, and technology. Saidel (1990, 1991) presents six kinds of resources for state agencies and non-profit organizations: revenues, information (technology), legitimacy, access, service delivery capacity, and political support.

The appearance of resource inflow – “Resource Dependence Patterns” – is an important interest of the study. The RDP assumes that the interrelations with in-and-outside stakeholders for getting the needed resources are closely related to an organization’s success or high performance. Such diverse interrelations would

¹¹ Dependence is defined as “the product of the importance of a given input or output to the organization and the extent to which it is controlled by relatively few organizations (Pfeffer and Salancik, 2003, p. 51). Pfeffer and Salancik (2003) describe uncertainty as “the degree to which future states of the world cannot be anticipated and accurately predicted” (p. 67).

lead to the heterogeneous resource-getting patterns in nonprofit organizations. The resource dependence patterns can be understood at five different dimensions: resource dependency – “where resources come from” (Lan, 1991); resource diversity – “the degree of centralization or decentralization of the resource inflow” (Lan, 1991, Pfeffer and Salancik, 2003); resource uncertainty – “the degree of predictability of the resource inflow” (Lan, 1991) or how much organizations’ budgets change; resource abundance – the degree of abundance or scarcity of an organization’s resources, and; resource competitiveness – the perception of competitiveness for obtaining resources from in-and-outside the organization.

Generally, resources for nonprofit organizations are from government agencies, for-profit and non-profit funding organizations, individuals, and their own business activities. “Where resources come from” significantly influences behavior, goals, missions, and roles of the organization. For example, university research institutes are likely to have some public characteristics when their resources mainly come from government organizations (Bozeman, 2004; Lan, 1991; Bretschneider, 1990). On the other hand, nonprofit organizations will show some market-friendly characteristics when they mainly rely on funds from the private sector (Froelich, 1999; Useem, 1987).

“How diversified resources are” could reflect on the heterogeneity of nonprofit organizations (DiMaggio and Anheier, 1990; Salamon, 1987; Kramer, 1981). Organizations that depend on diverse sources of funding will be concerned

with various voices from funders and stakeholders; under such a situation, organizations' goals, missions, or decision-making processes are more likely to be complex. On the contrary, a centralized resource dependence pattern would lead to centralized organizational structure, decision-making, and simplified organizational missions and goals. Furthermore, the centralization of resource supply or the control of critical resources would result in the isomorphism of the organization on which it depends for resources (DiMaggio and Powell, 1983; Thompson, 1967) or dependence on the organization which provides resources (Hillman, Withers, and Collins, 2009; Nienhuser, 2008; Pfeffer and Salancik, 2003).

'How stable the nonprofit organizations' resources are' could also affect their behavior, performance, and survival. The uncertainty or instability of important resources has a negative effect on the organizational survival (Pfeffer and Salancik, 2003). Lan (1991) argues that the level of resource security in university research institutes influences their behavior (p. 37). Nonprofits are operated by diverse funding sources: grants and contracts from government; government appropriations, grants and contracts from private organizations; funding through business activities including sales, user charges and fees; donations from individuals, foundations, and other organizations. For example, regular or multiyear appropriations by government or long-term contracts or grants from the public and private sector are regarded as relatively steady and

predictable; on the other hand, donations or funding through business activities are relatively unstable and uncertain.

The insufficiency of resources negatively involves the managerial autonomy, organizational performance, and the continued existence of the organization. In particular, the lack of critical resources significantly influences an organization's vulnerability (Pfeffer and Salancik, 2003). Given their great resource scarcity, nonprofits' autonomy in the processes of decision-making and goal-setting is likely to be reduced.

The degree of competitiveness to obtain critical resources can directly or indirectly affect organizational behavior and performance. Competition for resources makes nonprofit organizations more dependable on in-and-outside stakeholders that control needed resources. Organizations are likely to change their decision-making and goal-setting to meet the demands of stakeholders. Such competition for critical resources has been strong in both the American and Korean nonprofit organizations. For example, the financial support by the Ministry of Public Administration and Security (MOPAS) has decreased from 7.5 billion won to 5 billion won between 2001 and 2010 while a large number of the Korean nonprofit organizations have been established in the same period¹². In addition, the MOPAS supports financial resources for specific projects – e.g., in

¹² For 10 years, the number of the registered nonprofit organizations has tripled from 3236 (2001) to 9182 (2010).

2010, environment protection/resource saving, welfare for social minorities, voluntary service/donation, peace/unification, and international cooperation.

Definition of Organizational Behavior and actions

Organizational Behavior (OB) has been studied and developed from a number of academic disciplines including psychology, sociology, business administration, anthropology, and political science, etc. OB mainly investigates 'how individuals and groups act in the organization'. OB generally has three different levels of unit of analysis: individual, group, and organization. Psychology focuses on individual indicators such as motivation, leadership, performance appraisal, and job satisfaction. Traditionally, group indicators including group dynamics, work teams, communications, and group conflict were the major research interests of sociologists and anthropologists. The issues of goals, structure, culture, environment, and power are the indicators of OB at the organizational level. The focus of this study is the organizational behavior at the organizational level – that is, how resource dependence patterns influence the organizational level indicators in the nonprofit organizations. Specifically, the study mainly focuses on organizational structure (formalization, hierarchy), managerial factors (decision-making/autonomy), and organizational goals affected by the nonprofits' resource dependence patterns.

Hierarchy is defined as “a stable set of relations in which the positions are arrayed in a pattern of formal superior-subordinate authority links” (O’Toole and

Meier, 1999, p. 508). That is, it is a system of ranking or organizing its members in the level of organization. Hierarchical organizations are inclined to maintain the status quo and make an effort to reduce the probability of change (Moon, 1998; Kim, 2007; Hage and Aiken, 1970). Formalization (formal working process) means “the degree to which norms of an organization are explicitly formulated” (Price and Mueller, 1986, p. 137). Formalization could be reified by the amount of written rules and regulations. Formalization could improve the stability of an organization and promote standardization (or routinization) of various organizational procedures¹³. Pfeffer and Salancik (2003) assert that organizational actions and structures are also “the consequence of the environment and the particular contingencies” (p. 3) because organizations always change through processes of interactions with their environment. That is, resource dependence patterns as environmental factors affect formalization and hierarchy of an organization. For example, nonprofit organizations are likely to have highly formalized structure when their survival is closely associated with stable and certain resources such as regular governmental appropriations or long-term grants/contracts from the private sector (Lan, 1991).

Under the RDP, the management makes an effort to find favorable environments and furthermore, to establish negotiated environments for obtaining the needed resources. Pfeffer and Salancik (2003) present the three roles of

¹³ Sometimes, high degree of formalization has a positive relation with the degree of red tape – i.e., formalization imposes unnecessary administrative burdens to an organization (Bozeman, 2000; Hall, 1968; Moon, 1998).

management: symbolic (scapegoat) role, responsive (decision making) role, and discretionary (autonomy) role. For the scapegoat function, managers and organizational leaders are considered a symbol of organizational success or failure – that is, they could be dismissed when organizational performance goes poorly. Dismissing them is not related to achieving high performance or guarantying organizational success; however, on a symbolic level, it could fulfill the demands of major external stakeholders who control critical resources (Niehuser, 2008).

Decision making is closely related to power and centralization because basically, it is for the problem of ‘who decides organizational issues’.

Centralization means the degree of control that organizational leaders have (Moon, 1998; Rainey, 2003). In a centralized organization, directors or managers have more power over others in that leaders or managers often have the right to make decisions for important organizational affairs. Because all levels of employees share power, participatory and flexible decision making would be encouraged in a decentralized organization (Kim, 2007; Hage and Aiken, 1970). The existing literature suggests that the degree of power and centralization is mainly determined by internal managerial factors. However, the RDP assumes that decision making is not free from the given social context – i.e., the context inevitably constrains organizational decision making processes (Pfeffer and Salancik, 2003, p. 266).

An organization is distinguished from other social groups or entities in that it has specific purposes or goals to attain (Parsons, 1956; Perrow, 1972). Rainey (2003) defines an organizational goal as “a condition that an organization seeks to attain” (p. 130). The social context that organizations face could considerably affect the process of goal-setting and characteristics of organizational goals. Organizational goals are not fixed; instead, organizations alter their purposes and domains to adapt to the environmental contexts (March, 1962; Cyert and March, 1963; Lan, 1991). In addition, the modern nonprofit organizations involve many social issues and obtain resources from various funders. These are likely to make organizational goals more ambiguous and complex. Therefore, goal clarity – whether an organization has clearly defined missions or goals is an important research issue in this study. Initially, goal displacement means that formalistic goals become more important than the substantive goal in organizations because of pathologies or inefficiencies of bureaucracy (Merton, 1957). In addition to the initial meaning, this research regards frequent changes, revisions, and modifications of organizational goals as goal displacement. Goal displacement is conceptualized as ‘how frequently organizations change their goals’.

Bridging Resource Dependence and Organizational behavior

The closed-rational system perspective that takes root in economics is mainly concerned with maximizing internal efficiency on economic/technical

rationality (Thompson 1967; Pfeffer, 1982; Ulrich and Barney, 1984; Scott and Davis, 2003). Therefore, organizational actions and behavior only focus on attaining internal rationality. For building efficient organization, the role of organizational leaders and managers is to gather detailed information on “work processes, analyze it, and derive rules and guidelines for the most efficient way to perform the required tasks” (Rainey, 2003, p. 25). From the rational perspective, the activities or behavior of an organization and its constituencies are seen as purposive, expected, and constrained. In addition, organizational managerial structures are invulnerable to environmental contexts (Mizruchi and Schwartz, 1987, p.3) because this assumes that external factors are just given and hardly changeable.

However, the whole image of actions and behavior cannot be justified and explained by maximizing economic efficiency or profit in modern organizations. For example, the power and interrelations with stakeholders could also influence organizational members’ behavior. Pfeffer (1987) asserts that organizational behavior are not always related to the consideration of efficiency or profit. Under the Resource Dependence Theory (RDT), similarities and differences of organizational actions and structures are affected by both the internal and external actors who are associated with critical resources (Neinhuser, 2008; Pfeffer and Salancik, 2003).

The RDT assumes that control of critical resources creates power issues such as autonomy, dependence and interdependence between organizations and their environmental contexts. The established power relations influence many organizational activities. For example, Provan and his colleagues (1980) argue that individual nonprofit organizations' autonomy in the processes of service delivery and decision making are relatively weak when the United Way as an umbrella organization controls their critical resources.

Many organizational activities are related to efforts to reduce environmental uncertainty that organizations face. That is, public, for-profit, and nonprofit organizations make an effort to obtain adequate resources that they need and, simultaneously, to reduce the influence of environment through the change of their structure and actions. Uncertainty is "the degree to which future states of the world cannot be anticipated and accurately predicted" (Pfeffer and Salancik, p. 67). For example, Tolbert (1985) explores the relationship between type of resources (public or private funds) and organizational structures in the public and private colleges and universities. She reveals that a high level of environmental uncertainty – i.e., an organization has heavy resource dependency on its environmental contexts – results in a high level of administrative differentiation in colleges and universities. There is a negative relationship between organizational instability in resource supply and administrative expense ratio in nonprofit organizations (Callen, Klein, and Tinkelman, 2010).

Resource Dependence and Organizational Performance

How to define performance is a critical issue in the modern public, for-profit, and nonprofit organizations. However, the concept of performance is complex and multidimensional; therefore, there is no best way to define and measure it. In the real world, the conflict of priority of performance elements among the organizational members and of political interests by in-and-outside stakeholders make it difficult to define what performance means and measure the size of performance. Scholars note that performance is not only a socially constructed concept that cannot be specified by simple measurement tools (Brewer and Selden, 2000; Au, 1996; Anspach, 1991). Instead, we should use both internal and external measures for reifying organizational performance. Measuring organizational performance should consider the views of both external stakeholders and internal employees. More specifically, performance is conceptualized through interaction among various measurement criteria (e.g., output, outcome, time), targets (e.g., goals, objectives, purposes, and missions), constituencies (e.g., organizational members, taxpayers, consumers and politicians), and measurement levels (e.g., individual, group, program, and agency).

‘How to measure performance’ (measurability) is a critical theme in the public, private, and nonprofit organization. In practice, a large number of definitions emphasize the measurable figures such as efficiency that are made by

the organization and its constituencies in a specific time frame (Buchner, 2008; Swanson and Holton, 2001; Hatry, 1999 et al.). That is, the emphasis on measurability is linked with quantifiable measurement criteria such as input, output, cost, and profit. Today, the concept of organizational performance is more than measuring productivity, efficiency, and outputs. Moynihan (2008) points out that performance is now more broadly redefined to include effectiveness – whether organizations or programs achieve desired results or outcomes (p. 3).

In general, performance can be operationalized by the following dimensions: efficiency (or productivity), effectiveness, quality, and equity in the modern nonprofit organizations. Boyne (2003) proposes seven dimensions for assessing performance through sixty-five performance-related empirical studies (p. 368): 1) quantity of outputs 2) quality of outputs; 3) efficiency; 4) equity (fairness of the distribution of service costs and benefits between different groups); 5) outcomes; 6) value for money (cost per unit of outcome); and 7) consumer satisfaction (which may be a proxy for some or all of the above, depending on the questions posed to service users). Additionally, a 1992 GAO report reveals eleven measures for assessing program performance through the survey of 103 federal agencies with more than 1,000 employees¹⁴. In particular, nonprofit organizations should be more concerned with the major stakeholders' (e.g., individual funders,

¹⁴ These are the observed performance measures (GAO, 1992): 1) outputs or final products; 2) program inputs; 3) financial indicators; 4) work activity level; 5) timeliness of services; 6) internal measures of quality; 7) operating ratios; 8) outcomes of products or services; 9) external customer satisfaction; 10) equity of services to users; and 11) complexity of work process (p. 34).

private companies, government agencies, citizens, and clients) desire, dissatisfaction, and complaints above economic values on measuring their performance (Berman, 2006; Carnevale and Carnevale, 1993).

Organizational efficiency and effectiveness are key components of organizational performance in the RDT. Organizational effectiveness is conceptualized by the relationship between organizations and the external factors; on the other hand, organizational efficiency is a criterion for specifying internal management of organization. Organizational effectiveness is mainly concerned about “how well organization is meeting demands of the various groups and organizations with activities” (Pfeffer and Salancki, 2003, p. 11). Efficiency focuses on an internal evaluation of the amount of resources consumed in the process of doing activity (Pfeffer and Salancik, 2002, p. 37). The RDP and system resource approach tend to emphasize the ability to acquire the resources that an organization needs to survive as the criterion for specifying organizational performance. Also, both the ability to acquire needed resources and efficiency in using an organization’s inputs are important judgment tools for organizational effectiveness and performance. However, measuring organizational performance is explicitly or implicitly related to what the organization attains – goals, missions, targets, or objectives.

This study defines performance as attaining organizations’ established purposes effectively and efficiently. It assumes that “organizations will perform

better if the people in them clarify their goals and measure progress against them” (Rainey, 2003, p. 129). Clear goals and good measurement systems are closely associated with organizational success. The GAO’s (2005) definition of performance measurement is closely associated with the given organizations’ outcome and result – specifically, it is described as “the ongoing monitoring and reporting of program accomplishments, particularly progress toward pre-established goals” (p. 3).

Chapter 3

Models and Hypothesis Development

Research Framework for Data Analysis

This study uses 13 variables¹⁵ in order to explore indirect and direct relationships among resource dependence patterns, behavior, and performance in nonprofit organizations. Figure 3.1 is the theoretical model for specifying these relations and suggests that there are path effects between the RDP, organizational behavior, and organizational performance.

The study fundamentally assumes that appearance of the resource inflow – Resource Dependence Pattern (RDP) – directly or indirectly correlates with behavior and performance of nonprofit organizations. The existing literature reveals that organizations' dependency on critical resources that are for their survival and success could explain and influence its behavior, actions, and structures (Casciaro and Piskorski, 2005; Baker and Aldrich, 2003; Pfeffer and Davis-Blake, 1987; Tolbert, 1985 et al.). Therefore, RDP affects behavior and actions of nonprofit organizations:

$$\text{Nonprofits' Organizational Behavior} = F(\text{Resource Dependence Patterns})$$

Attaining organizational performance is heavily related to behavior and actions of organizations. For instance, organizations may adhere to more formal

¹⁵ 13 variables include: five dimensions of RDP (dependency, diversity, uncertainty, abundance, and competitiveness); five variables of organizational behavior and structures (formalization, decision making, hierarchy, goal, and communication); number of staff and size of organization; and, organizational performance.

rules, regulations, and procedures rather than performance – i.e., evaluating and achieving performance – when they have highly formalized and hierarchical structure (Rainey, 2003; Timmons and Spinelli, 2003; Bidwell and Kasarda, 1975, Pondy, 1969). Vagueness and complexity of organizational goals may cause lower commitment, involvement, and satisfaction of organizational leaders and managers (Buchanan, 1975; Rainey, 2003). Chun and Rainey (2005) suggest that ambiguous goals can lower performance of the US federal agencies. The research presents the following model:

$$\text{Nonprofits' Organizational Performance} = F(\text{Organizational Behavior})$$

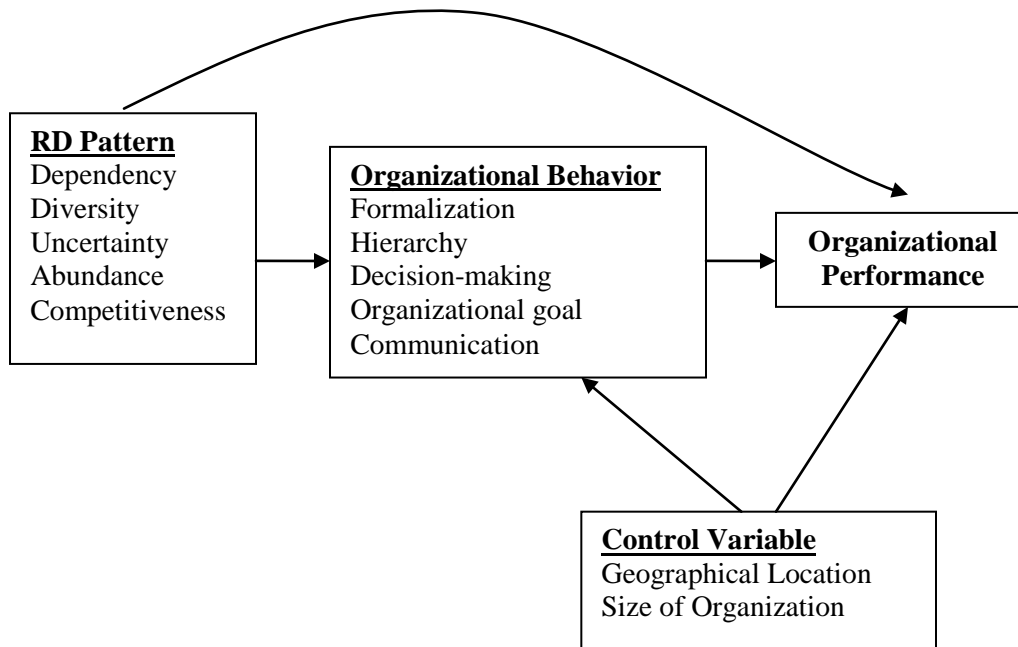


Figure 3.1. Basic Framework

Financial stability and the ability to gather needed resources are important indicators for understanding performance in nonprofit organizations. Modern nonprofit organizations should appropriately respond to demands of their stakeholders who control resources. Nonprofit organizations get some benefits from stakeholders' support for realizing goals or missions when their demands are satisfied (Berman, 2006). The RDT and systems-resource approach tend to equate the ability to obtain valued resources with organizational performance (Yuchtman and Seashore, 1967; Goallmar, 2008). This research assumes that resource acquisition is required for achieving high performance, not organizational performance itself. Hence, the RDP is likely to have indirect effect on nonprofits' performance in the study.

Organizational Performance = F (Resource Dependence Patterns)¹⁶

- Control Variables

The study is mainly focused on nonprofit organizations that have more than five regular staff and are located in Seoul. The number of regular staff of the Korean nonprofit organizations is controlled in the study. As mentioned above, formalization and hierarchy, as organizational behavior, are important variables for understanding performance of the Korean nonprofits. In general, it might be difficult to investigate behavior and actions of organizations when the number of regular workers is too small in a nonprofit organization. In practice, the average number of staff who engages in the Korean nonprofit organization is very small. According to the

¹⁶ This study assumes that the effects of the RDP on organizational performance are mainly indirect.

Encyclopedia of Korean Associations (2009), more than 20 percent of the Korean nonprofit organizations have only one regular staff person and about 80 percent of organizations have fewer than 5 regular staff among approximately 3,100 nonprofit organizations that report the number of regular staff.

Geographical location is also controlled in the research. Organizations within the same region are more likely to have similar social, political, cultural, and economic characteristics (Moon, 1998, p. 88). Regional effects such as economic power, culture, and political orientation could significantly influence state and local welfare policies (Meyers, Riccucci, Lurie, 2001; Lurie, 2006). That is, many scholars are concerned about geographical factors for understanding social, cultural, political, and economic differences among various regions (Moon, 1998). In particular, the study pays attention to geographical location due to different economic conditions and regional diffusion of nonprofit organizations among cities and provinces in South Korea. In 2008, Seoul as capital of South Korea was responsible for more than 24 percent of the Gross Domestic Product (GDP). Approximately 30 percent of nonprofit organizations are located in Seoul (Lim, et al., 2009).

*Impact of Resource Dependence Patterns on Organizational Behavior,
Managerial Factors, and Organizational Performance*

- Impact of Resource Dependency on Organizational Behavior

‘Where resources come from’ – i.e., Resource Dependency – could influence a hierarchical level and the degree of standardization or routinization of organizational procedures in a nonprofit organization. Nonprofit organizations’ activities should be supported by various resource providers including individuals,

corporations, and governments. In addition, their own commercial activities such as selling goods and services are good funding sources for helping organizational actions and behavior.

Environmental contexts considerably affect organizational actions and structures (Pfeffer and Salancik, 2003, p. 3) because organizations continuously respond to changes in their environment. Public organizations or public-oriented organizations that are dependent on government tend to have a large amount of formal administrative controls and public scrutiny and show a high level of accountability (Rainey, 1989; Perry and Rainey, 1988; Lan, 1991). Public (oriented) organizations would be subject to more red tape and more hierarchical (bureaucratic) organizational structures (Bozeman, 2000; Bozeman and Scott, 1996; Baldwin, 1990; Rosenfield, 1984) even though there is some contradictory research (Buchanan, 1975 et al.). Froelich (1999) argues that government funding involves “exacting adherence to minute details, intense monitoring, and prolific reporting” (p. 260) in nonprofit organizations. In this venue, nonprofit organizations are more likely to face more rules, procedures, regulations, and protocols when they mainly obtain various resources from the public sector. On the other hand, market-oriented organizations enjoy greater flexibility and more decentralized organizational structures than public-oriented organizations (Weisbrod, 1988; Moon, 1998). More dependence on private funding from individuals and corporations will be negatively associated with the degree of

formalization and hierarchy in nonprofit organizations. Hence, the study presents the following hypotheses:

H1. Nonprofit organizations that mainly depend on public resources are likely to have highly formalized and hierarchical organizational structures.

H2. Nonprofit organizations with higher private resource dependency are likely to have lower formalized and hierarchical organizational structures.

With a high level of formalization and hierarchy, public-oriented organizations generally have less autonomy and power in decision making processes. Public organizations not only tend to avoid delegation of authority to their subordinates and subunits but also, to allow organizational leaders and managers to have a lower level of decision making autonomy and flexibility than leaders and managers in private organizations (Rainey, 2003, p. 77). Furthermore, Froelich (1999) asserts that nonprofit organizations that have their own resources by various commercial activities enjoy greater flexibility and autonomy than nonprofit organizations that mainly depend on traditional forms of support such as private contributions and government funding; thus, the research hypothesizes the following:

H3. Nonprofit organizations with higher public resource dependency are likely to have more highly authoritative and

centralized decision making than nonprofit organization that have funding from their own commercial activities. Nonprofits with higher private resource dependency fall between nonprofits with higher public resource dependency and nonprofits with higher private resource dependency.

Currently, resource providers from the public and for-profit sector require nonprofit organizations to focus more on attaining high performance and to respond to their demands. Changes or modifications of organizational goals often occur as changes in resource providers' needs. It is because nonprofit organizations seriously consider needs of external funders in order to obtain adequate financial resources. Existing studies point out that changes in nonprofits' goals or priorities often occur even when they depend heavily on government funding (Guo, 2007; Bernstein, 1991; Kramer, 1981).

However, missions or roles of nonprofits are similar to those of governmental agencies; frequently, there are some conflicts between purposes of nonprofits and that of for-profit organizations in that for-profit organizations generally seek to maximize profits through great efficiency. Nonprofit organizations might be forced to change or add organizational goals when they rely heavily on resources from the private sector; therefore, there is the following hypothesis:

H4. Nonprofit organizations with high private resource

dependency are likely to experience goal displacement and to have various organizational goals.

- Impact of Resource Diversity on Organizational Behavior

Resource Diversity – “the degree of centralization or decentralization of the resource inflow” (Lan, 1991) – is closely associated with nonprofits’ organizational behavior, actions, and structures. Diversification strategy is often used for reducing dependence on single or few external resource providers. Diversification is a strategy of “avoiding the domination that comes from asymmetric exchanges when it is not possible to absorb or in some other way gain increased control over the powerful external exchange partner” (Pfeffer and Salancik, 2003, p. 127).

Tough and uncertain environmental contexts encourage nonprofit organizations to adopt resource diversification strategies. Many federal agencies and departments obtain most of their financial resources from a single funding source – governmental appropriations. In fiscal years 2007 to 2009, more than 97 percent of budgets of the sixty four US federal agencies were from discretionary and mandatory governmental appropriations (Seo and Lan, 2010). Many of them are heavily rule-bound and highly bureaucratized organizational structures. Nonprofit organizations that mainly rely on single or few resource providers are likely to have more formalized, rule-bound, and hierarchical organizational

structures. In other words, under a turbulent and uncertain environment, it is not easy for nonprofit organizations to obtain resources from a variety of stakeholders when they have formal and hierarchical organizational structures (Lan, 1991). In accordance with these arguments, I hypothesize:

H5. Nonprofits with high resource diversification are likely to have less formalized and hierarchical organizational structures.

Dependence on the given environmental context is an important factor that constrains organizational decision making. The demands of powerful stakeholders significantly influence organizations' decisions and actions (Pfeffer and Salancik, 2003). Resource providers for nonprofit organizations may have their own funding criteria and criteria of one resource provider sometimes do not correspond with those of others (Froelich, 1999). Under diversified resources – i.e., among a variety of resource providers, nonprofits' organizational members – especially, decision makers – will invest a large amount of time and cost for making decisions and formulating their own actions under pressure of in-and-outside resource providers; thus I present the following hypothesis:

H6. Nonprofits with high resource diversification are likely to invest their time and costs in the decision making process than nonprofits with low resource diversification.

Survival or success of a large organization requires a large amount of financial and other support. Hence, large organizations will make an effort to

build and keep good networks with external stakeholders in order to obtain critical resources. A large organization may be in a better position than small one in resource acquisition (Jung, 2003). It requires more social support and has increased dependence on the environmental contexts (Pfeffer, 1973; Pfeffer and Salancik, 2003). The following hypothesis results:

H7. Organizational size is positively associated with the degree of resource diversity.

- Impact of Resource Uncertainty on Organizational Behavior

Resource Uncertainty¹⁷ – the degree of predictability of the resource inflow – is directly related to organizational actions, behavior, and structures. Pfeffer and Salancik (2003) argue that uncertainty is important if only it is related to critical things such as resource acquisition and success or survival of organizations. Scholars suggest that firms (organizations) could well manage with a clear hierarchy of authority, formally defined tasks, centralized decision making, and bureaucratized organizational structures in a more stable and certain environment (Lawrence and Lorsch, 1967; Burns and Stalker, 1961). On the other hand, organizations that are in a more uncertain and turbulent environment are likely to have less hierarchical and formalized organizational structures, more participatory decision making processes, and more lateral communication and networking. Rainey (2003) notes that formalized, standardized, specialized, and

¹⁷ Uncertainty is determined by “the level of forecasting ability of the organization at a given point in time” (Pfeffer and Salancik, 2003, pp. 67-68).

bureaucratized organizational structures are inappropriate for adapting to complex, turbulent, and uncertain environmental changes. In this venue, the study assumes that certain or stable resource acquisition of nonprofit organizations is positively associated with formalized and hierarchical organizational structures and top-down decision making processes. These hypotheses are formulated as::

H8. Nonprofit organizations with high resource uncertainty are likely to have less formalized and hierarchical organizational structures.

H9. Nonprofit organizations with high resource uncertainty are likely to have decentralized and participatory decision making processes.

Predictability of the resource inflow can influence setting and changing mission or goals in nonprofit organizations. “Revenue volatility – substantial year-to-year variation of revenue inflow” (Froelich, 1999, p. 252) improves the probability of goal displacement in nonprofit organizations (Gronbjerg, 1993; Froelich, 1999). In general, private resources including individual and corporation contributions are regarded as more unpredictable and unstable than government funding (Gronbjerg, 1993; Boris and Odendahl, 1990; Useem, 1987); thus, the research tests the following hypothesis:

H10. Nonprofit organizations with high resource uncertainty are likely to have a high level of goal displacement risk.

An organization that mainly depends on certain and stable funding sources is likely to have rather ambiguous and unclear goals. In general, public organizations that have stable funding sources tend to have a high level of goal ambiguity while private organizations with a high level of resource uncertainty make an effort to set clear organizational goals for inducing external resource providers' investment. In this context, this research sets the following hypothesis:

H11. There is a positive relationship between resource uncertainty and goal clarity in nonprofit organizations.

Resource Dependence Theory assumes that organizations make an effort to boost stability and predictability in the relationship with their environments. In general, growth is the most direct strategy for eliminating a source of external constraints and reducing environmental uncertainty (Pfeffer, 1987; Burt, 1983). Lan (1991) also argues that organizational size is positively associated with the predictability (stability) of the resource inflow through the study of university research and development institutes (p. 69). Therefore, the study leads the following hypothesis:

H12. The size of nonprofit organizations is negatively correlated with resource uncertainty.

- Impact of Resource Abundance on Organizational Behavior

The scarcity of resources is related to organizations' autonomy, decision making, and goals. An organization's survival will be threatened if the supply of

important resources is not sufficient; on the other hand, the external dependence of organizations is reduced when they have adequate resources. In addition, organizations that hold sufficient resources could have relatively strong power in the decision making process and goal-setting (Galbraith, 1973; Pfeffer and Salancik, 2003). Guo and Acar (2005) suggest that small organizations under great resource insufficiency might be more likely to abandon their autonomy and to build collaborative relations such as merges, joint ventures, and alliances in order to solve the problem of resource scarcity (pp. 345-346). In this respect, nonprofit organizations with great resource scarcity might not have enough autonomy in decision making and their goals or missions might be frequently changed by demands of external resource providers. For these reasons, the following hypotheses can be stated:

H13. Given their resource scarcity, nonprofit organizations are likely to have less autonomy in the process of decision making.

H14. Nonprofit organizations that hold sufficient resources are less likely to experience goal displacement.

H15. Larger nonprofit organizations are likely to face less resource scarcity.

- Impact of Resource Competitiveness on Organizational Behavior

Organizations obtain appropriate revenues and appropriations for organizational success and survival through interactions with their environment.

In this process, many organizations will compete with other organizations. Currently, funders, including the private and public sector, tend to force nonprofit organizations to adopt marketized approaches and values due to the new public management (Weisbrod, 1998) – for example, the trend of government funding shifts from regular grants and appropriations to contracts based on competition with other organizations. In addition, for-profit organizations instead of government agencies have gradually increased provision of social goods and services (Eikenberry and Kluver, 2004). Many business companies have experienced similar competition for resources and tend to be more flexible and less complex organizational structures. Like the private sector, nonprofit organizations might adopt less bureaucratized organizational structures in severe resource competition. Following this line of argument, it is proposed that:

H16. Nonprofit organizations with high resource competitiveness are likely to have less formalized and hierarchical organizational structures.

The needs of resource providers or external stakeholders heavily influence setting and changing organizational goals. Berman (2006) argues that nonprofits obtain (financial) benefits from stakeholders' support when their demands are satisfied. Under high resource competitiveness, nonprofit organizations are very sensitive to the major resource providers' desire, dissatisfaction, and complaints

related to their works because these are closely associated with the needed resource acquisition for nonprofits' success and survival.

H17. Nonprofit organizations with high resource competitiveness are more likely to change their goals or missions.

An organization makes an effort to set clearer organizational goals in the situation that they compete heavily with other organizations for acquiring financial resources. Clearly-defined organizational goals help external resource providers to understand what organizations do and help them to determine financial support to the organizations. Therefore, a hypothesis can be stated:

H18. Nonprofit organizations with high resource competitiveness are more likely to have clearly defined organizational goals.

Resource competitiveness might be negatively associated with time of decision making in the nonprofit sector. For their survival and success, nonprofit organizations make an effort to meet stakeholders' demands. Furthermore, rapid actions or decisions for meeting powerful resource providers' needs will help nonprofit organizations to get adequate resources in competition with other organizations. It can be hypothesized that:

H19. Nonprofit organizations with high resource competitiveness will reduce time for decision making.

Impact of Organizational Behavior and Managerial Factors on Performance

The diverse roles, ends, and stakeholders' demands create one major reason for evaluation of performance in the nonprofit sector. Many scholars agree that nonprofit organizational performance is also multidimensional as is that of public organizations (Kirk and Nolan, 2010; Herman and Renz, 2008; Rainey, 2003). This study defines performance as attaining organizations' established purposes effectively and efficiently even though one tool cannot adequately measure performance across various nonprofit organizations.

The degree to which nonprofit organizations are formalized and hierarchical (bureaucratized) will moderately influence their performance (see Figure 3.2). A high level of formalization, rules, procedures, and regulations may have a negative effect on achieving high organizational performance (Kim, 2007; Bozeman, 2000; Hall, 1968). Public agencies, as external funders, will require nonprofit organizations to add more rules and procedures in the process of performance. A high level of formalization, rules, and hierarchy in organizations is likely to create inefficiency, excessive regulation, and frustration when organizations make an effort to attain high performance.

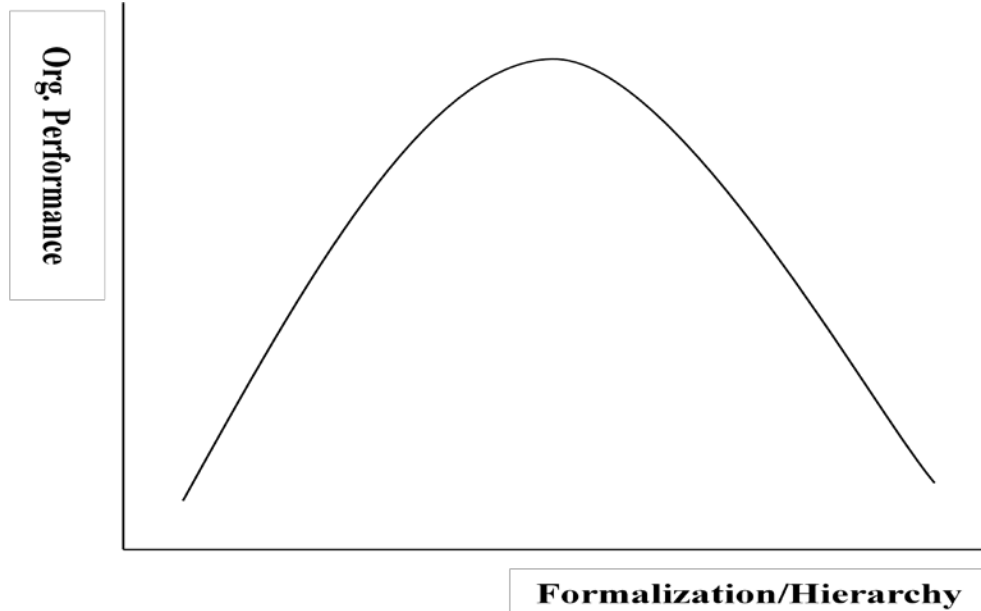


Figure 3.2. Quadratic Effect of Formalization/Hierarchy on Performance

However, such formalized and rule-bound organizational structures are not always bad for organizational performance. Authors suggest that duplication and overlapping of procedures and a moderate level of hierarchy and formalization can be procedural safeguards that guarantee accountability, predictability, and fairness for achieving high performance (Landau, 1969; Benveniste, 1987; Bozeman, 2000). Nonprofit organizations will face ambiguities and uncertainties when they carry out the given missions or duties without the appropriate rules and procedures. These arguments lead to the following hypotheses:

H20. A high level of formalized and hierarchical organizational structures will be negatively associated with organizational performance in the nonprofit sector.

H21. A moderate level of formalization and hierarchy will lead to a high level of performance in nonprofit organizations.

Diversity of organizational goals is closely associated with how well nonprofit organizations perform. Ambiguous goals in public agencies are the important reason why they achieve a low level of organizational performance (Rainey, 2003). Drucker (2005) asserts that a nonprofit organization's goals should be clearly defined for better performance. Baum and the colleagues' study for entrepreneurial firms (1998) reports that Brevity and clarity of mission statements have a positive effect on their financial performance. Well-written organizational missions and purposes are more important in nonprofit organizations in that these help better communications with critical resource providers and contribute to widening the potential group of stakeholders (McDonald, 2007; Kirk and Nolan, 2010). Clarity or ambiguity of organizational goals leads to the following hypothesis:

H22. Clearly defined goals have a positive effect on organizational performance in nonprofit organizations.

The degree of flexibility and centralization in decision making correlates with organizational efficiency and effectiveness. Authors note that tightening control is negatively related to organizational performance (Singh, 1987; Burns and Stalker, 1961; Lawrence and Lorch, 1986). The study of Carmeli and his colleagues (2009) reveals that Participatory decision making in top management

teams¹⁸ is positively associated with firm performance. Kim (2007) also suggests that public agencies and departments that have more autonomous and flexible decision making processes show good organizational performance. Thus, the study hypothesizes the following:

H23. Nonprofit organizations that have a decentralized and participatory decision making process are likely to show a high level of organizational performance.

Summary

This chapter presents the research framework and hypotheses for understanding the relationship among RDP, behavior, and performance of Korean nonprofit organizations. The framework shows that the five dimensions of RDP (dependency, diversity, uncertainty, abundance, competitiveness) have a direct effect on nonprofits' behavioral factors (formalization, decision making, goal, hierarchy). Table 3.1 shows the direct effects of RDP on organizational behavior and structures.

¹⁸ Top management team is composed of individual executives who are accountable for key decision-making processes in an organization (Carmeli, Sheaffer, and Halevi, 2009; Hambrick, 1994).

Table 3.1.

Hypotheses on Relationship between RDP & Organizational Behavior

RDP	Organizational Behavior	Hypotheses	Expected Direction
	Formalization/Hierarchy	<i>H1; H2</i>	
Dependency	Participatory decision making	<i>H3</i>	Not Applicable
	Goal displacement	<i>H4</i>	
	Formalization/Hierarchy	<i>H5</i>	Negative
Diversity	Length of comm. (DM)	<i>H6</i>	Positive
	Organizational size	<i>H7</i>	Positive
	Formalization/Hierarchy	<i>H8</i>	Negative
	Participatory decision making	<i>H9</i>	Positive
Certainty	Goal displacement	<i>H10</i>	Positive
	Goal Clarity	<i>H11</i>	Positive
	Organizational size	<i>H12</i>	Negative
	Decision Making	<i>H13</i>	Positive
Abundance	Goal displacement	<i>H14</i>	Negative
	Organizational size	<i>H15</i>	Positive
	Formalization/Hierarchy	<i>H16</i>	Negative
Competitiveness	Goal displacement	<i>H17</i>	Positive
	Goal clarity	<i>H18</i>	Positive
	Length of comm. (DM)	<i>H19</i>	Negative

RDP also has a path (indirect) effect on nonprofits' performance at the organizational level. Table 3.2 summarizes proposed hypotheses associated with the relationship between organizational behavior and organizational performance.

Table 3.2.

Hypotheses on Relationship between Organizational Behavior and Organizational Performance

	Organizational Behavior	Hypotheses	Expected Direction
	Formalization/Hierarchy	<i>H20; H21</i>	Curvilinear
<i>Organizational Performance</i>	Goal clarity	<i>H22</i>	Positive
	Participatory decision making	<i>H23</i>	Positive

Chapter 4

Data Collection and Measurement

Sampling Strategy

The main purpose of this study is to explore: 1) how resource dependence patterns (RDP) affect organizational behavior – formalization, hierarchy, decision making, and goals; 2) how organizational behavior affects performance, and; 3) how RDP affects performance. The study is concerned about RDP, behavior, and performance at the organizational level – i.e., the unit of analysis of the study is an individual nonprofit organization. Survey procedures are a major tool for obtaining information and the main survey target is regular staff including financial (business) officers and managers/directors in Korean nonprofit organizations.

The main purpose of survey sampling is “to select a set of elements from a population in such a way that descriptions of those elements accurately describe the total population from which they are selected” (Babbie, 1990, p. 75). Hence, sampling processes need to ensure representativeness of a population and a high level of validity (accuracy of measurement or close relationship between measured results and desired values) and reliability (the precision of measurement or repeatability of measured results) of the collected data. Diverse images of nonprofit organizations will be perceptually understood because the study heavily relies on organizational members’ responses on survey questionnaires. This study

uses the self-administered and the closed-ended survey questionnaire. Some questions are open-ended for understating detailed information. This study might obtain biased information if the respondents' perception were biased – i.e., these are associated with reliability in the survey sampling process. The study presents more than two questions per variable for reliability. The research conducted a preliminary test (pilot testing) for understanding the accuracy and precision of survey questions (Fink, 2006).

The sample was obtained from Korean nonprofit organizations that are controlled under the 'Korean Nonprofit Organizational Support Act' and are registered in central departments/agencies and local governments. In 2010, more than 9,000 organizations were registered in central departments/agencies and local and city governments.

In order to make a more elaborate research design and to get a high level of validity, the study controlled some factors in the sampling process– range of services, the number of regular staff, and geographical region. In particular, the sampling process was conducted by the following three steps. First, the main targets for survey were national-level nonprofit organizations. That is, the study narrowed the range of study to 1,142 nonprofits that are registered in 31 central governmental departments/agencies. Second, the survey sampling targets are Korean nonprofit organizations that have more than five regular staff. The study excluded very small organizations in the sampling process because it is not easy

to observe the appearance of the resource inflow, organizational behavior, and performance in small organizations. Third, samples were obtained from nonprofit organizations located in the area of Seoul, Incheon, and Gyeonggi to control for diverse economic conditions and regional diffusion of nonprofit organizations among cities and provinces in South Korea¹⁹.

Survey Design

Survey is an information collection method used to “describe, compare, or explain individual and societal knowledge, feelings, values, and behavior” (Fink, 2006, p. 1). This study adopts a cross-sectional survey design for examining the relationship among resource dependence patterns, organizational behavior, and organizational performance. A cross-sectional design generally provides information on variables and determines relationships between them at one point in time (Babbie, 1990; Fink, 2006).

Survey in this study depends on various types of questions (items); dichotomous, multiple-choice, rank-order, and Likert response scale questions. In particular, a seven-point Likert scale questionnaire is a major instrument for verifying hypotheses and measuring indicators related to organizational behavior and performance. For verifying some hypotheses, multiple questions are used because it is not easy for a single question to measure them. This study adopts a single-scale strategy for all Likert scale questionnaires to reduce the complexity

¹⁹ In 2008, this area accounts for approximately 50 percent of Gross National Product (GDP) even though it just covers about 10 percent of total Korean territory.

of the survey structure (Kim, 2007). This study uses rank-order questions for understanding the origin of financial resources and determining their importance.

The study uses an online survey tool for collecting the data. First, I emailed an advance letter telling respondents the purpose of the survey before sending the survey questionnaire. Second, an online survey tool was delivered to respondents through their email account. Respondents' email accounts were obtained from diverse literatures and websites of nonprofit organizations and governmental departments/agencies. In order to improve the response rate, the online survey tool was emailed to each respondent twice in the survey period (about one month). The online survey tool includes a questionnaire, survey instructions, and an informed consent form.²⁰

Measurement of Variables

- Resource Dependence Patterns

The research presents nine financial resources for supporting a variety of activities of nonprofit organizations:

- (1) *Charitable donations from individuals;*
- (2) *Charitable donations from corporations;*
- (3) *Grants from foundations;*
- (4) *Contracts from foundations;*
- (5) *Grants from governments;*

²⁰ This form includes the title, purpose, and duration of the survey, potential benefits to respondents and society, confidentiality, potential risks and discomforts, and personal information of surveyors.

- (6) *Contracts from governments;*
- (7) *Appropriations from governments;*
- (8) *Resources from commercial activities, and;*
- (9) *Other resources.*

Nonprofit organizations also obtain critical resources from commercial activities including selling products and charging service fees. The study reclassifies nine financial resources as four categories: contributions from governments, private organizations, nonprofit organizations by their own commercial activities, and other resources (see Table 4.1.). Hence, resource dependency is determined by the degree of governmental funds, private contributions, resources from commercial activities of nonprofits, and other resources. For example, governmental resource dependency is determined by the following formula:

$$\text{Resource dependency by governments} = \frac{\text{(Total amount of funds from the public sector)}}{\text{(Total amount of funds from governments, private organizations, nonprofits and others)}}$$

Table 4.1.

Funding Sources for Nonprofit Organizations

Public Sector	Private Sector	Nonprofits	Other Resources
- Long/short-term grants	- Donations	- Resources from commercial activities	
- Contracts	- Long/short-term grants		
- Appropriations	- Contracts		

Decreases in financial support from the public and private sectors encourage nonprofit organizations to diversify sources of funds. Diversification of resource strategies in nonprofit organizations is very important for organizational success and survival (Froelich, 1999). How resources diversify in an organization is closely associated with two dimensions. A nonprofit organization that shows a high level of resource diversity is: 1) an organization that has diverse funding sources and; 2) the distribution of resources is even. For example, nonprofit organizations have a highly diversified resource dependence pattern when they obtain critical resources from nine methods and the proportion of resources that come from each method is equal. On the other hand, resource diversity of nonprofit organizations would be low when they depend on a single funding source or few funding sources.

Like resource dependency, the study recategorizes the funding sources as four dimensions (government funds, private contributions, resources from commercial activities, other resources) for the research's convenience. In the study of resource dependence patterns of university research institutes, Lan (1991) presents the formula for calculating resource diversity. The study applies to Lan's (1991) formula for understanding resource diversity of nonprofit organizations (p. 78):

$$RD=100-\{\sqrt{\{(RGov - 25)^2 + (RPri - 25)^2 + (RCom - 25)^2 + (ROth - 25)^2\}/4}\}$$

RD: Resource diversity of a nonprofit organization

RGov: Resources from the public sector

RPri: Contributions from the Private sector

Rcom: Funds from commercial activities of a nonprofit organization

Roth: Other resources

Figure 4.1. Basic Formula for Resource Diversity

According to the formula, resource diversity is highest when a nonprofit organization relies evenly on all four sources of funds.

The degree of resource uncertainty in nonprofit organizations is mainly determined by characteristics of funding sources. Nonprofit organizations show a high level of resource uncertainty when organizations heavily rely on an unknown and unstable resource. Nonprofits' financial resources are categorized as three dimensions of the degree of predictability of the resource inflow (see Table 4.2.).

Table 4.2.

Resource Uncertainty in the Nonprofit Sector

Level of Certainty	Resource Description
<i>High Level of Certainty</i>	- Contracts from foundations
	- Grants from foundations
	- Contracts from governments
	- Grants from governments
<i>Moderate Level of Certainty</i>	- Appropriations from governments
	- Resources from commercial activities
<i>Low Level of Certainty</i>	- Donations from individuals
	- Donations from corporations
	- Other resources

Grants and contracts from governments and foundations are regarded as a traditional way of obtaining financial resources by nonprofit organizations. The funding by contracts and grants are considered to be certain and stable because a strong contractual bond is formed between funding organizations and nonprofit organizations (Lan, 1991). Gronbjerg (1991) notes that government grants and contracts have greater continuity and predictability compared to individual or corporation donations (pp. 10-11). In particular, long-term contracts or grants are more stable and predictable funding sources of nonprofit organizations.

On the other hand, the funding from donations is considered to be relatively unstable. Literature of nonprofits' revenue strategies reveals the unpredictability and volatility of individual and corporate donations (Froelich, 1999; Gronbjerg, 1992, 1993). Lastly, governmental appropriations and resources from commercial activities show a moderate level of resource uncertainty. Governmental appropriations are considered to be certain and predictable funding sources for nonprofits to some degree; however, certainty of governmental appropriations is moderate because nonprofit organizations do not have adequate power to control budget processes. Governmental appropriations are likely to fluctuate by changes in political priorities and economic conditions (Lan, 1991, p. 80). Nonprofit organizations often get funding through their own commercial activities such as selling goods and services to customers. Self-generated revenues allow nonprofit organizations to have greater flexibility and autonomy (Froelich 1999). However, commercial activities are less able to reduce resource uncertainty (Bielefeld, 1992).

This research estimates a value of a nonprofit's resource uncertainty by using weighted value. Resources that show a high level of certainty have a weighted value of .03. For moderate level resources, a weighted value is .02, and it is .01 for low level ones. Therefore, the range of resource uncertainty is 1.00 (the lowest level of certainty) to 3.00 (the highest level of certainty). For example,

the value of resource uncertainty is 3.0 when a nonprofit organization obtains all financial resources from contracts and grants from government²¹.

Two measurement tools are used for understanding the degree of abundance or scarcity of an organization's resources (Resource Abundance). First, the change in the amount of nonprofits' nine funding sources in the past three years is used as the proxy for measuring resource abundance. However, it is not easy to understand the degree of resource abundance through only increase or decrease of financial resources. For understanding the degree of nonprofits' resource abundance, organizational members' perceptions are also important in addition to the quantitative change in organizations' budgets. The perceived level of resource abundance is reified by the Likert scale.

Did your organization's annual budget increase in the last three years? If your organization's annual budget had changed in the last three years, to what extent does your organization's annual budget change? To what extent is your organization's annual budget enough to achieve organizational goals and missions?

The degree of competitiveness for resources is also specified by a perceptual measure. The feeling of financial staff, directors, or managers is an important standard for judging resource competitiveness when they make an

²¹ The sum of both contracts and grants of the organization is 100.00 percent in the online survey. The formula is 100.00 times .03 (a weighted value for high level of certainty).

effort to obtain financial resources through appropriations, grants, contracts, and donations from resource providers.

To what extent does your organization compete with other organizations for obtaining financial resources?

- Measuring Organizational Behavior

The study observes four dimensions of organizational behavior and structures: formalization, hierarchy, decision making, goal displacement, and goal clarity. A nonprofit organization's behavior and structures are mainly specified by respondents' perceptions using survey procedures.

The study measures the perceived level of hierarchy of a nonprofit organization depending on organizational members' opinions. For example, the research asks respondents about the degree of layers of authority in their organization (1 = few layers of authority; 7 = many layers of authority).

My organization has multiple layers of authority. My organization has hierarchical processes for implementing programs.

Establishing the order of rank is important in the organization.

The degree of formalization is determined by 'to what extent an organization has laws, regulations, rules, and procedures'. The degree of formalization in nonprofit organizations is also reified by respondents' perceptions using the Likert scale.

To what extent are written procedures and rules important in your organization? My organization has many rules, regulations, and

procedures. My organization imposes sanctions against violation of rules, regulations, and procedures.

The study is chiefly concerned with two dimensions of decision making: a nonprofit organization's autonomy of decision making against external factors and the degree of decentralization of decision making inside organizations. The research measures the perceived level of an organization's power against outside stakeholders (1 = weak autonomy; 7 = strong autonomy). Second, the study explores how much organizational members' opinions are reflected in the decision making process – i.e., the degree of participation and decentralization in the decision making.

My organization has flexible decision making processes. My organization encourages employees to participate in decision making processes. My organization has available channels for communicating between non-executive employees and managers (directors).

The research focuses on clarity, multiplicity, and displacement of organizational goals and missions. The perceived level of three dimensions of nonprofits' goals and missions is measured by survey questions using a seven-point Likert scale.

My organization has clearly defined goals or missions. To what extent does your organization change goals or missions? My organization has conflicts among goals or missions.

- Measuring Organizational Performance

This study pays attention to multidimensionality of performance in the nonprofit sector. As mentioned above, nonprofits' works involve diverse stakeholders including organizational employers and employees, governments, foundations, corporations, and customers. In-and-outside stakeholders are likely to have different standards for evaluating organizational performance. For more precise evaluation of performance, it is desirable that many stakeholders be included in the survey procedure. However, the study has a limitation – i.e., the main survey target is organizational members; the research asks multidimensional aspects of performance to survey respondents to lessen the limit. The perceived level of organizational performance is specified by the following dimensions using a seven-point Likert scale: 1) effectiveness (relevance between goals and nonprofits' activities and appropriateness of resource management); 2) productivity/efficiency; 3) responsiveness (customer satisfaction about nonprofits' services and goods), and 4) publicness. This study conducts factor analysis for checking whether the concept of organizational performance is multidimensional and for checking how to bind the collected data. After conducting factor analysis,

each dimension that comprises the concept of performance is merged as an organizational performance variable.

*Organizational goals or missions respond to community demands.
My organization uses resources effectively. Customers are satisfied with my organization's goods and services. Making profits is important in my organization. My organizational performance responds to public interests or publicness. Outside stakeholders (or resource providers) are satisfied with my organizational performance.*

Data Analysis Procedures

The collected data are sequentially analyzed by the following procedures: descriptive statistics, reliability test (Cronbach alpha coefficient calculation), factor analysis, multiple regression analysis by Ordinary Least Squares, and path analysis. We understand the basic characteristics, information, summaries of the collected quantitative data through descriptive statistics. This research conducts the Cronbach alpha coefficient test for checking internal consistency and reliability of survey items.

Factor analysis is a multivariate data analytic tool for extracting common factors – i.e., “a smaller number of hypothetical variables” (Kim and Mueller, 1978, p. 9) – from a large set of the measured variables and for explaining these factors based on understanding patterns or relationships among the measured

variables. The principle of parsimony is important in factor analysis (Yang, 2006). Factors as latent constructs summarize a number of observed variables as reduced dimensions. There are two types of factor analyses: Explanatory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA). It is EFA when you do not have a pre-defined idea of the structure (constructs) or how many dimensions are in a set of observed variables (Kim and Mueller, 1978); on the other hand, CFA tests whether a set of observed variables is explained by a specified set of constructs (DeCoster, 1998).

This research conducts the EFA for obtaining a summarized set of variables (factors) from survey questions (items) or for demonstrating the dimensionality of a measurement scale. Principle Component Analysis (PCA) is used for minimizing a number of factors and also for fully keeping the information that survey items contain. Performing data reduction through the PCA transforms the original survey items into a smaller set of factors.

This research is concerned with three kinds of relationships: (1) influence of the RDP on organizational behavior; (2) influence of organizational behavior on organizational performance; and, (3) influence of the RDP on organizational performance. Each influence is measured by multiple regression analysis. Multiple regression analysis is a multivariate statistical technique for understanding how well several independent variables (or predictor variables) predict or explain a dependent variable (or criterion variable). Generally, multiple

regression analysis estimates “a model of multiple factors that best predicts the criterion” (Abu-Bader, 2006, pp. 233-234). In order to get undistorted results, the study also checks the basic assumptions of multiple regression analysis – e.g., detecting outliers and multicollinearity among independent variables; independence of the errors (autocorrelation); normality of the error distribution; homoscedasticity of the variance of the errors; and, linearity of residuals.

This research seeks to estimate the presumed causal effects of both RDP and organizational behavior on organizational performance by carrying out path analysis. Path coefficients in path analysis reveal causal relations among observed variables; on the other hand, multiple regression analysis just focuses on prediction or explanation of the efforts of independent variables on a dependent variable. The following conditions are important for verifying causality among observed variables (Kline, 2005, p. 94): (1) time precedence; (2) correctly specified direction of causal relation; and, (3) true (not spurious) relation²².

In particular, path model analysis shows the direct causality of organizational behavioral factors including formalization, hierarchy, decision making, and organizational goal on organizational performance. It also shows the indirect effect of the five dimensions of RDP (dependency, diversity, uncertainty, abundance, and competitiveness) on organizational performance.

²² This means that the relation between observed variables does not disappear “when external variables such as common causes of both are held constant” (Kline, 2005, p.94).

Chapter 5
Findings and Analyses
Descriptive Statistics

- Response Rate

There were 593 Korean nonprofit organizations surveyed in this research and 179 organizations responded. As of 2010, 1,142 nonprofits were registered in Korean central government and this research focuses on the 593 nonprofit organizations located in Seoul and the Gyeonggi province. The study obtained 1,081 email accounts²³ for 593 nonprofits' financial staff, directors, or managers and sent survey a questionnaire through an online survey system. A total of 179 questionnaire responses were gathered by two survey mailings²⁴ and the number of refused or returned emails was 187 (187/1,081). The total survey response rate of the study is about 30.2 percent (179/593). Table 8 shows the distribution of respondent organizations by the ICNPO classification. Approximately, 60 percent of the surveyed 179 nonprofit organizations are for 'education and research' and 'law, advocacy, and politics'.

²³ The total number of email accounts is more than 1,000 because many financial officers, directors, and managers have more than one email account.

²⁴ First online survey was conducted from January 25 to February 4, 2011 and 109 responses were collected. Second survey was conducted from February 9 to February 18, 2011 and 70 responses were collected.

Table 5.1.

Survey Respondents by ICNPO Classification

ICNPO Classification	N of Organization	Percentage
<i>Culture & Recreation</i>	11	6.1 %
<i>Education & Research</i>	64	35.8 %
<i>Health</i>	3	1.7 %
<i>Social services</i>	9	5.0 %
<i>Environment</i>	3	1.7 %
<i>Development & Housing</i>	4	2.2 %
<i>Law, Advocacy, & Politics</i>	45	25.1 %
<i>Philanthropic Intermediaries & Voluntarism</i>	14	7.8 %
<i>International</i>	7	3.9 %
<i>Religion</i>	1	0.6 %
<i>Business & Professional Associations, Unions</i>	7	3.9 %
<i>Not Elsewhere Classified</i>	11	6.1 %
<i>Total</i>	179	100 %

- Descriptive Statistics for the Demographic Data

Table 5.2 depicts the age distribution of survey respondents. About 90 percent of survey respondents are middle age – thirty to forty four and forty five to fifty four. Among 179 respondents, about 60 percent of them are female

(N=108). Table 8 also presents the length of survey respondents' work years. About 60 percent of survey respondents have 11 years or more years of work experience (N=104).

Table 5.2.

Age & Work Years of Survey Respondents

Age	N	Percent	Work Years	N	Percent
<i>18 to 29</i>	1	0.6	<i>Less than 3 years</i>	11	6.1
<i>30 to 44</i>	109	60.9	<i>3 to 5 years</i>	18	10.1
<i>45 to 54</i>	51	28.5	<i>6 to 10 years</i>	46	25.7
<i>55 to 64</i>	15	8.4	<i>11 to 15 years</i>	32	17.9
<i>65 or older</i>	3	1.7	<i>Over 16 years</i>	72	40.2
Total	179	100.0	Total	179	100.0

More than two thirds of survey respondents work at the practitioner level – i.e., over 40 percent of them are front-line workers (see Table 5.3). This result reveals that work related to financial management is carried out by a working-level person in the nonprofit sector. Most respondents are well-educated – i.e., about 85 percent of respondents obtained degrees from a higher education institute (4-year college or university or more).

Table 5.3.

Respondents' position

Position	N of Respondents	Percent	Cumulative Percent
<i>Executive</i>	21	11.7	11.7
<i>Manager</i>	13	7.3	19.0
<i>Specialist</i>	13	7.3	26.3
<i>Coordinator</i>	48	26.8	53.1
<i>Front Line</i>	72	40.2	93.3
<i>Other</i>	12	6.7	100.0
Total	179	100.0	100.0

Ages of the nonprofit organizations, as shown in Table 5.4, show a narrow variability. 120 of the nonprofits are over ten years old. This is an unexpected result because the history of the Korean nonprofit sector is short. As mentioned above, the democratization of the Korean political system at the end of the 1980s provided the opportunity to form nonprofits by citizens' voluntary participation – i.e., the history of Korean nonprofit sector is about 30 years²⁵.

²⁵ Many scholars agree that democratization is the trigger for forming nonprofit organizations (Lim et al. (2009); Jung and Moon, 2007; Jung, 2003; Mhin, 2003) even though there is no clear consensus about when exactly the Korean nonprofit sector was formed (Kang, 2001; Cho, 1997)

Table 5.4.

Age of the Organization

	N of Organizations	Percent	Cumulative Percent
<i>Fewer than 2 years</i>	10	5.6	5.6
<i>2 to 4 years</i>	10	5.6	11.2
<i>5 to 7 years</i>	13	7.3	18.4
<i>8 to 10 years</i>	21	11.7	30.2
<i>Over 11 years</i>	124	69.3	99.4
<i>No Answer</i>	1	0.6	100.0
Total	179	100.0	100.0

The number of regular staff of 179 nonprofit organizations shows a wide variability (see Table 5.5). The mean is 9.63 members and the standard deviation is 5.26.

Table 5.5.

Number of regular staff

	N of Members	Percent	Cumulative Percent
<i>Fewer than 3</i>	8	4.5	4.5
<i>4 to 6</i>	72	40.2	44.7
<i>7 to 9</i>	32	17.9	62.6
<i>10 to 12</i>	17	9.5	72.1
<i>13 to 15</i>	11	6.1	78.2
<i>16 to 18</i>	10	5.6	83.8
<i>Over 18</i>	29	16.2	100.0
Total	179	100.0	

As shown in Table 5.6, there is a wide variation for where nonprofits' financial resources come from. About 75 percent of the surveyed nonprofit organizations (N=134) receive financial resources from governmental departments/agencies. Some nonprofit organizations obtain their resources from profits of foreign exchange, interest on deposits, and founder's assets (other resources).

Table 5.6.

Resource type nonprofits use (Total N of nonprofits = 179)

Type of Resource	N of Organizations	Percent²⁶
<i>Donations from individuals</i>	90	50.3
<i>Donations from corporations</i>	77	43.0
<i>Grants from foundations</i>	49	27.4
<i>Contracts from foundations</i>	31	17.3
<i>Grants from governments</i>	134	74.9
<i>Contracts from governments</i>	52	29.1
<i>Regular appropriations from governments</i>	134	74.9
<i>User charges and fees</i>	103	57.5
<i>Selling products and goods to customers</i>	45	25.1
<i>Other resources</i>	35	19.6

Figure 5.1 reveals how many financial resources an individual nonprofit organization has. 109 nonprofit organizations (about 60 percent) have two to four different types of financial resources. On average, a nonprofit organization has

²⁶ For example, 50.3 percent for donations from individuals is calculated by the following formula - $90/179 = 50.3$ percent

about 4.2 different types of financial resources (Mean=4.189) and the standard deviation is about 2.49. Fifty five nonprofit organizations have more than five.

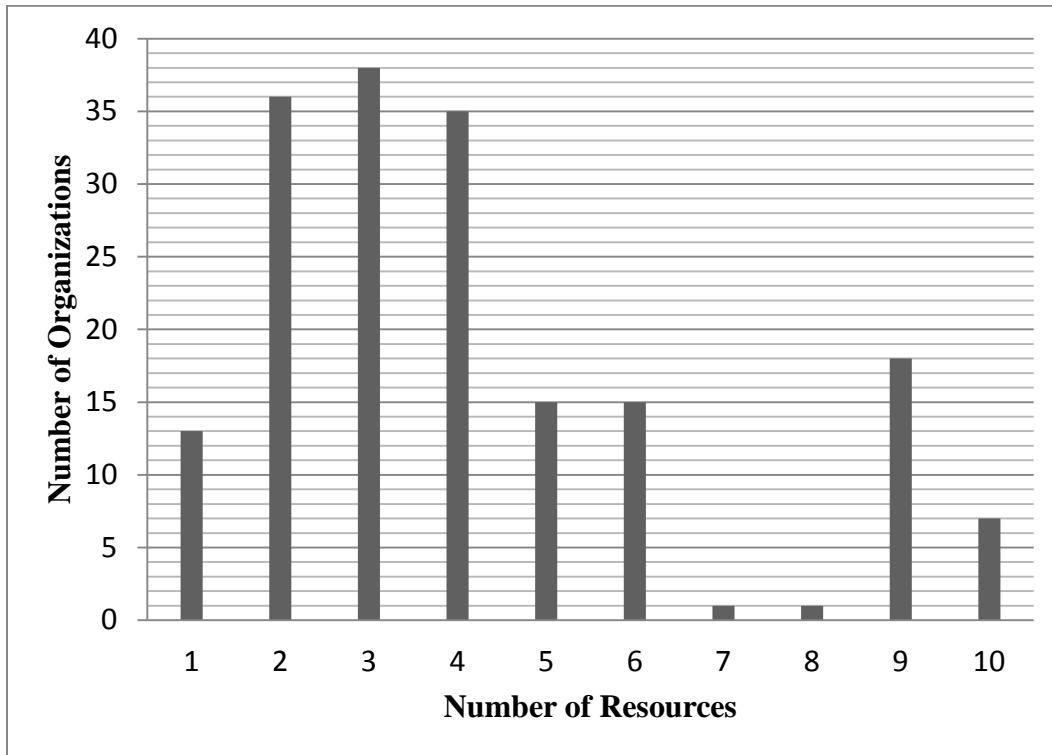


Figure 5.1. Number of different types of financial resources of the surveyed organizations

Reliability Test

Reliability is a matter of “whether a particular technique, applied repeatedly to the same object, would yield the same result each time” (Babbie, 1990, p. 132) – i.e., it is for the precision or the consistency of measurement. There are several methods for estimating reliability: test-retest reliability;

equivalence reliability²⁷, and; internal consistency. Reliability of the surveyed items is calculated by Cronbach's Alpha (Coefficient Alpha) for measuring internal consistency because this test is widely used in the social sciences. It describes how well survey items complement each other in their measurement of the same quality or dimension (Fink, 2006). In general, the alpha coefficient of .70 to .80 is desirable and a value of .60 is acceptable as a minimum standard even though there is no clear criterion (Moon, 2009; Field, 2005; Nam, 2007).

Table 14 shows the Cronbach's alpha values for the surveyed items of organizational performance, organizational behavior, and public entrepreneurship. For organizational performance, the alpha coefficients of all four elements of performance (responsiveness, efficiency, effectiveness, and customer satisfaction) are over .60.

The alpha coefficient is calculated for the five elements of organizational behavior – goal clarity, goal displacement, hierarchy, formalization, and decision making. The alpha coefficients show a wide variability from .473 (goal displacement) to .926 (goal clarity). In particular, the coefficient alpha values of three items for goal displacement are lower than .50. This research excludes the GD2 item from this group for increasing the alpha value. After deleting the GD2 item, the total alpha value of the goal displacement is about .60 (see Table 5.7).

²⁷ For equivalence reliability, respondents will get the same score regardless of which one they take if only two different survey questionnaires are used for understanding the same attitude.

Table 5.7.

*Reliability Test for the Surveyed Items*²⁸

<i>High-level</i>	<i>Sub-level</i>	<i>Variable Name</i>	<i>Cronbach's Alpha if item deleted</i>	<i>Cronbach's Alpha</i>	
Performance	<i>Responsiveness</i>	Res1	.755	.803	
		Res2	.706		
		Res3	.729		
	<i>Effectiveness</i>	Effe1	.652	.826	
		Effe2	.766		
		Effe3	.770		
		Effe4	.927		
	<i>Efficiency</i>	Effi1	.701	.640	
		Effi2	.405		
		Effi3	.569		
	<i>Customer Satisfaction</i>	CS1	.725	.806	
		CS2	.715		
		CS3	.714		
		CS4	.848		
	Organizational Behavior	<i>Decision Making</i>	DM1	.498	.627
			DM2	.720	
DM3			.376		
<i>Goal Displacement</i>		GD1	.293	.473	
		GD2	.591		
		GD3	.253		
<i>Goal Clarity</i>		GC1	.903	.926	
		GC2	.892		
		GC3	.884		

²⁸ Some items are excluded in the reliability test because these items do not have a similar questionnaire item for measuring internal consistency.

	For1	.869	
<i>Formalization</i>	For2	.625	.776
	For3	.596	
	Hie1	.880	
<i>Hierarchy</i>	Hie2	.911	.890
	Hie3	.749	

Factor Analysis

This research conducted explanatory factor analysis (EFA) using the principal component analysis (PCA) with varimax rotation. It helps extract some factors (constructs) that well reflect characteristics of the observed items. In the reliability test section, this research categorized 14 organizational performance items into four factors (efficiency, effectiveness, customers satisfaction, and responsiveness) and categorized 15 organizational behavior items into five factors (formalization, hierarchy, decision making, goal clarity, and goal displacement). The first EFA is to check the dimensional structure of the 14 items related to organizational performance and the second one is to check that of organizational behavior items.

There are some basic assumptions underlying factor analysis. The ratio of variables to sample size is at least one to ten (Yang, 2006; Nunnally and Bernstein, 1994; Cliff, 1987). The two EFA meet this assumption in that the ratio of

variables to sample is over one to ten²⁹. Second, the variables used in factor analysis are linearly related to each other (Yang, 2006). This means that the correlation matrix among the observed variables is not independent. Bartlett's test for sphericity is a good tool for verifying correlation among variables. Factor analysis in SPSS provides a value of chi-square for the Bartlett's test for sphericity and a value of .05 ($p < .05$) is a threshold for determining linearity among the variables. Lastly, the power of correlation among the used variable is important for conducting factor analysis. That is, the measured variables must show a value of adequate correlation to have common factors³⁰. In addition, the Kaiser-Meyer-Olkin (KMO) statistics calculate a sampling adequacy for conducting factor analysis. In general, a value of .80 to .90 is desirable and over .60 is acceptable (Kaiser, 1974).

- EFA for Organizational Performance (Initial Model)

In the initial model, EFA is conducted with all 14 variables for specifying organizational performance. Before conducting factor analysis, adequacy for the initial model is examined. First, more than half the variables have correlations of at least .30 with at least one other item. Second, the KMO measure of sampling adequacy is about .83, above the acceptable value of .60, and Bartlett's test of sphericity is statistically significant ($\chi^2(91) = 1208.403, p < .001$).

²⁹ For the EFA of organizational performance, the ratio is about 1 to 13 – i.e., the 14 surveyed variables to the 179 samples. For the EFA of organizational behavior, the ratio is about 1 to 12 (15:179).

³⁰ More than half of the variables correlated at least .30 (absolute value) with at least one other item.

Table 5.8.

Principal Component Analysis of Organizational Performance (Initial Model)

Component	Total	Variance (Percent)	Cumulative (Percent)
<i>Factor 1</i>	2.735	19.534	19.534
<i>Factor 2</i>	2.655	18.963	38.498
<i>Factor 3</i>	2.337	16.696	55.194
<i>Factor 4</i>	1.962	14.013	69.207

For organizational performance, the initial model extracts four factors with eigenvalues of over one³¹. Eigenvalues are a criterion for determining the number of factors. The four extracted factors in this model explain about 69 percent of the variance (see Table 5.8). The first component explains about 20 percent of the variance, the second component 19 percent of the variance, the third factor 17 percent, and the fourth factor 14 percent of the variance.

³¹ Eigenvalue is the variance of each factor and the factor does not explain the variance of one variable if eigenvalue is less than one.

Table 5.9.

Factor Loadings and Communalities for Organizational Performance

	Factor1	Factor2	Factor3	Factor4	Communalities
<i>Effe1</i>	.825				.765
<i>Effe2</i>	.813				.772
<i>Effe3</i>	.808				.791
<i>CS1</i>		.826			.744
<i>CS2</i>		.825			.777
<i>CS3</i>	.381	.670			.713
<i>Res1</i>			.792		.701
<i>Res2</i>	.358		.721		.724
<i>Res3</i>		.481	.700		.738
<i>Effi1</i>				.707	.604
<i>Effi2</i>			-.346	.697	.616
<i>Effi3</i>			.393	.588	.611
<i>CS4</i>	.309	.438		.504	.618
<i>Effe4</i>	.454			.495	.515

Note. Factor loadings < .30 are suppressed

Table 5.9 shows the values of factor loadings and communalities of 14 organizational performance variables. These values are obtained from the Principal Component Analysis (PCA) with varimax rotation. The value of

communality is adequate for verifying the fact that all 14 variables are important for determining the initial factor model. Factor loading shows the relationship between the extracted factor and variables – i.e, how well variables explain the extracted factors. There is no absolute cutoff value of factor loadings; In general, a value of (positive or negative) .50 is acceptable (Yang, 2006; Nam, 2007).

However, there is some room for model modification in the initial model. This research removes the two variables: CS4 and Effe4 because these are mislocated and less-associated with factor 4 (See Table 5.9). The modification process contributes to yielding clear and robust factor structures. In particular, removing the two mislocated variables make conceptualization of the four factors easier.

- Revised EFA Model for Organizational Performance

After eliminating the two mislocated variables, the revised model for the 12 organizational performance variables does not violate basic assumptions of factor analysis. The KMO measure of sampling adequacy is .831 and Bartlett's test of sphericity is statistically significant ($\chi^2(66) = 989.717, p < .001$).

Table 5.10.

PCA for Organizational Performance (Revised Model)

Component	Total	Variance (Percent)	Cumulative (Percent)
<i>Effectiveness</i>	2.573	21.445	21.445
<i>Customer Satisfaction</i>	2.434	20.286	41.732
<i>Responsiveness</i>	2.232	18.602	60.334
<i>Efficiency</i>	1.537	12.812	73.146

The revised model also has the four components with eigenvalues higher than one – effectiveness, customer satisfaction, responsiveness, and efficiency. The revised model explains 73.1 percent of the variance and efficiency as the fourth factor explains about 13 percent of the variance, as presented in Table 5.10.

Table 5.11.

Factor Loadings and Communalities for the Revised Model

	Effectiveness	Customer Satisfaction	Responsiveness	Efficiency	Communalities
<i>Effe1</i>	.803				.704
<i>Effe2</i>	.847				.829
<i>Effe3</i>	.847				.811
<i>CS1</i>		.841			.769
<i>CS2</i>		.837			.804
<i>CS3</i>	.402	.674			.710
<i>Res1</i>			.819		.738
<i>Res2</i>			.732		.735
<i>Res3</i>		.467	.727		.766
<i>Effi1</i>				.660	.553
<i>Effi2</i>			-.420	.723	.700
<i>Effi3</i>				.696	.659

Note. Factor loadings < .40 are suppressed

The communalities values of the 12 variables are acceptable because all values are over .50. Values of factor loadings for the revised model are higher than .670. Therefore, all variables are appropriate for conducting factor analysis (See Table 5.11). All in all, the revised model is better than the initial model because the explanatory power of the four factors improve approximately four

percent (from 69 percent to 73 percent) and there are no mislocated or less-associated variables on the extracted four factors.

- Initial EFA Model for Organizational Behavior

The Explanatory Factor Analysis (EFA) for the 15 organizational behavior variables has four factors with eigenvalues higher than one. The four factors are extracted by the PCA with varimax rotation. However, the initial model is not statistically robust and adequate because it violates a basic assumption for the factor model. This model fails to estimate the values of both the KMO measure of sampling adequacy and Bartlett's test of sphericity. These are for the following reasons: (1) one variable (Hie3) shows a very high communality value – i.e., high probability of multicorrelarity among the variables and; (2) there are negative eigenvalues (below zero) in the factor model.

Table 5.12.

Initial Eigenvalues for Organizational Behavior (1st Model)

Component	Total	Variance (Percent)	Cumulative (Percent)
<i>Factor 1</i>	5.996	39.971	39.971
<i>Factor 2</i>	1.937	12.915	52.885
<i>Factor 3</i>	1.415	9.437	62.322
<i>Factor 4</i>	1.075	7.617	75.525
<i>Factor 14</i>	.149	.996	100.00
<i>Factor 15</i>	-9.92E-016	-6.61E-015	100.00

Table 5.13 reveals the initial eigenvalues of the 15 components and the fifteenth factor that shows the lowest value has a negative value³². The Hie3 variable is likely to have the problem of multicorrelarity because its communalities value closes to one – communalities value (.993). This research removed Hie3 variable for adequacy and robustness of the factor analysis. After eliminating the Hie3 variable, the basic assumptions of a factor analysis are satisfied. The KMO measure of sampling adequacy is .849 and Bartlett’s test of sphericity is statistically significant ($\chi^2(91) = 1214.894, p < .001$). The four factors in this model explain 67.4 percent of the variance (see Table 5.13).

Table 5.13.

PCA for Organizational Behavior without the Hie3

Component	Total	Variance (Percent)	Cumulative (Percent)
<i>Factor 1</i>	3.680	26.289	26.289
<i>Factor 2</i>	3.073	21.947	48.235
<i>Factor 3</i>	1.554	11.103	59.339
<i>Factor 4</i>	1.125	8.037	67.376

The model trimming process for this model is required because there are some problematic variables. As shown in Table 5.14, the communalities value of the DM3 variable is less than .50 – communalities value is .460. The factor

³² Basically, the number of the component is the same as the number of the used variables in the factor model.

loading value of the DM2 variable is high on both the first factor (.486) and the second factor (.569). The two variables are mislocated on the second factor. Unlike the assumption in the previous chapter, there is no clear distinction between hierarchy and formalization in EFA.

Table 5.14.

Factor Loadings and Communalities for Organizational Behavior Variables

	Factor1	Factor2	Factor3	Factor4	Communalities
<i>Hie1</i>	.816				.723
<i>Hie2</i>	.811				.692
<i>Formal1</i>	.804				.698
<i>Formal2</i>	.784				.761
<i>Formal3</i>	.735				.571
<i>GC1</i>		.887			.828
<i>GC2</i>		.823			.829
<i>GC3</i>		.810			.793
<i>DM2</i>	.486	.569			.592
<i>DM3</i>		.565			.460
<i>GD1</i>			.771		.621
<i>GD2</i>			.705		.638
<i>GD3</i>			.620		.533
<i>DM1</i>				.826	.694

Note. Factor loadings < .40 are suppressed

- Revised Model for Organizational Behavior

This research eliminates the two mislocated variables (DM2 and DM3) for improving model fit. The assumptions for conducting a factor analysis are not

violated in the revised model. The KMO measure of sampling adequacy is .826 and the Bartlett's test of sphericity is statistically significant ($\chi^2(66) = 1058.664$, $p < .001$).

Table 5.15.

Eigenvalues of the Revised Model (Organizational Behavior)

Component	Total	Variance (Percent)	Cumulative (Percent)
<i>Hierarchy/Formalization</i>	2.573	21.445	21.445
<i>Goal Clarity</i>	2.434	20.286	41.732
<i>Goal Displacement</i>	2.232	18.602	60.334
<i>Decision Making</i>	1.537	12.812	73.146

The PCA with varimax rotation extracts the four components – (1) formalization/hierarchy; (2) goal clarity; (3) goal displacement, and; (4) decision making. The revised model explains about 73.1 percent of the variance (see Table 5.15). However, this model also fails to differentiate hierarchy from formalization. Therefore, this study considers formalization and hierarchy as the same dimension based on the result.

Table 5.16.

Factor Loadings and Communalities for the Revised Model

	Hierarchy Formalization	Goal Clarity	Goal Displacement	Decision Making	Communalities
<i>Hie1</i>	.825				.732
<i>Hie2</i>	.808				.682
<i>Formal1</i>	.795				.703
<i>Formal2</i>	.793				.758
<i>Formal3</i>	.729				.564
<i>GC1</i>		.917			.871
<i>GC2</i>		.871			.879
<i>GC3</i>		.871			.867
<i>GD1</i>			.772		.619
<i>GD2</i>			.699		.636
<i>GD3</i>			.628		.508
<i>DM1</i>				.910	.835

Note. Factor loadings < .40 are suppressed

Table 5.16 presents factor loadings and communalities values of the 12 organizational behavior variables. A value of each variable's factor loading is higher than .60 and the communalities values of all variables are acceptable. After explanatory PCA with varimax rotation, the following factors are identified as mentioned above:

- (1) Effectiveness: *Effe1, Effe2, Effe3*
- (2) Customer Satisfaction: *CS1, CS2, CS3*
- (3) Responsiveness: *Res1, Res2, Res3*
- (4) Efficiency: *Effi1, Effi2, Effi3*
- (5) Hierarchy/Formalization: *Hie1, Hie2, Formal1, Formal2, Formal3*
- (6) Goal Clarity: *GC1, GC2, GC3*
- (7) Goal Displacement: *GD1, GD2, GD3*
- (8) Decision Making: *DM1*.

Table 5.17 presents descriptive statistics for regression factor scores of four organizational performance variables and four organizational variables. In addition, this table includes descriptive statistics for five resource dependence pattern (RDP) variables and other variables for conducting multiple regression analysis and path analysis.

Table 5.17.

Descriptive Statistics of Multiple Regression and Path Analysis

Variables	N.	Mean	Stdev.	Min.	Max.
Effectiveness	179	-1.02e-016	1.00	-2.8753	3.2562
Customer satisfaction	179	-1.53e-016	1.00	-5.8438	1.6815
Responsiveness	179	1.25e-016	1.00	-4.7751	2.3524

Efficiency	179	7.38e-017	1.00	-2.5425	2.6947
Performance ³³	179	2.30e-017	.50	-2.3154	.9630
Hierarchy/Formalization	179	-2.89e-016	1.00	-3.1284	1.6982
Goal clarity	179	9.72e-016	1.00	-4.3810	2.0901
Goal displacement	179	2.24e-016	1.00	-1.9813	2.1218
Decision making	179	1.28e-016	1.00	-2.1746	2.5455
Resource dependency	179	.6824	.347	.00	1.00
Resource diversity	179	3.0592	.783	1.38	4.45
Resource uncertainty	179	2.025	.374	1.00	3.00
Resource abundance	179	3.771	1.142	1.50	6.50
Resource competitiveness	179	4.07	1.628	1.00	7.00
Communication	179	1.35e-016	1.00	-3.581	1.731
Organizational Size	179	9.63	5.26	2.00	21.00
Organizational Age	178	8.68	3.36	1.00	11.00

Multiple Regression Analysis

Multiple regression analysis is for how well independent variables explain or predict a dependent variable. This research tests three models: (1) explanatory power of Resource Dependence Patterns (RDP) on organizational behavior variables (Model 1); (2) explanatory power of organizational behavior on organizational performance (Model 2), and; (3) explanatory power of both RDP

³³ This is the mean value of the four factors for organizational performance – effectiveness, efficiency, customer satisfaction, and responsiveness.

and organizational behavior variables on organizational performance (Model 3).

In particular, model 1 is composed of the following sub-models:

- (1) *Hierarchy/Formalization on RDP (Model 1.1);*
- (2) *Goal clarity (GC) on RDP (Model 1.2);*
- (3) *Goal displacement (GD) on RDP (Model 1.3);*
- (4) *Decision making (DM) on RDP (Model 1.4), and;*
- (5) *Communication (Comm.) on RDP (Model 1.5)*

- Correlation Analysis

A correlation (coefficient) is a standardized analytic tool for measuring the degree to which two variables vary together (Keith, 2006) – i.e., the degree of the linear relationship between two variables. A correlation coefficient ranges from negative one to positive one while there is no range of the value of a covariance coefficient as an unstandardized measurement tool. Correlation analysis (matrix) is a tool for checking multicollinearity between independent variables. In general, there is a multicollinearity between two variables when a correlation coefficient is higher than .85 (Cohen et al., 2003). Table 5.18 presents the correlative relationship among independent variables and dependent variable. All variables are relatively free from multicollinearity, as showed in Table 5.18.

Correlation analysis moderately supports this research's assumption that organizational behavior variables have direct and strong effects on organizational performance, compared to the resource dependence pattern variables. In particular,

the three variables (Hie/For, GC, and Comm) are positively associated with organizational performance – e.g., the correlation coefficient between goal clarity (GC) and organizational performance (Org.Per) is about .650 at the five percent significance level (see Table 5.18).

Table 5.18.

Correlations among Variables

	1	2	3	4	5	6	7	8	9
<i>R.Dep</i>	1								
<i>R.Div</i>	.35**	1							
<i>R.Cer</i>	.52**	-.39**	1						
<i>R.Abun</i>	.27**	-.18**	.17**	1					
<i>R.Com</i>	-.14*	.35**	-.05	.14*	1				
<i>GC</i>	-.15**	.31**	-.12*	-.11	.19*	1			
<i>Hie/For</i>	.36**	-.07	.15**	.08	-.09	.00	1		
<i>Comm</i>	.03	.22**	-.04	-.08	-.02	.48**	.47**	1	
<i>Org.Per</i>	-.06	.40**	-.04	.01	.30**	.65**	.26**	.45**	1

Note = 179; Significance level (2-tailed);

* Correlation Significant at .10 level; ** Correlation Significant at .05 level

- Checking Basic Assumptions of Linear Regression Analysis

Violating the underlying assumptions of regression is likely to lead to the distortion of statistical results. For obtaining sound and strong statistical results, this research diagnoses data problems including outliers and high correlation among independent variables (multicollinearity) and checks autocorrelation,

normality of the error distribution, and homoscedasticity of the variance of the errors in model 1, 2, and 3.

Detecting Outliers

Outliers arise from contaminated observations, rare cases, or specification error (Cohen et al, 2003 pp. 411-413). One relatively simple way to identify outliers is to look at standardized values of independent variables and a dependent variable. Generally, an outlier is considered as being more than three standard deviations from the mean. Descriptive analysis for all variables reveals standardized values of 179 samples and the following cases are likely to be outliers because in at least one variable, these have more than three standard deviations from the mean (see Table 5.19).

Table 5.19.

Detecting Outliers by Standard Deviation

ID	Variable Names (Values of Standard Deviation)
7	Hierarchy/Formalization (-3.128)
103	Communication (-3.440)
139	Communication (-3.581); Goal Clarity (-4.381); Performance (-4.631)
147	Communication (-3.274); Goal Clarity (-3.585); Performance (-3.700)

A case can be considered as an outlier when the leverage value is greater than .0890 in models 1 and 2; on the other hand, the cutoff point for model 3 is .1453 – these are the formulas: $2(7 + 1)/179$ for the model 1 and 2; $2(12+1)/179$

for the model 3. Leverage shows the distance between each case and the meanvalue of a set of independent variables. It means “the unusualness of a pattern of independent variables without respect to the dependent variable” (Keith, 2006, p. 197). Ranges of leverage value is from zero to one with an average of $(K + 1)/N$ (K = number of independent variables; N = number of samples). The cutoff point for determining the unusual pattern of predictors (or high leverage value) is twice the average leverage value for large samples – $2(K + 1)/N$ and three times the average leverage value for small samples – $3(K + 1)/N$ (Belsley, Kuh, and Welsch, 1980; Cohen et al., 2003).

Externally studentized residuals (SDRESID) and Cook’s D_i are frequently used for detecting extremity on the dependent variable. In particular, the former is for detecting the difference between observed and predicted values of the dependent variable (Cohen et al., 2003); on the other hand, the latter represents the change in the predicted value at a given point if that point was not included in the model (Cook, 1977; Cohen et al., 2003). When externally studentized residuals exceed $+ 3$ or $- 3$, these cases can be considered outliers. For Cook’s D_i , a conventional cutoff is 1.0 for a small or medium sized data set (Yang, 2006) and is $2\sqrt{(k + 1)/n}$ for large samples (Cohen et al., 2003). A case can be regarded as

an outlier when a value of Cook's D_i is greater than .4228 in models 1 and 2. In model 3, .5390 is a cutoff point for detecting an outlier³⁴.

Table 27 shows the results of detecting outliers by three regression diagnostic tools (Leverage, SDRESID, and Cook's D_i). Through Table 5.19 and 5.20, this research finds the 11 cases that are likely to be considered as outliers – ID 7, 11, 37, 62, 103, 108, 137, 138, 139, 147, and 159. Among these cases, the four cases (ID 103, 138, 139, 147) that have severe problems are excluded from multiple regression analysis and path analysis.

³⁴ These are the formulas: $2\sqrt{(7+1)/179}$ for the model 1 and 2; $2\sqrt{(12+1)/179}$ for the model 3.

Table 5.20.

Detecting Extremity by Three Regression Diagnostic Tools in Models 1, 2, & 3

Model	Diagnostic Tools & Case Number (Value)
<i>M 1.1</i> (<i>DV=Hie/For</i>)	Leverage: 139 (.1595); 159 (.1422); 11 (.1156); 62 (.1011) SDRESID: None Cook's D _i : None
<i>M 1.2</i> (<i>DV =GC</i>)	Leverage: 139 (.1595); 159 (.1422); 11 (.1156); 62 (.1011) SDRESID: 139 (-4.9178); 147 (-3.7976) Cook's D _i : 139 (.5265)
<i>M 1.3</i> (<i>DV=GD</i>)	Leverage: 139 (.1595); 159 (.1422); 11 (.1156); 62 (.1011) SDRESID: None Cook's D _i : None
<i>M 1.4</i> (<i>DV=DM</i>)	Leverage: : 139 (.1595); 159 (.1422); 11 (.1156); 62 (.1011) SDRESID: None Cook's D _i : None
<i>M 1.5</i> (<i>DV=Comm.</i>)	Leverage: 139 (.1595); 159 (.1422); 11 (.1156); 62 (.1011) SDRESID: 147 (-38027) Cook's D _i : None
<i>Model 2</i>	Lev: 139 (.194); 103 (.172); 108 (.137); 137 (.127); 7 (.117); 147 (.115) SDRESID: 138 (-3.6656) Cook's D _i : None
<i>Model 3</i>	Leverage: 139 (.303); 103 (.213); 159 (.187); 147 (.151); 7 (.145) SDRESID: 138 (-4.0036) Cook's D _i : None

Checking Multicollinearity & Autocorrelation

The independent variables don't have a multicollinearity problem in models 1, 2, and 3 (see Table 5.21). Multicollinearity is a high degree of correlation among two or more independent variables. Perfect collinearity occurs if an independent variable can be explained from other independent variables in a model (Studenmund, 2006). Multicollinearity is only related to the set of predictors – i.e., its value is the same regardless of change of a dependent variable (Cohen et al., 2003, p 419). The five sub-models in the model 1 have the same degree of multicollinearity because these models use the same independent variables. The severity of multicollinearity is estimated by the Variance Inflation Factor (VIF)³⁵. A model has a problem of multicollinearity when the VIF value is greater than 10 even though there is some debate about critical VIF values³⁶.

Table 5.21.

Detecting Multicollinearity by VIF & Tolerance

	Variables	VIF	Tolerance
	<i>Organizational Age</i>	1.036	.965
	<i>Size of Organization</i>	1.058	.945
	<i>Resource Diversity</i>	1.373	.728
Model 1	<i>Resource Abundance</i>	1.180	.848

³⁵ Tolerance is also used for detecting the degree of multicollinearity. It is the reciprocal of the VIF – i.e., $VIF = 1 / (1 - R^2_{i,1,2,3,\dots,K})$ $Tolerance = 1 - R^2_{i,1,2,3,\dots,K}$ (Yang, 2006; Keith, 2006).

³⁶ For instance, $VIF > 5$ is also used as a common rule of thumb for determining multicollinearity (Studenmund, 2006).

	<i>Resource Uncertainty</i>	1.387	.721
	<i>Resource Dependency</i>	1.647	.607
	<i>Resource Competitiveness</i>	1.203	.831
	<i>Organizational Age</i>	1.039	.962
	<i>Size of Organization</i>	1.061	.943
	<i>Hierarchy/Formalization</i>	1.513	.661
Model 2	<i>Goal Clarity</i>	1.460	.685
	<i>Goal Displacement</i>	1.094	.914
	<i>Decision Making</i>	1.019	.982
	<i>Communication</i>	2.035	.491
	<i>Organizational Age</i>	1.092	.916
	<i>Size of Organization</i>	1.110	.901
	<i>Hierarchy/Formalization</i>	1.718	.582
	<i>Goal Clarity</i>	1.535	.651
	<i>Goal Displacement</i>	1.247	.802
Model 3	<i>Decision Making</i>	1.171	.854
	<i>Communication</i>	2.119	.472
	<i>Resource Diversity</i>	1.522	.657
	<i>Resource Abundance</i>	1.201	.832
	<i>Resource Uncertainty</i>	1.398	.715
	<i>Resource Dependency</i>	2.104	.475

<i>Resource Competitiveness</i>	1.361	.735
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All models for regression analysis are relatively free from a problem of first-order autocorrelation. The value of the Durbin-Waston test in all the models closes to two as shown in Table 5.22. Autocorrelation (serial dependency) occurs when “the value of the error term from one time period depends on the value of the error term in other time periods” (Studenmund, 2006, p. 313). In particular, this research checks first-order (the lag one) autocorrelation in the regression models. It exists when the current value of the error term is affected by the previous value of the error term (Cohen et al., 2003). This study uses the Durbin-Waston test to check first-order autocorrelation in the regression model. The Durbin-Waston statistic ranges from zero (extreme positive autocorrelation) to four (extreme negative autocorrelation). A result of the Durbin-Waston test is two if there is no lag one autocorrelation in a model.

Table 5.22.

Checking Autocorrelation

Model	Durbin-Waston <i>d</i> Test
<i>Model 1.1 (DV=Hierarchy/Formalization)</i>	1.948
<i>Model 1.2 (DV=Goal Clarity)</i>	1.943
<i>Model 1.3 (DV= Goal Displacement)</i>	2.109
<i>Model 1.4 (DV=Decision Making)</i>	1.877
<i>Model 1.5 (DV=Communication)</i>	1.758
<i>Model 2 (DV=Organizational Performance)</i>	1.974
<i>Model 3 (DV=Organizational Performance)</i>	1.900

Homoscedasticity & Normality of the Error Distribution

Homoscedasticity is an important assumption for regression analysis – i.e., the error term has a homogeneous variance. According to Studenmund (2006), heteroscedasticity (the lack of a constant variance for the distribution of the error term) causes the regression model to “generate inaccurate estimates of the standard error of the coefficients” (p. 94). This research conducts White’s test and the Brueusch-Pagan/Cook-Weisberg test for detecting heteroscedasticity. The null hypothesis for two tests is that the error term has a constant variance (homoscedasticity).

Table 5.23 shows the results of both the White’s test and the Brueusch-Pagan/Cook-Weisberg test. Model 1.1 has moderate evidence that the null

hypothesis that the error term has a constant variance can be accepted ($\chi^2(1) = 3.48, p = .062$) by the Brueusch-Pagan/Cook-Weisberg test and the null hypothesis can be accepted at the five percent significance level by the White test ($\chi^2(35) = 46.43, p = .0937$). For model 1.4, we conclude that homogeneity of variance of the residuals can be marginally accepted at the five percent significance level ($\chi^2(1) = 3.21, p = .073$) by the Brueusch-Pagan/Cook-Weisberg test and homoscedasticity can be accepted at the five percent level by the White test ($\chi^2(35) = 45.69, p = .1066$).

Table 5.23.

Checking Homoscedasticity

	Bruesch-Pagan/ Cook-Weisberg Test	White General Test
	H ₀ : Constant Variance	H ₀ : Homoscedasticity
<i>Model 1.1</i>	Variables: Fitted values of Risk	H _a : Unrestricted Heteroscedasticity
<i>Hie/For on RDP</i>	chi2(1) = 3.48	chi2(35) = 46.43
	Prob > chi2 = 0.0621	Prob > chi2 = 0.0937
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	H ₀ : Constant Variance	H ₀ : Homoscedasticity
<i>Model 1.2</i>	Variables: Fitted values of Risk	H _a : Unrestricted Heteroscedasticity
<i>GC on RDP</i>	chi2(1) = 9.63	chi2(35) = 42.85
	Prob > chi2 = 0.0019	Prob > chi2 = 0.1698
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	H ₀ : Constant Variance	H ₀ : Homoscedasticity
<i>Model 1.3</i>	Variables: Fitted values of Risk	H _a : Unrestricted Heteroscedasticity
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<i>GD on RDP</i>	chi2(1) = 1.23	chi2(35) = 29.62
	Prob > chi2 = 0.2672	Prob > chi2 = 0.7251
	H ₀ : Constant Variance	H ₀ : Homoscedasticity
<i>Model 1.4</i>	Variables: Fitted values of Risk	H _a : Unrestricted Heteroscedasticity
<i>DM on RDP</i>	chi2(1) = 3.21	chi2(35) = 45.69
	Prob > chi2 = 0.0733	Prob > chi2 = 0.1066
	H ₀ : Constant Variance	H ₀ : Homoscedasticity
<i>Model 1.5</i>	Variables: Fitted values of Risk	H _a : Unrestricted Heteroscedasticity
<i>Comm. on RDP</i>	chi2(1) = 0.48	chi2(35) = 34.63
	Prob > chi2 = 0.4869	Prob > chi2 = 0.4859
	H ₀ : Constant Variance	H ₀ : Homoscedasticity
<i>Model 2</i>	Variables: Fitted values of Risk	H _a : Unrestricted Heteroscedasticity
<i>Org. Per. on OB</i>	chi2(1) = 2.59	chi2(35) = 36.57
	Prob > chi2 = 0.1075	Prob > chi2 = 0.3959
	H ₀ : Constant Variance	H ₀ : Homoscedasticity
<i>Model 3</i>	Variables: Fitted values of Risk	H _a : Unrestricted Heteroscedasticity
<i>Per on All Var.</i>	chi2(1) = 0.01	chi2(90) = 75.23
	Prob > chi2 = 0.9147	Prob > chi2 = 0.8680

Model 1.2 shows the opposing result in the two tests. By the Brueusch-Pagan/Cook-Weisberg test, we conclude that the null hypothesis can be rejected at the five percent significance level ($\chi^2(1) = 9.63, p = .0019$); on the other hand, the null hypothesis can be accepted by the White test ($\chi^2(35) = 42.85, p = .1968$). In

model 1.2, heteroscedasticity needs to be prudently rechecked and corrected.

There is no heteroscedasticity in other models (see Table 5.23).

Assumption of normality – i.e., the error term is normally distributed – is relatively less critical for regression estimation (Kline, 2005). In particular, the violation of normality is problematic with small samples because hypothesis tests including the *t*-statistic and *F*-statistic would be invalid (Keith, 2006; Studenmund, 2006). This research adopts two types of numerical methods for checking normality of residuals – checking skewness and kurtosis as a descriptive method and Shapiro-Francia *W* test as a theory-driven method³⁷. Skewness and kurtosis show how the error term deviates from a normal distribution. Assumption of normality is not violated when values of both skewness and kurtosis are within +3 to –3 (Park, 2008; Nam, 2007). The values of skewness and kurtosis in all variables in the model 1, 2 and 3 are in +2 to -2 – i.e., the error term is normally distributed in all variables as presented in Table 5.24.

³⁷ Graphical methods for checking normality include dot plot, histogram, or box plot as descriptive methods and P-P plot or Q-Q plot as theory-driven methods (Park, 2008).

Table 5.24.

Testing Normality of the Error Term

Variable	Obs.	Skewness ¹	Kurtosis ²	Shapiro-Francia W Test		
				W	z	Prob > z
<i>Res.Div.</i>	179	-.286	-.612	.9912	.517	.3027
<i>Org.Per.</i>	179	-.283	-.055	.9923	.140	.4442
<i>Res.Abun.</i>	179	.189	-.333	.9938	-.330	.6291
<i>Comm.</i>	179	-.412	-.374	.9798	2.139	.0162
<i>Hie./For.</i>	179	-.494	-.159	.9758	3.589	.0002
<i>GC</i>	179	-.851	.432	.9450	4.110	.0000
<i>GD</i>	179	.126	-.829	.9828	1.806	.0355
<i>DM</i>	179	.200	-.969	.9689	2.995	.0013
<i>Res.Com.</i>	179	-.185	-.801	.9920	.224	.4113
<i>Res.Dep.</i>	179	-.824	-.694	.8983	5.281	.0000
<i>Res.Cer.</i>	179	-.615	1.698	.9069	5.116	.0000
<i>Org.Age</i>	179	-1.767	1.992	.9498	3.933	.0000
<i>Org.Size</i>	179	.742	-.900	.9882	.953	.1703

Note: 1. Standard error of skewness is .187 for all variables.

2. Standard error of kurtosis is .373 for all variables.

There is a conflicting result between checking skewness/kurtosis and the Shapiro-Francia W test. More than half of all variables would violate the assumption of normality by the W statistic. For the seven variables, the null

hypothesis – the error term has normal distribution – can be rejected at the five percent significance level as shown in Table 5.24. The W statistic is positive and the maximum value is one (Park, 2008). The value closes to one when the error term is normally distributed.

However, this research concludes that the assumption of normality is not violated because theory-driven graphical tests including the p-p plot and q-q plot also indicate that the error terms of all variables are normally distributed. Additionally, some scholars argue that the W statistic is considered a sensitive tool for checking normality (Kim, 2007).

Regression Analysis

As mentioned above, the multiple regression analyses for models 1, 2, and 3 exclude the four cases (ID 103, 138, 139, and 147) due to the violations of some regression diagnostics. Therefore, the sample is 175 for the three regression models.

Model 1

Model 1 examines how well the RDP variables predict or explain organizational behavior variables. Model 1.1 is for the relationship between the RDP and hierarchy/formalization in the nonprofit sector. Analysis of Variance (ANOVA) shows that the result of this model is statistically significant $F(7, 167) = 5.693, p < .01$. The regression model is:

$$\hat{Y}_{Hie/For} = B_0(\text{Constant}) + B_1X_{ResDep} + B_2X_{Res.Abun} + B_3X_{Res.Com} + B_4X_{Res.Cer} + B_5X_{Res.Div} + B_6X_{Org.Age} + B_7X_{N.Staff}$$

This model explains approximately 16 percent of hierarchy/formalization in the Korean nonprofit organizations (adjusted $R^2 = .156$). Age of organization (Beta – standardized coefficient = .176, $p = .013$) and resource dependency (Beta = .428, $p = .00$) are closely associated with a high level of hierarchy/formalization in an organization. Nonprofit organizations are more hierarchical and formalized when they highly depend on public financial resources for their success and survival. Additionally, number of regular staff (Beta = .112, $p = .115$) and resource diversity (Beta = .116, $p = .151$) are positively associated with the degree of hierarchy/formalization at the 85 percent significance level.

Table 5.25.

Regression Analysis for Hie/For on RDP (Model 1.1)

Variables	Unstandardized Coefficient	Standard Error	Standardized Coefficient (Beta)
<i>Constant</i>	-1.762	.652	
<i>Age of Organization</i>	.149**	.059	.176
<i>Number of Regular Staff</i>	.058	.037	.112
<i>Resource Diversity</i>	.149	.103	.116
<i>Resource Abundance</i>	-.013	.066	-.015
<i>Resource Uncertainty</i>	-.091	.217	-.034
<i>Resource Dependency</i>	1.235***	.255	.428
Resource Competitiveness	-.038	.046	-.062

Note: $R^2 = .189$; Adjusted $R^2 = .156$; F Value = 5.693***; Sample size = 175.

* Significant at .1 level; **Significant at .05 level; ***Significant at .01 level

Model 1.2 explores how well RDP variables predict Goal Clarity (GC) in the Korean nonprofit sector. The model for GC is statically significant, $F(7, 167) = 3.749, p < .01$. The linear combination of the five RDP variables accounts for approximately 10 percent of GC as a dependent variable (adjusted $R^2 = .103$). The multiple regression equation for predicting the GC is:

$$\hat{Y}_{Goal\ Clarity} = B_0(\text{Constant}) + B_1X_{ResDep} + B_2X_{Res.Abun} + B_3X_{Res.Com} + B_4X_{Res.Cer} + B_5X_{Res.Div} + B_6X_{Org.Age} + B_7X_{N.Staff}$$

This model reveals a negative relationship between resource certainty (Beta = -.221, $p = .012$). A nonprofit organization with uncertain and unstable funding source (donations from individuals and private corporations) is more likely to show a high level of goal clarity. Organizations are more likely to have clear organizational goals when they compete with other organizations for obtaining financial resources (Beta = .218, $p = .009$).

Table 5.26.

Results of Regression Analysis (Model 1.2)

Variables	Unstandardized Coefficient	Standard Error	Standardized Coefficient (Beta)
<i>Constant</i>	-.157	.638	
<i>Resource Abundance</i>	-.005	.063	-.007
<i>Resource Diversity</i>	.175*	.103	.148
<i>Age of Organization</i>	.032	.059	.041
<i>Number of Regular Staff</i>	-.003	.035	-.006
<i>Resource Dependency</i>	.203	.251	.076
<i>Resource Competitiveness</i>	.122***	.046	.218
Resource Certainty	-.555**	.218	-.221

Note: $R^2 = .141$; Adjusted $R^2 = .103$; F Value = 3.749***; Sample size = 175.

* Significant at .1 level; **Significant at .05 level; ***Significant at .01 level

The RDP variables account for approximately 10.5 percent of goal displacements (GD) in nonprofit organization (adjusted $R^2 = .105$) and the

ANOVA shows that this model is statistically significant, $F(7, 167) = 3.787, p < .01$. This relationship is described as:

$$\hat{Y}_{Goal\ Displacement} = B_0(\text{Constant}) + B_1X_{ResDep} + B_2X_{Res.Abun} + B_3X_{Res.Com} + B_4X_{Res.Cer} + B_5X_{Res.Div} + B_6X_{Org.Age} + B_7X_{N.Staff}$$

Competition for financial resources is positively associated with frequent changes of organizational goals in nonprofit organizations (Beta = .310, $p > .001$). Setting organizational goals under high resource competitiveness is more sensitive to the needs of external stakeholders and resource providers. The influences of resource abundance and resource uncertainty on the GD are not strong and not statistically significant, as shown in Table 5.27. Contrary to the hypothesis, the relationship between resource dependency and GD is positive and statically significant at the 10 percent significance level (Beta = .173, $p = .067$). The regression model shows that high dependency on public resources is more likely to lead to a high level of GD (frequent changes or modifications of organizational goals) in nonprofit organizations.

Table 5.27.

Regression Analysis for Goal Displacement on RDP (Model 1.3)

Variables	Unstandardized Coefficient	Standard Error	Standardized Coefficient (Beta)
<i>Constant</i>	-1.081	.702	
<i>Resource Abundance</i>	-.008	.069	-.009
<i>Resource Diversity</i>	.089	.114	.069
<i>Age of Organization</i>	-.063	.064	-.074
<i>Number of Regular Staff</i>	-.046	.038	-.090
<i>Resource Dependency</i>	.509*	.276	.173
<i>Resource Competitiveness</i>	.191***	.051	.310
<i>Resource Certainty</i>	.072	.240	.026

Note: $R^2 = .142$; Adjusted $R^2 = .105$; F Value = 3.787***; Sample size = 175.

* Significant at .1 level; **Significant at .05 level; ***Significant at .01 level

Model 1.4 accounts for the relationship between (de)centralized decision making (DM) and the RDP variables and is statistically significant, $F(7, 167) = 3.649, p < .01$. This model tests how well the five RDP variables predict the degree of (de)centralization in nonprofits' decision making process. The multiple regression equation for explaining the DM is:

$$\hat{Y}_{(de)centralized DM} = B_0(\text{Constant}) + B_1X_{ResDep} + B_2X_{Res.Abun} + B_3X_{Res.Com} + B_4X_{Res.Cer} + B_5X_{Res.Div} + B_6X_{Org.Age} + B_7X_{N.Staff}$$

The five RDP variables explain about 10 percent of the de(centralized) decision making in nonprofit organizations (adjusted $R^2 = .094$). Organizations with high resource diversity are more likely to have a decentralized decision making process (Beta = .232, $p = .006$); on the contrary, organizations with high dependency on public resources are more likely to have a centralized decision making process at the 10 percent significance level (Beta = -.149, $p = .105$). The proposed hypothesis for resource uncertainty and decision making is not accepted and the result is not statistically significant.

Table 5.28.

Results of Decision Making on the RDP Variables (Model 1.4)

Variables	Unstandardized Coefficient	Standard Error	Standardized Coefficient (Beta)
<i>Constant</i>	3.650	.980	
<i>Resource Abundance</i>	-.054	.098	-.042
<i>Resource Diversity</i>	.430***	.155	.232
<i>Age of Organization</i>	.033	.089	.027
<i>Number of Regular Staff</i>	.029	.055	.038
<i>Resource Dependency</i>	-.623	.383	-.149
<i>Resource Competitiveness</i>	.038	.070	.042
<i>Resource Certainty</i>	-.104	.325	-.027

Note: $R^2 = .130$; Adjusted $R^2 = .094$; F Value = 3.649***; Sample size = 175.

* Significant at .1 level; **Significant at .05 level; ***Significant at .01 level

Model 1.5 examines the relationship between the RDP variables and communication (Comm) – i.e., length of decision making or communication in an organization. The independent variables account for approximately 8 percent of nonprofits’ communication (adjusted $R^2 = .077$). ANOVA shows that this model is statistically significant, $F(7, 167) = 3.649, p = .004$. The regression equation for predicting the length of communication is described as:

$$\hat{Y}_{\text{Length of decision making (Comm.)}} = B_0(\text{Constant}) + B_1X_{\text{ResDep}} + B_2X_{\text{Res.Abun}} + B_3X_{\text{Res.Com}} + B_4X_{\text{Res.Cer}} + B_5X_{\text{Res.Div}} + B_6X_{\text{Org.Age}} + B_7X_{\text{N.Staff}}$$

Resource diversity (the degree of centralization or decentralization of the resources inflow) is significantly associated with the length of communication (decision making) in nonprofit organizations. Like the proposed hypothesis, diversified (decentralized) inflow of the resources is more likely to lengthen communication time or the decision making process (Beta = .345, $p < .001$). Old nonprofit organizations are more likely to have a long communication process for decision making (Beta = .154, $p = .038$). Resource competitiveness is negative related to the length of communication (Beta = -.109) even though this result is not statically significant ($p = .172$). Lastly, organizations that mainly acquire their resources from the public sector (high resource dependency) are more likely to have a long decision making process. (Beta = .242, $p = .010$).

Table 5.29.

Regression Model for Communication on the RDP Variables (Model 1.5)

Variables	Unstandardized Coefficient	Standard Error	Standardized Coefficient (Beta)
<i>Constant</i>	-1.570	.641	
<i>Age of Organization</i>	.125**	.060	.154
<i>N of Regular Staff</i>	-.028	.036	-.058
<i>Resource Diversity</i>	.413***	.101	.345
<i>Resource Abundance</i>	.009	.065	.011
<i>Resource Certainty</i>	-.161	.213	-.064
<i>Resource Dependency</i>	.655***	.251	.242
<i>Resource Competitiveness</i>	-.062	.046	-.109

Note: $R^2 = .113$; Adjusted $R^2 = .077$; F Value = 3.088***; Sample size = 175.

* Significant at .1 level; **Significant at .05 level; ***Significant at .01 level

Model 2

The second model explores the relationship between organizational performance and organizational behavior in the nonprofit sector. This research conducts a polynomial regression analysis to test the hypothesis for Hierarchy/Formalization (Hie/For) and organizational performance. In the previous chapter, this study assumed that the relationship between Hie/For and organizational performance is not simply linear but curvilinear. This study suggests that a moderate level of hierarchical and formalized organizational

structure is positively associated with organizational performance; on the contrary, a high level of hierarchy and formalized structure is likely to lower organizational performance.

The scatterplot of Hie/For vs. organizational performance is visually consistent with the hypothesized quadratic relationship. As seen in Figure 5.2, the line accounts for approximately 8 percent of organizational performance ($R^2 = .076$); on the other hand, the inverted U shape curve explains about 13 percent of organizational performance ($R^2 = .125$).

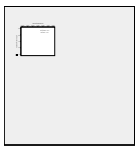


Figure 5.2. Scatterplot of Hierarchy/Formalization vs. Organizational Performance

This research centers Hie/For around its mean - .i.e., $Hie/For_{Centered} = Hie/For - \text{Mean of Hie/For}$. Centering predictors in the polynomial regression equation has the following advantages (Cohen et al., 2003): (1) improving interpretability of low-order regression coefficients and (2) reducing nonessential multicollinearity between simple linear variables and quadratic variables. The polynomial regression model including the quadratic term for the Hie/For variable is described as:

$$\hat{Y}_{Org.Per.} = B_0(\text{Constant}) + B_1X_{Hie/For_Cen} + B_2X_{Hie/For_Cen}^2 + B_3X_{GC} + B_4X_{GD} + B_5X_{DM} + B_6X_{Comm.} + B_7X_{Org.Age} + B_8X_{N.Staff}$$

After centering the Hie/For variable around its mean and computing the quadratic term, the ANOVA reveals that both linear and quadratic regression models are statistically significant at the .01 level (see Table 5.30).

Table 5.30.

ANOVA Results for the Second Model

	Model	Sum of Squares	df	Mean Square	F	Sig.
	Regression	23.945	7	3.421	29.863	.000
Linear	Residual	19.358	167	.115		
	Total	43.303	174			
	Regression	25.173	8	3.147	29.159	.000
Quadratic	Residual	18.130	166	.108		
	Total	43.303	174			

The quadratic model predicts approximately 56 percent of organizational performance in nonprofit organizations ($R^2 = .581$ adjusted $R^2 = .561$). Although both the linear model and the quadratic model explain more than 50 percent of organizational performance, the quadratic model accounts for about 3 percent more of the variance in average organizational performance than the linear model, $\Delta R^2 = .028$, $F(1, 166) = 11.383$, $p = .001$.

The goal clarity (GC) is the strongest predictor for explaining nonprofits' organizational performance. An organization with a high level of GC is more likely to have high organizational performance (Beta = .634, $p = .000$ for the quadratic model). The curvilinear relationship between the hierarchy/formalization and organizational performance is verified in the quadratic regression model, as presented in Table 38. A curve for the Hie/For and performance is an inverted U-shape because the regression coefficient of the quadratic term (the highest order term) has a negative sign. The age of organization is negatively associated with organizational performance – i.e., an older organization is likely to show a low level of organizational performance even though the statistical significance of this result is rather moderate (Beta = -.073, $p = .154$ for the quadratic model).

Table 5.31.

Results of the Linear Model & the Quadratic Model (Model 2)

Model	Variables	Unstandardized Coefficient	Standard Error	Standardized Coefficient (Beta)
Linear	<i>Constant</i>	.175	.108	
	<i>Org.Age</i>	-.032	.022	-.076
	<i>N.Staff</i>	-.007	.014	-.027
	<i>GC</i>	.320***	.031	.644
	<i>GD</i>	.027	.027	.055
	<i>DM</i>	-.029	.026	-.058
	<i>Comm.</i>	.037	.036	.075
	<i>Hie/For</i>	.127***	.031	.256
Quadratic	<i>Constant</i>	.260	.108	
	<i>Org.Age</i>	-.031	.021	-.073
	<i>N.Staff</i>	-.014	.013	-.055
	<i>GC</i>	.315***	.030	.634
	<i>GD</i>	.020	.026	.041
	<i>DM</i>	-.020	.025	-.040
	<i>Comm.</i>	.034	.035	.068
	<i>Hie/For</i>	.086***	.033	.173
	<i>H/F_Quad</i>	-.065***	.019	-.195

Note: Sample size = 175.

* Significant at .1 level; **Significant at .05 level; ***Significant at .01 level

Model 3

Model 3 examines how well all variables for both the RDP and organizational behavior simultaneously predict or explain performance in nonprofit organizations. The organizations' resource dependence pattern and their five behavioral factors explain approximately 61 percent of organizational performance in the simple linear model, ($R^2 = .639$ adjusted $R^2 = .613$). The quadratic model accounts for 2.2 percent more of the variance in average organizational performance than the linear model, $\Delta R^2 = .023$, and this change is statistically significant, $F(1, 166) = 11.075, p = .001$. The quadratic model predicts about 64 percent of organizational performance, ($R^2 = .662$ adjusted $R^2 = .635$). Both the linear model and the quadratic model are statistically significant, as seen in Table 5.32.

Table 5.32.

Results of ANOVA (Model 3)

	Model	Sum of Squares	df	Mean Square	F	Sig.
	Regression	27.683	12	2.307	24.221	.000
Linear	Residual	15.620	162	.095		
	Total	43.303	174			
	Regression	28.677	13	2.206	24.584	.000
Quadratic	Residual	14.626	161	.090		
	Total	43.303	174			

The regression model for predicting the effects of the RDP variables and organizational behavior variables on organizational performance is:

$$\hat{Y}_{Org.Per.} = B_0(\text{Constant}) + B_1X_{Hie/For_Cen} + B_2X_{Hie/For_Cen}^2 + B_3X_{GC} + B_4X_{GD} + B_5X_{DM} + B_6X_{ResDep} + B_7X_{Res.Abun} + B_8X_{Res.Com} + B_9X_{Res.Cer} + B_{10}X_{Res.Div} + B_{11}X_{Comm.} + B_{12}X_{Org.Age} + B_{13}X_{N.Staff}$$

In the linear model, the relationship between a dependent variable and the four regressors (goal clarity, decision making, hierarchy/formalization, and resource diversity) are statistically significant at the one percent level. Resource abundance is positively associated with organizational performance at the ten percent significance level (Beta = .90, $p = .081$). In particular, goal clarity and resource diversity are strong predictors that positively relate to organizational performance. Nonprofits that have clearly defined organizational goals are more likely to show a high level of organizational performance (Beta = .579, $p < .001$). Nonprofit organizations with high resource diversity (the decentralized or diversified resource dependence pattern) are positively correlated with organizational performance (Beta = .243, $p < .001$). Young nonprofits are likely to show high organizational performance although this result is not statistically robust (Beta = -.073, $P = .136$).

Table 5.33.

Results of the Linear Model & the Quadratic Model (Model 3)

Model	Variables	Unstandardized Coefficient	Standard Error	Standardized Coefficient (Beta)
Linear	<i>Constant</i>	-.512	.226	
	<i>Org.Age</i>	-.031	.021	-.073
	<i>N.Staff</i>	-.011	.013	-.043
	<i>GC</i>	.288***	.029	.579
	<i>GD</i>	-.001	.026	-.003
	<i>DM</i>	-.056***	.025	-.113
	<i>Comm.</i>	.009	.034	.019
	<i>Hie/For</i>	.165***	.030	.332
	<i>Res.Com</i>	.026	.017	.085
	<i>Res.Dep</i>	-.128	.097	-.089
	<i>Res.Cer</i>	.030	.073	.022
	<i>Res.Abun</i>	.039*	.022	.090
<i>Res.Div</i>	.154***	.037	.243	
	<i>Constant</i>	-.420	.221	
	<i>Org.Age</i>	-.030	.020	-.073
	<i>N.Staff</i>	-.017	.012	-.068
	<i>GC</i>	.284***	.028	.573

<i>Quadratic</i>	<i>GD</i>	-.007	.025	-.014
	<i>DM</i>	-.049**	.025	-.098
	<i>Comm.</i>	.010	.033	.021
	<i>Hie/For</i>	.127***	.032	.255
	<i>Res.Com</i>	.030*	.017	.098
	<i>Res.Dep</i>	-.159*	.095	-.111
	<i>Res.Cer</i>	.051	.071	.038
	<i>Res.Abun</i>	.042*	.022	.097
	<i>Res.Div</i>	.135***	.036	.212
	<i>H/F_Quad</i>	-.059***	.018	-.179

Note: Sample size = 175.

* Significant at .1 level; **Significant at .05 level; ***Significant at .01 level

In addition, three variables (resource competitiveness, resource dependency, and hierarchy/formalization_quad) are statistically significant with organizational performance in the polynomial regression model. Nonprofits with a high level of dependency on public resources are likely to show a low level of organizational performance (Beta = -.111, $p = .095$). The effect of competition for the needed resource acquisition with other organizations on organizational performance is moderate and positive in nonprofit organizations (Beta = .098, $p = .072$).

Indirect Effects of the RDP on Organizational Performance

Before conducting path analysis, this research explored indirect effects of the resource dependence patterns on performance in nonprofit organizations. The linear combination among the RDP variables is statistically robust, $F(7, 167) = 7.371, p < .001$. Here is the multiple regression equation for predicting organizational performance:

$$\hat{Y}_{Organizational\ Performance} = B_0(\text{Constant}) + B_1X_{ResDep} + B_2X_{Res.Abun} + B_3X_{Res.Com} + B_4X_{Res.Cer} + B_5X_{Res.Div} + B_6X_{Org.Age} + B_7X_{N.Staff}$$

The seven predictors explain about 20 percent of performance in the sampled nonprofit organizations, adjusted $R^2 = .202$. The two RDP variables (resource diversity and resource competitiveness) are statistically significant at the one percent level. A high level of decentralization of the diversified resources (high resource diversity) is positively correlated with a high level of organizational performance (Beta = .307, $p < .001$). As nonprofits' competition with other organizations for resources increases, the level of organizational performance also increases (Beta = .263, $p < .001$).

Table 5.34.

Direct Effects of the RDP on Organizational Performance

Variables	Unstandardized Coefficient	Standard Error	Standardized Coefficient (Beta)
<i>Constant</i>	-.705	.290	
<i>Age of Organization</i>	-.006	.026	-.015
<i>N of Regular Staff</i>	-.006	.016	-.027
<i>Resource Abundance</i>	.041	.029	.105
<i>Resource Diversity</i>	.178***	.047	.307
<i>Resource Dependency</i>	.112	.113	.086
<i>Resource Certainty</i>	-.147	.096	-.121
<i>Resource Competitiveness</i>	.073***	.021	.263

Note: $R^2 = .234$; Adjusted $R^2 = .202$; F Value = 7.371***; Sample size = 175.

* Significant at .1 level; **Significant at .05 level; ***Significant at .01 level

Path Analysis

The main purpose of conducting path analysis is for examining causal relationships among observed exogenous and endogenous variables³⁸. Path analysis includes multiple regression equations that are estimated simultaneously. Direct causality among exogenous and endogenous variables – i.e., direct and unique effect of one variable on another are depicted as a path and its power is

³⁸ Exogenous variables are specified as causes of other variables (Kline, 2005); on the other hand, endogenous variables can explain other variables and can be explained by other variables in a path model.

specified by a path coefficient. Path coefficients, as statistical estimates of direct causalities, are similar to regression coefficients in regression analysis. Indirect effects among variables are also calculated by the combination of path coefficients. Path analysis is performed using maximum likelihood (ML) estimation³⁹.

A good path model explains the appearance of the sample data with a small number of parameters (parsimony) and has a high fitness of the sample data (a high level of model fit). That is, model fit indices only evaluate a statistical robustness of a path model – i.e., fit indices do not explain whether the results of a path model are theoretically and practically meaningful (Moon, 2009; Kline, 2005). Theoretical significance is mainly determined by the existing theories, research, and literature; path coefficients and covariances among variables in a path model estimate practical meaningfulness.

Model Fit Indices for Path Model

There are many indices that are used to check the fitness of a path model. Among them, this research adopts the five model fit indices that respond to the study purpose of the proposed path model⁴⁰: (1) the normed chi-square (NC); (2) the goodness of fit index (GFI), (3) the Steiger-Lind root mean square error of

³⁹ Analysis of Moment Structures (AMOS) is statistics software for path analysis in this study.

⁴⁰ GFI, RMSEA, and SRMR are regarded as absolute fit indices in that a level of model fit is determined by the explanatory power of the (co)variance or correlation matrix of the research model without other models such as independence (null) model or just identified (saturated) model.

approximation (RMSEA); (4) the standardized root mean square residual (SRMR), and; (5) the Bentler comparative fit index (CFI).

Model chi-square⁴¹ (χ_M^2) as the most basic fit statistic is calculated by $(N - 1)F_{ML}$, where $N - 1$ is the degree of freedom (df) and F_{ML} is “the value of the statistical criterion minimized in maximum likelihood (ML) estimation” (Kline 2005, p. 135). The increased value of χ_M^2 in the overidentified model means a decrease in model fit. However, model chi-square is very sensitive to the sample size⁴²; therefore, some researchers use the NC to reduce the effect of sample size in model chi-square. For the NC, values of 2.0 to 3.0 are a reasonably acceptable guideline (Kline, 2005; Bollen, 1989).

GFI as an absolute fit index shows how well the covariance matrix of the research model explains the proportion of variability in the sample covariance matrix. It is similar to R^2 in multiple regression. The model has good fit when its GFI value is more than .90⁴³ (Nam, 2007). The RMSEA estimates lack of model fit compared to the just identified model. It is a badness-of-fit because lower values of the RMSEA means a better model fit (Kline, 2005). Model fit is reasonable and acceptable when values of RMSEA are between .05 and .08 (Browne and Cudeck, 1993; Moon, 2009). RMR is covariance residuals – that is, the difference between the observed covariances and predicted covariances. It is

⁴¹ In saturated (just-identified) model, both the values of χ_M^2 and df are zero. The model perfectly fit the data when χ_M^2 is zero (Moon, 2009).

⁴² Specifically, the overidentified model with large sample size is likely to reject the null hypothesis that the observed model perfectly fits the real data.

⁴³ GFI ranges from .00 to 1.0 and the model fit is very poor when GFI value closes to zero.

also a badness-of-fit because $RMR = 0$ means the best model fit. It is problematic in that its calculation depends on unstandardized variables that have different scales. To reduce this problem, researchers use the standardized RMR (SRMR) that depends on absolute correlation values (Moon, 2009; Kline, 2005). A common rule of thumb is that values of the SRMR less than .10 indicate acceptable model fit (Kline, 2005, p. 141).

CFI compares the research model fit to the independence (null) model. Covariance values among observed variables are zero in the independence model. The CFI index is the difference between the two models' noncentral chi-square distributions. CFI values range from zero to one and $CFI > .90$ may indicate good model fit (Nam, 2007; Moon, 2009).

Strategies of Model Specification

Researchers adopt strategies for developing the research models based on research purposes, existing literature, and observed relationships among variables. There are three strategies for research model development (Moon, 2009; Joreskog and Sorbom, 1993): (1) a single model confirming strategy; (2) exploratory model development strategy, and; (3) model comparison strategy. Research builds a single model and checks its statistical robustness and power of practical causal relationship among variables in the first strategy. Researchers can explore a new path model through adding or deleting paths in the model when an initial model

does not explain the causalities among exogenous and endogenous variables⁴⁴.

Lastly, researchers compare several competing theoretical models that show different causal relationships among variables. All in all, the goal of model specification is “to find a parsimonious model that still fits the data reasonably well” (Kline, 2005, p. 146).

This study adopts the exploratory model development strategy for building the path model that has statistically significant and strong explanatory power. First, this study establishes the initial path model depending on the proposed hypotheses and the results of multiple regression analyses. Second, the initial model is modified according to the significance of path coefficient and modification indices by AMOS. The theoretical validity of the added or deleted paths in the revised model will be discussed in the next chapter.

Initial Path Model

The initial path model depicts the following causality:

- (1) *direct causality between the resource dependence patterns and organizational behavior factors;*
- (2) *in(direct) causal relationships between the RDP and organizational performance, and;*

⁴⁴ This is called as model trimming strategy when a research study explores a new model by deleting the existing paths in the model; on the other hand, new paths are added in model building strategy. A model fit typically becomes worse when a model is trimmed; on the other hand, a model fit typically becomes better as the model is built (Kline, 2005, pp. 145-146).

(3) *direct causal effects of organizational behavior factors on organizational performance.*

As mentioned above, paths in the model are determined by the proposed hypotheses and the results of multiple regression analyses. Figure 5.3 is a basic framework for showing causal relationships among the RDP, the organizational behavioral factors, and organizational performance.

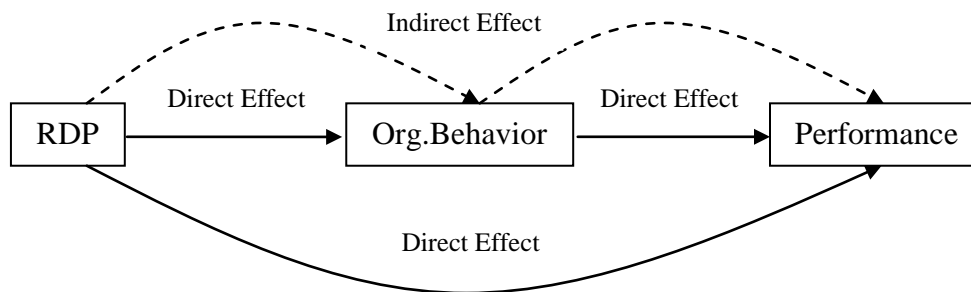


Figure 5.3. Basic Paths of Initial Path Model

Model fit indices including NC, GFI, RMSEA, SRMR, and CFI show that the initial path model has moderately unacceptable model fit. These results are summarized in Table 5.35. The normed chi-square (NC) for the initial model (χ^2/df ratio) is 3.725, which does not meet the guideline of being below 3.0⁴⁵. The value of root mean square error of approximation (RMSEA) is over .10 (poor model fit) and the value of standardized root mean residual (SRMR) is .0816 in the initial path model⁴⁶ (reasonable model fit). The goodness-of-fit index (GFI) is .915, which meets the cutoff of being over .90. Lastly, comparative fit index

⁴⁵ AMOS outputs NC as CMIN/DF.

⁴⁶ The cutoff points for RMSEA and SRMR are respectfully below .80 and .10.

(CFI) for the initial model is .804 even though CFI > .90 indicates reasonable and acceptable model fit. Values of GFI and SRMR are acceptable and reasonable; however, values of NC, RMSEA, and CFI are unacceptable in the model. Therefore, the initial model needs to be corrected in order to improve its statistical robustness.

Table 5.35.

Model Fit Information for the Initial Model

	NC	GFI	RMSEA	SRMR	CFI
<i>Initial M.</i>	3.725	.915	.124	.0816	.804
<i>Saturated M.</i>	-	1.000	-	-	1.000
<i>Null M.</i>	7.234	.676	.188	-	.000

Covariances among the observed exogenous variables are parameters to be estimated in the path model. Table 5.36 reveals correlations, covariances, and the statistical significances of the seven observed variables.

Table 5.36.

Correlations and Covariances among the Observed Exogenous Variables

	Correlation	Covariance	Standard Error
<i>OrgAge < - - > NStaff</i>	.049	.112	.173
<i>NStaff < - - > ResCom</i>	-.028	-.086	.236
<i>NStaff < - - > ResAbun</i>	.185	.409**	.169
<i>NStaff < - - > ResCer</i>	.058	.042	.055

<i>NStaff</i> < - - > <i>ResDiv</i>	.002	.003	.114
<i>ResDep</i> < - - > <i>NStaff</i>	.124	.083*	.051
<i>OrgAge</i> < - - > <i>ResCom</i>	-.012	-.022	.144
<i>OrgAge</i> < - - > <i>ResAbun</i>	-.057	-.077	.102
<i>OrgAge</i> < - - > <i>ResCer</i>	-.138	-.061*	.034
<i>OrgAge</i> < - - > <i>ResDiv</i>	-.030	-.027	.069
<i>OrgAge</i> < - - > <i>ResDep</i>	-.120	-.049	.031
<i>ResCom</i> < - - > <i>ResAbun</i>	.125	.231*	.140
<i>ResCom</i> < - - > <i>ResCer</i>	-.065	-.039	.046
<i>ResDiv</i> < - - > <i>ResCom</i>	.375	.471***	.101
<i>ResDep</i> < - - > <i>ResCom</i>	-.163	-.090**	.042
<i>ResCer</i> < - - > <i>ResAbun</i>	.162	.069**	.033
<i>ResDiv</i> < - - > <i>ResAbun</i>	-.173	-.153**	.068
<i>ResDep</i> < - - > <i>ResAbun</i>	.256	.100***	.031
<i>ResDiv</i> < - - > <i>ResCer</i>	-.167	-.049**	.022
<i>ResDep</i> < - - > <i>ResCer</i>	.515	.066***	.011
<i>ResDep</i> < - - > <i>ResDiv</i>	-.381	-.102***	.022

Note: * Significant at .1 level; **Significant at .05 level; ***Significant at .01 level

Table 5.37 presents the unstandardized estimates of the observed variances of the exogenous variables and disturbances (see the second column in Table 5.37). All values are statistically significant at the .01 level. The values of the observed variances for the observed exogenous variables are fixed as 1.00 in the standardized estimate (see the fourth column). The standardized estimates of the

disturbance variances means unexplained variability for six endogenous variables (Hie/For, Comm, DM, GC, GD, and OrgPer). For instance, the explained proportion for the goal clarity (GC) by its presumed direct causes⁴⁷ is .101 (1.00 - .899).

⁴⁷ The GC is explained by the following variables – ResDiv, ResCer, and ResCom (see Figure 7).

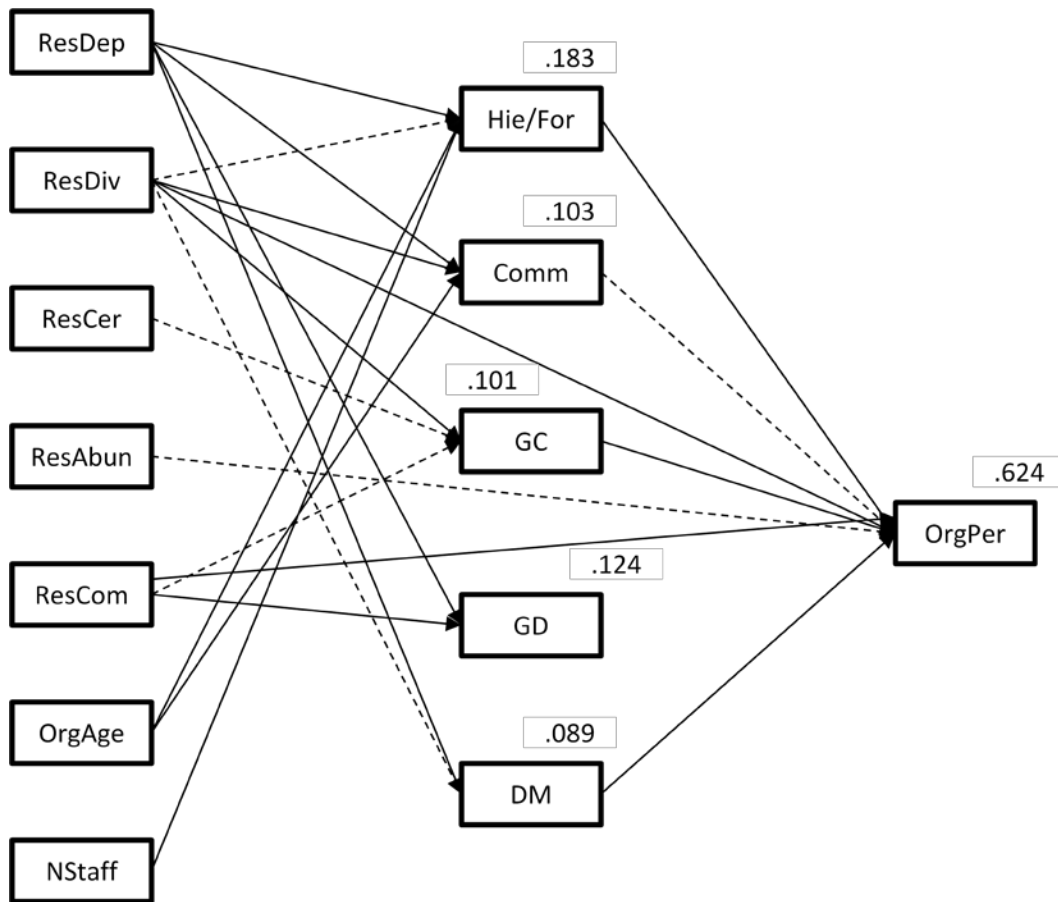
Table 5.37.

Variances of the Observed Exogenous Variables and Disturbances

Variable	Estimate of Var.	Standard Error	Standardized Est.
<i>OrgAge</i>	1.395	.149	1.000
<i>ResDep</i>	.118	.013	1.000
<i>NStaff</i>	3.750	.400	1.000
<i>ResDiv</i>	.605	.065	1.000
<i>ResCom</i>	2.609	.278	1.000
<i>ResCer</i>	.140	.015	1.000
<i>ResAbun</i>	1.302	.139	1.000
<i>D_{Hie/For}</i>	.813	.087	.818
<i>D_{Comm}</i>	.894	.095	.898
<i>D_{DM}</i>	.898	.096	.911
<i>D_{GC}</i>	.892	.095	.899
<i>D_{OrgPer}</i>	.091	.010	.377
<i>D_{GD}</i>	.878	.094	.876

Figure 5.4 graphically shows (in)direct causal relationships among the exogenous variables and endogenous variables for the initial model. However, this figure does not include the lines for covariances between the exogenous variables and graphical information of disturbance variances because it was

already provided in above tables. In Figure 5.4, the solid line means that the causal relationship between the two variables is at least statistically significant at the .10 level. Resource dependency (ResDep) affects HieFor, Comm, GD, and DM and its impacts on the four endogenous variables are statistically significant. Resource competitiveness (ResCom) influences the goal clarity and goal displacement; however, its impact on the GC is not statistically robust. The seven exogenous variables and the five endogenous variables account for approximately 62 percent of organizational performance in nonprofit organizations (Standardized path coefficient for OrgPer = .624).



Note: Solid Arrow $p < .10$; Dashed Arrow $p \geq .10$

Figure 5.4. Path Diagram for the Initial Model⁴⁸

Table 5.38 reveals both unstandardized and standardized path coefficients between variables for the initial path model. The GC is the strongest causality for explaining organizational performance. When the GC goes up by one standard deviation, organizational performance may increase by .586. Among the 22 causal relationships (paths) – i.e., direct causality between two variables, the 15 causal relationships are statistically significant at the over .10 level.

⁴⁸ All numbers in this figure are standardized path coefficients.

Table 5.38.

ML Parameter Estimates for the Initial Path Model

		Unstandardized Estimate	Standardized Estimate	Standard Error
<i>HieFor</i>	<--- <i>OrgAge</i>	.148**	.175	.058
<i>HieFor</i>	<--- <i>ResDep</i>	1.170***	.403	.218
<i>HieFor</i>	<--- <i>NStaff</i>	.059*	.115	.036
<i>HieFor</i>	<--- <i>ResDiv</i>	.111	.087	.095
<i>Comm</i>	<--- <i>OrgAge</i>	.150**	.178	.061
<i>Comm</i>	<--- <i>ResDiv</i>	.412***	.321	.106
<i>Comm</i>	<--- <i>ResDep</i>	.466**	.160	.227
<i>Comm</i>	<--- <i>ResCom</i>	-.063	-.102	.048
<i>GC</i>	<--- <i>ResDiv</i>	.313***	.244	.100
<i>GC</i>	<--- <i>ResCom</i>	.065	.106	.048
<i>GC</i>	<--- <i>ResCer</i>	-.185	-.069	.193
<i>DM</i>	<--- <i>ResDiv</i>	.031	.024	.099
<i>DM</i>	<--- <i>ResDep</i>	-.835***	-.289	.225
<i>GD</i>	<--- <i>ResCom</i>	.213***	.343	.044
<i>OrgPer</i>	<--- <i>HieFor</i>	.144***	.293	.023
<i>OrgPer</i>	<--- <i>GC</i>	.289***	.586	.024

		Unstandardized	Standardized	Standard
		Estimate	Estimate	Error
<i>OrgPer</i>	<--- <i>ResDiv</i>	.169***	.268	.034
<i>OrgPer</i>	<--- <i>DM</i>	-.050**	-.100	.023
<i>OrgPer</i>	<--- <i>ResAbun</i>	.032	.074	.021
<i>OrgPer</i>	<--- <i>ResCom</i>	.027*	.089	.016
<i>OrgPer</i>	<--- <i>Comm</i>	.008	.016	.024
<i>GD</i>	<--- <i>ResDep</i>	.447**	.153	.208

Note: * Significant at .1 level; **Significant at .05 level; ***Significant at .01 level

Revised Path Model

As mentioned in the previous section, the model fit of the initial path model is just acceptable and reasonable. This study improves the model fit through a model building strategy – adding new paths. The model respecification process passes through three stages. The chi-square (χ^2_M) changes and theoretical bases are criteria for adding a new path (Moon, 2009). Although adding a new path results in a great change of the chi-square, it is not acceptable if this change is not supported by theories or empirical research.

Table 5.39.

Modification index (Regression Weights - Initial Model)

			Modification Index	Estimated Parameter Change
Comm	<---	HieFor	31.515	.401
HieFor	<---	Comm	36.115	.409
GC	<---	Comm	34.236	.417
GD	<---	Comm	9.090	-.213

Table 5.39 shows some paths need to be corrected; HieFor and Comm; GC and Comm, and; GD and Comm. Connecting a new path between Comm and HieFor shows that the value of χ_M^2 decreases 36.115 and the change of the unstandardized path coefficient is .409. However, this change is not accepted because of the absence of appropriate theoretical grounds. In the first stage, this study adds the new path from Communication to Goal Clarity ($\Delta\chi_M^2 = 34.236$; Δ unstandardized path coefficient = .417).

Table 5.40.

Modification index for the Second and Third Changes

			Modification Index	Estimated Parameter Change
<i>GD</i>	<---	<i>Comm</i>	9.090	-.213
<i>GC</i>	<---	<i>HieFor</i>	7.702	-.176

Table 5.40 shows the second model building, adding a new path from Comm to GD and the third model building, adding a new path from HieFor to GC. For example, the second path decreases 9.090 of χ^2_M and changes -.213 of the unstandardized path coefficient. All three changes are theoretically and statistically acceptable.

Table 5.41.

Model Fit Information for the Revised Path Model

	NC	GFI	RMSEA	SRMR	CFI
<i>Revised M.</i>	2.172	.948	.082	.0559	.923
<i>Initial M.</i>	3.725	.915	.124	.0816	.804
<i>Null M.</i>	7.234	.676	.188	-	.000

The model respecification makes the revised path model more statistically significant. Model fit information for the revised model is summarized in Table 48. The model fit indices reveal that model fit has remarkably improved in the revised model. The revised model has an acceptable NC (2.172) and CFI (.923) unlike the initial path model. The other three model fit indices (GFI, RMSEA, and SRMR) have improved compared to those of the initial model. However, the RMSEA (.082) does not quite reach the suggested criterion – less than .080.

The covariance for the revised model is the same as that of the initial model because the revised model also uses the same observed exogenous variables. New paths lead to change of standardized estimates of the disturbance

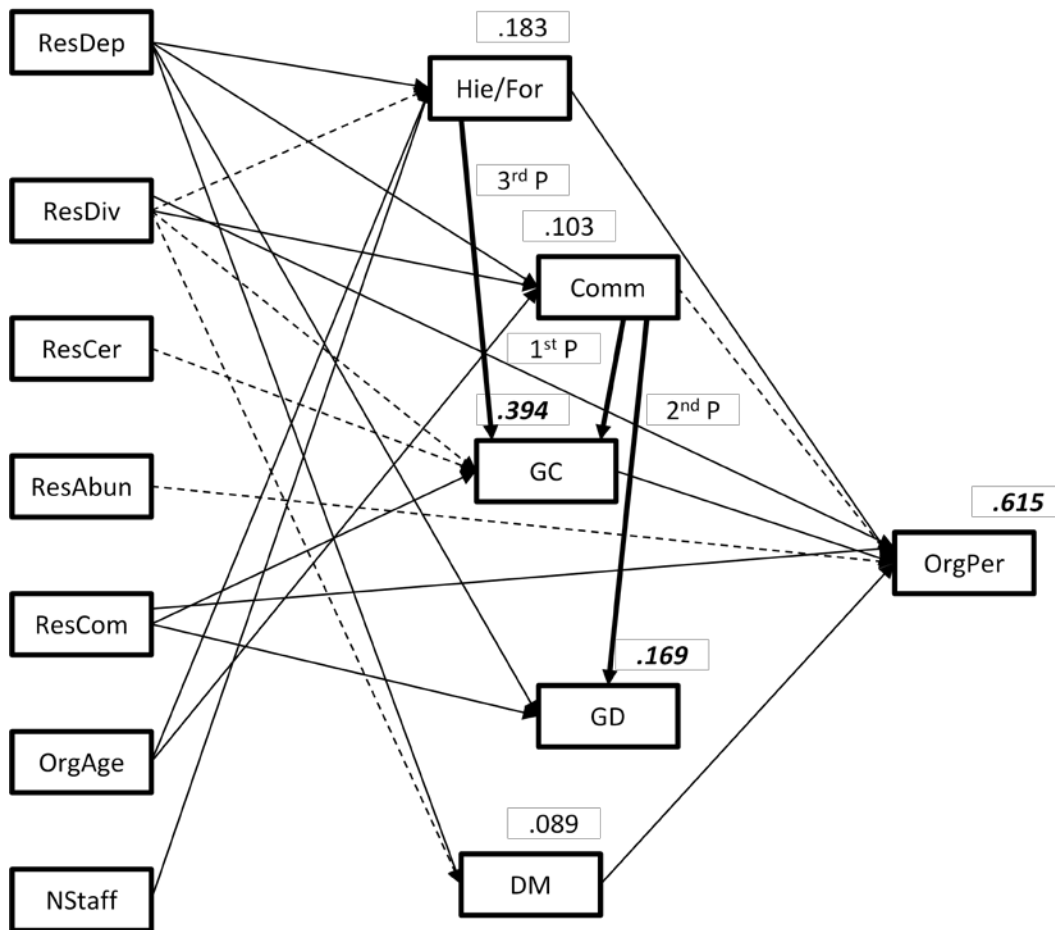
variances (see Table 5.42). The unexplained proportion for the GC and the GD by other variables is reduced – e.g., about 40 percent of the GC is explained by other exogenous and endogenous variables ($D_{GC} = .607$).

Table 5.42.

Changed Disturbance Variances in the Revised Model

Variable	Estimate of Var.	Standard Error	Standardized Est.
D_{GC}	.666	.071	.607
D_{GD}	.832	.089	.831

The revised path model for the resource dependence patterns and organizational behavior on organizational performance is depicted in Figure 5.5. Unlike the initial model, the revised model builds some causal relationships among endogenous variables. Three bold lines in this figure are new paths – from Comm to GC (1st path), from Comm to GD (2nd path), and from HieFor to GC (3rd path). All exogenous variables and endogenous variables explain approximately 62 percent of organizational performance.



Note: Solid Arrow $p < .10$; Dashed Arrow $p \geq .10$

Figure 5.5. Path Diagram for the Revised Path Model⁴⁹

Table 5.43 shows both the unstandardized path coefficients and the standardized path coefficients for the 25 paths in the revised model. More than 70 percent of direct paths are statistically significant. In particular, all three paths also have strong explanatory power. For example, Active communication among organizational members is positively associated with a higher level of goal clarity (Beta = .528, $p = .000$); on the other hand, a higher level of

⁴⁹ All numbers in this figure are standardized path coefficients.

hierarchy/formalization is more likely to lower goal clarity in nonprofit organizations (Beta = -.242, $p = .000$).

Table 5.43.

ML Parameter Estimates for the Revised Path Model

	Unstandardized Estimate	Standardized Estimate	Standard Error
<i>HieFor</i> <--- <i>OrgAge</i>	.148**	.175	.058
<i>HieFor</i> <--- <i>ResDep</i>	1.170***	.403	.218
<i>HieFor</i> <--- <i>NStaff</i>	.059*	.115	.036
<i>HieFor</i> <--- <i>ResDiv</i>	.111	.087	.095
<i>Comm</i> <--- <i>OrgAge</i>	.150**	.178	.061
<i>Comm</i> <--- <i>ResDiv</i>	.412***	.321	.106
<i>Comm</i> <--- <i>ResDep</i>	.466**	.160	.227
<i>Comm</i> <--- <i>ResCom</i>	-.063	-.102	.048
<i>GC</i> <--- <i>ResDiv</i>	.121	.090	.089
<i>GC</i> <--- <i>ResCom</i>	.091**	.140	.041
<i>GC</i> <--- <i>ResCer</i>	-.095	-.034	.169
<i>DM</i> <--- <i>ResDiv</i>	.031	.024	.099
<i>DM</i> <--- <i>ResDep</i>	-.835***	-.289	.225
<i>GC</i> <--- <i>Comm</i>	.565***	.538	.064
<i>GC</i> <--- <i>HieFor</i>	-.242***	-.230	.063

		Unstandardized	Standardized	Standard
		Estimate	Estimate	Error
<i>GD</i>	<--- <i>ResCom</i>	.212***	.342	.043
<i>OrgPer</i>	<--- <i>HieFor</i>	.144***	.296	.024
<i>OrgPer</i>	<--- <i>GC</i>	.289***	.623	.028
<i>OrgPer</i>	<--- <i>ResDiv</i>	.169***	.271	.034
<i>OrgPer</i>	<--- <i>DM</i>	-.050**	-.101	.023
<i>OrgPer</i>	<--- <i>ResAbun</i>	.032	.074	.021
<i>OrgPer</i>	<--- <i>ResCom</i>	.027*	.090	.016
<i>OrgPer</i>	<--- <i>Comm</i>	.008	.016	.028
<i>GD</i>	<--- <i>ResDep</i>	.467**	.160	.203
<i>GD</i>	<--- <i>Comm</i>	-.214**	-.213	.069

Note: * Significant at .1 level; **Significant at .05 level; ***Significant at .01 level

Table 5.44 summarizes the causal effects of the observed exogenous variables on organizational performance. The total causal effect of resource diversity on performance is .451 from one direct path (.271) and six indirect paths (.180). When resource diversity goes up by one standard deviation, organizational performance may increase by .451. Resource abundance in the revised model shows direct causality (.074) on organizational performance.

Table 5.44.

*Decomposition of Causal Effects for the Exogenous Variables on Performance*⁵⁰

Exogenous Variables	Total Effect	Direct Effect	Indirect Effect
<i>Resource Dependence</i>	.147	.000	.147
<i>Resource Diversity</i>	.451	.271	.180
<i>Resource Uncertainty</i>	-.021	.000	-.021
<i>Resource Abundance</i>	.074	.074	.000
<i>Resource Competitiveness</i>	.141	.090	.051
<i>Age of Organization</i>	.089	.000	.089
<i>Number of Staff</i>	.018	.000	.018

Summary

This chapter shows the empirical results of the surveyed data by using descriptive statistics, reliability tests, factor analysis, multiple regression and path analysis. The survey response rate is about 30.2 percent and descriptive statistics are presented for understanding basic characteristics of the collected data. Some collected items are excluded from item sets of each variable because values of the Cronbach's alpha coefficients are below a cutoff point (.60).

The factor analysis (explanatory factor analysis) is used for checking the dimensions for organizational performance and for checking those of organizational behavior items. Factor analysis extracts the four dimensions

⁵⁰ All numbers in this table are standardized path coefficients.

(effectiveness, customer satisfaction, responsiveness, and efficiency) for organizational performance items and the four factors (hierarchy/formalization, goal clarity, decision making, and goal displacement).

Three multiple regression analyses are conducted for investigating the linear relationships among the resource dependence patterns (RDP), organizational behavior, and performance in nonprofit organizations. Regression diagnostic tools reveal that all three regression models and their variables do not violate the basic assumptions of regression analysis. The results shows that the RDP mainly directly influence organizational behavior factors and their effects on organizational performance are indirect and secondary.

Path analysis examines the causal effects of the observed exogenous variables and the endogenous variables on organizational performance. Path analysis reveals that resource diversity has the strongest explanatory power on organizational performance. In addition, new causal relationships among organizational behavior variables are created through the model respecification strategy (model building).

Chapter 6

Conclusion and Discussion

Brief Overview

This study primarily pays attention to the five dimensions of the RDP (resource dependency, resource diversity, resource uncertainty, resource abundance, and resource competitiveness) and the five organizational behavior variables (decision making, goal clarity, goal displacement, communication, and hierarchy/formalization) in nonprofit organizations. This study examines their (in)direct effects on organizational performance based on resource dependence perspectives, modern organization theories and practices, and management theories for the public, private, and nonprofit sectors. Resource acquisition is very important for sustaining organizational performance (effectiveness) in the modern nonprofit sector. Understanding resource dependence patterns (RDP) – appearance of the (financial) resource inflow, helps explore contemporary nonprofits' behavior and performance. Public administrators and other scholars, however, have not been successful in empirically addressing the influence of the RDP in organizations. This study is a theoretical and empirical analysis of the RDP on organizational behavior and performance.

The empirical findings reveal that the RDP directly influences organizational behavior and indirectly or directly affects organizational performance in nonprofit organizations. The RDP has critical impacts on

organizational behavior in nonprofit organizations. Particularly, the empirical results show that resource dependency – “Where resources come from (the private sector or the public sector)” has substantive and wide impacts on the overall nonprofits’ behavior, actions, and structures. High resource dependency – i.e., high dependency on government funding is positively associated with hierarchy/formalization, frequent goal displacement, and long communication time; on the other hand, it is negatively associated with participatory decision making.

Consistent with the discussions or opinions of the existing theories, empirical research, and literature, organizational behavior considerably influences nonprofits’ performance. In particular, goal clarity has the strongest direct impact on nonprofits’ performance. Clear organizational goals increase the likelihood that nonprofits show a higher level of performance. The paths of both resource diversity and resource competitiveness also have direct impacts on organizational performance and their impacts are statistically robust. Path analysis verifies the fact that the other three RDP variables account for organizational performance via organizational behavior variables (indirect causality on performance).

Findings

This section summarizes the results of regression analyses and path analysis. The former mainly accounts for the effects of the RDP and the organizational behavior on nonprofits’ performance. The latter helps to

understand (in)direct causal effects of the RDP and the organizational behavior on organizational performance.

Resource Dependence Patterns and Organizational Behavior

Table 6.1 summarizes results and directions of the RDP on organizational behavior. Resource dependency – i.e., dependency of governmental (public) funding has significant impact on the level of hierarchy/formalization in nonprofit organizations. A high level of public resource dependency is positively correlated with hierarchical and formalized organizational structure; on the other hand, nonprofit organizations that obtain their resources from the private sector are more likely to have less hierarchical and less formalized organizational structures. The results suggest that nonprofit organizations with high private resource dependency show decentralized and participatory decision making.

The existing literature argued that resource dependency on private resources is associated with frequent goal displacement in nonprofit organizations (Useem, 1987). The regression analysis result for resource dependency and goal displacement is statistically and practically significant. However, the direction of the result (+) is different from that of the proposed hypothesis (-). High dependency on public resources may lead to frequent goal changes⁵¹ (modifications).

⁵¹ The proposed hypothesis assumes that nonprofits with high private resource dependency are positively associated with goal displacement.

Resource diversity has a significant impact on nonprofits' decision making process. Diversified resource dependency from different resource providers is a way of "avoiding the domination that comes from asymmetric exchanges" (Pfeffer and Salancik, 2003, p. 127). In particular, nonprofit organizations make an effort to break the concentrated resource dependency by one or a few dominant resource providers in order to keep or increase autonomy in their works. This fact suggests that time and costs for decision making increases when nonprofit organizations obtain their resources from diverse funding sources including governments, individuals, corporations, and their own commercial activities. The two proposed hypotheses for effects of resource abundance on organizational behavior are not statistically supported.

Table 6.1.

Summarized Results of Hypothesis Tests for RDP and OB

RDP	OB Var.	Hypotheses	Expected	Result/Direction
Dependency	For/Hie	<i>H1</i>	(+)	1.235***
	For/Hie	<i>H2</i>	(-)	1.235***
	Participatory DM	<i>H3</i>	(-)	-.623*
	Goal displacement	<i>H4</i>	(-)	.509*
Diversity	For/Hie	<i>H5</i>	(-)	NS (-)
	Length of comm	<i>H6</i>	(+)	.413***
Abundance	Decision making	<i>H13</i>	(-)	NS (-)
	Goal displacement	<i>H14</i>	(-)	NS (-)
Uncertainty	For/Hie	<i>H8</i>	(-)	NS (-)
	Participatory DM	<i>H9</i>	(+)	NS (+)
	Goal displacement	<i>H10</i>	(+)	NS (+)
	Goal clarity	<i>H11</i>	(+)	-.555**
Competitiveness	For/Hie	<i>H16</i>	(-)	NS (-)
	Goal displacement	<i>H17</i>	(+)	.191***
	Goal clarity	<i>H18</i>	(+)	.122***
	Length of comm	<i>H19</i>	(-)	NS (-)

Note: NS = non supported;

* Significant at .1 level; **Significant at .05 level; ***Significant at .01 level

Resource uncertainty is a dimension for measuring stability or predictability of nonprofits' financial resources. Rapid and unexpected changes in

funding frequently have serious effects on various organizational behavior in nonprofits. Unlike initial expectations, the regression analysis fails to show statistical significance of resource uncertainty on hierarchy/formalizations, goal displacement, and participatory decision making (communication). The relationship with goal clarity is statistically confirmed. Nonprofit organizations are more likely to have clearer organizational goals when certainty or stability of funding is not high.

Competition with alternative vendors or other service providers make financial resource acquisition by a nonprofit organization more difficult. The results show that resource competitiveness of nonprofit organizations has critical impacts on their behavior. In particular, the regression analysis reveals that turbulent financial situations created by competition with other organizations significantly affect clarity and shifts of organizational goals in the nonprofit sector. As indicated in Table 6.1, high resource competitiveness is correlated with high levels of goal clarity and goal displacement.

Resource Dependence Patterns and Organizational Performance

This study did not propose a hypothesis for the effects of the RDP on nonprofits' performance because it mainly focused on the indirect effects that are mediated by organizational behavior variables. However, adequate financial resources are an important determinant for improving organizational performance (Light, 2004). The regression analysis and path analysis verifies the fact that

there are some direct effects of the RDP on organizational performance. The two analyses reveal that the direct effects of resource diversity and resource competitiveness on organizational performance are statistically and practically significant.

The results suggest that the more diversified resource dependence nonprofit organizations show (resource diversity), the higher performance they have. As mentioned above, the concept of performance is multidimensional and factor analysis extracted the four factors that constitute organizational performance – responsiveness, effectiveness, customer satisfaction, and efficiency. This study adopts multidimensionality of performance. The multidimensionality partially reflects the fact that every resource provider has different culture and a different set of objectives (Bornstein and Goldman Sachs Foundation, 2004). For example, responsiveness or customer satisfaction as a component of organizational performance includes diverse funders’ expectations and interests. In addition to internal efficiency and productivity, nonprofit organizations with diversified funding sources pay attention to outside stakeholders’ needs and these are more likely to connect to a high level of organizational performance.

Competition for financial resources is positively correlated with organizational performance in nonprofit organizations. Currently, many nonprofit organizations face increased competition for money under the circumstance of shrinking financial resources (Lebold and Edwards, 2006, p. 453). Competition

for money is likely to induce nonprofit organizations to make fast and positive responses for resource providers' demand for services⁵².

Abundance of financial resources is positively associated with a high level of organizational performance. However, its impact is moderate in that how to set the regression model determines statistical significance of the effect of resource abundance on organizational performance. This effect is not statistically significant in the model that just includes the five dimensions of the RDP, 'organizational age', and 'number of staff' (Beta = .105, $p = .155$). The direct effect of resource abundance on performance is statistically significant in the model that includes all independent variables – i.e., model 3 (Beta = .090, $p = .081$).

Organizational Behavior and Organizational Performance

The summarized results in Table 6.2 note that the proposed three hypotheses are practically and statistically confirmed. This study assumes that the effects of extensive rules, regulations, and bureaucratized organizational structure on organizational performance are curvilinear – specifically, the inverted U shape curve. This hypothesis is statistically supported. Currently, there is a dilemma between underlining nonprofits' accountability to external funders and boosting organizational performance (Bell-Rose, 2004). For instance, overemphasis on accountability may require nonprofit organizations to present a bunch of

⁵² Nonprofits also make an effort to verify high efficiency and effectiveness for attracting financial resources from outside funders.

paperwork for verifying their performance and to make a large amount of rules and regulations for keeping transparency. These could be a hindrance to realizing nonprofits' goals and missions.

Table 6.2.

*Summary of Hypothesis Tests for OB and Organizational Performance*⁵³

	OB Var.	Hypotheses	Expected	Result/ Direction
	For/Hie	<i>H20; H21</i>	Curvilinear	.127***/-.059***
<i>Organizational Performance</i>	Goal clarity	<i>H22</i>	(+)	.288***
	Participatory DM	<i>H23</i>	(-)	-.056***

Note: NS = non supported;

* Significant at .1 level; **Significant at .05 level; ***Significant at .01 level

The results suggest that organizational performance is improved when nonprofit organizations have well-defined goals, missions, and objectives. In particular, the regression model and path analysis reveal that goal clarity is the most powerful variable for explaining nonprofits' performance in this study. Existing studies draw attention to several benefits of clear and well-defined organizational goals (Drucker 2005; Kirk and Nolan, 2010; Rainey and Steinbauer 1999). For example, Chun and Rainey (2005) argue that ambiguous goals have negative impacts on organizational performance in U.S. federal agencies.

⁵³ All numbers are from the polynomial analysis in the model 3 (see Table 5.33).

Centralized or top-down decision making processes have negative effects on organizational performance in the nonprofit sector. Participatory and decentralized decision making significantly influences employee morale, productivity, and trust (Berman 2006; Carmeli, Sheaffer, and Halevi, 2009). High morale, trust, and productivity are directly connected with improving organizational performance and organizational success.

Other Findings

The result supports the fact that large nonprofit organizations⁵⁴ are more likely to face less resource scarcity. Small nonprofit organizations may have more troubles with financial resources (Beta = .180, $p = .024$). However, the other hypotheses related to resource diversity and resource uncertainty are not statistically confirmed by the regression analysis, as presented in Table 6.3.

Table 6.3.

*Size of Organization and the Resource Dependence Patterns*⁵⁵

	RDP	Hypotheses	Expected	Result/ Direction
<i>Size of Organization</i>	Diversity	<i>H7</i>	(+)	NS (+)
	Uncertainty	<i>H12</i>	(-)	NS (-)
	Abundance	<i>H15</i>	(+)	.312**

Note: NS = non supported;

* Significant at .1 level; **Significant at .05 level; ***Significant at .01 level

⁵⁴ A large organization means a nonprofit that engages many regular staff.

⁵⁵ See appendix A for more detailed results.

The maturation of organizations is closely associated with nonprofits' hierarchy/formalization and communication although this study does not present hypotheses for these relationships. Old nonprofits are likely to have more hierarchical and formalized organizational structures. The result notes that there is a positive relationship between age of organization and length of communication (decision making) among organizational members.

Diversification and dominance avoidance are organizational strategies for reducing organizational dependence on outside dominant groups (Pfeffer and Salancik, 2003; Lan, 1991). Resource diversification strategies for reducing dependence on a specific external funder have a positive effect on participatory decision making processes. The result suggests that nonprofit organizations that show diversified (decentralized) resource dependence patterns are more likely to have more participatory decision making processes (Beta = .430, $p = .000$).

Implications (Contributions)

Theoretical Contributions

- Expanding, Supplementing, & Deepening RDT

This study of resource dependence patterns contributes to expanding, deepening, and supplementing the discussions related to existing resource dependence theory (RDT). Specifically, the five dimensions of resource dependence patterns tap the unrealized potentials of the RDT⁵⁶. The existing

⁵⁶ Lan (1991) already introduced the three dimensions of the RDP (resource dependency, resource diversity, and resource uncertainty). In addition to the existing dimensions of the RDP, this study

studies just pay attention to one or two aspects of the RDP – e.g., resource scarcity and stability (Guo and Acar, 2005), financial stability/resource uncertainty (Singer and Yankey 1991; Gronbjerg, 1991), and diversification/resource diversity (Pfeffer and Salancik, 2003; Froelich, 1999).) In their book *'The External Control of Organizations'*, Pfeffer and Salancik (2003) just touch the issues of resource diversification and uncertainty and scarcity of important resources. This research draws attention to various aspects and characteristics of nonprofits' financial resources from the external stakeholders.

This study makes an organic loop with organizational behavior and organizational performance on the concept of the synthesized resource dependence pattern. The existing literature for RDT and nonprofit organizations chiefly concentrates upon governance patterns – e.g., relationship between boards and executive managers and relationship between an organization and external environments such as individuals, corporations, and governments (e.g., Pfeffer, 1973; Saidel, 1994; Salamon, 1987, Stone, 1996, et al.) and the issues related to organizational behavior/actions (e.g., Tolbert, 1985; Pfeffer and Leblebici, 1973; Pfeffer and Salancik, 1974, 1977 et al.). The existing studies are rather localized and fragmented. Instead, this research describes how the RDP explicitly or implicitly influences organizational behavior (decision making, organizational

newly introduces the two dimensions of the RDP (resource abundance/scarcity and resource competitiveness). Particularly, this research reveals that resource competitiveness (perception of competitiveness for obtaining resources from external resource providers) significantly affect nonprofits' behavior, actions, and performance.

goals, communication, and hierarchy/formalization) and organizational performance as a multidimensional concept (effectiveness, efficiency, customer satisfaction, and responsiveness) through a broad and synthesized lens.

- Other Theoretical Issues

On the whole, the findings of this study support and strengthen the existing studies for RDP, organizational behavior, and organizational performance. This study is theoretically meaningful in that some empirical findings are not consistent with the discussions of the existing research and literature. The different results are drawn from the relationship between some organizational behavior variables and some dimensions of the RDP.

Different organizational features may affect the power of the RDP on organizational behavior and structures. Lan (1991) argues that resource diversity and resource uncertainty do not seem to affect organizational behavior such as organizational goals, decision making, organizational structure, and outputs through the explanatory research for the U.S. university R & D institutions (p. 128). Furthermore, he notes that the overall impact of RDP (dependency, diversity, and uncertainty) on university R & D institutions is not strong – i.e., the behavior of university R & D institutions is not determined by the RDP (Lan, 1991, p. 129). On the contrary, this research shows that RDP has considerable impacts on nonprofits' behavior. Specifically, resource dependency, resource diversity, and resource competitiveness are important factors that affect goals, decision making,

and communication in nonprofit organizations. This study assumes that responsiveness or flexibility of organizations relative to the external environments influences the relationship between organizational behavior and RDP.

Resource dependency (where the money comes from) has a close relation to establishment or changes of organizational priorities, missions, and goals. Some scholars pay attention to goal displacements by government funds in nonprofit organizations (Guo, 2007; Berntstein, 1991) However, many existing studies suggest that goal displacement occurs more frequently when nonprofit organizations mainly depend on private contributions (Froelich, 1999; DiMaggio, 1986; Salamon, 1987, Peterson, 1986).

This study reveals that displacement or changes of organizational goals with high dependency on public resources appears more frequently than with high dependency on private contributions. This result partially stems from the distinctive environment – i.e., a high public resource dependency that Korean nonprofit organizations face. Such high dependency is closely associated with: (1) the relatively short history (about 30 years) of the Korean nonprofit sector (Lim et al., 2009; Jung and Moon, 2007; Kang, 2001); (2) low financial independence of the Korean nonprofits, and; (3) relatively low public interest for nonprofit organizations – i.e., a low level of private donations and contributions from individuals and corporations. Governments as major resource providers may

exercise strong influence upon the Korean nonprofits' goal/priority setting under such circumstances.

Practical Implications

The five dimensions of RDP including resource dependency, resource diversity, resource uncertainty, resource abundance, and resource competitiveness are important characteristics that comprise the environment of nonprofit organizations. Organizational behavior is closely related to the RDP and understanding RDP is a key for boosting efficiency and effectiveness. The exploration of these characteristics is an urgent policy concern in public administration.

This study is meaningful because it synthetically shows the financial status of (Korean) nonprofit organizations. Many existing studies have been interested in funding sources and external resource providers (Guo, 2007; Gronbjerg, 1991, 1993; Stone, 1996, et al.); however, some studies mainly focus on the public sector as funders and the effects of government funding (e.g., Guo, 2007; Stone, 1996) and some studies rely on case studies or interview data (e.g., Gronbjerg, 1991, 1993; Stone, 1996). By contrast, this research simultaneously adopts the survey method and is interested in various types of funding sources from the public, private, and nonprofit sector. In particular, for Korean nonprofit organizations, communities, external funders, and other citizens, understanding the synthesized financial status of nonprofit organizations is useful because Korea

does not have a data base or website that provides general information for the nonprofit sector including financial information like the GuideStar.

Understanding characteristics of funding sources affects nonprofits' various behavior and structures including organizational goals, decision making, communication, and level of hierarchy/formalization and directly or indirectly influence their performance. Gronbjerg (1991) argues that the right translation of the implicit or explicit priorities of funding sources helps accomplish nonprofits' own mission through case studies of four nonprofit social services agencies. The patternized characteristics of financial resources hopefully contribute to organizational behavior, structures, and performance in the mutual dependence (interdependence) with external resource providers including individuals, foundations, corporations, and government agencies.

High dependency on public resources and less diversified resource dependence pattern negatively influence organizational behavior and performance in nonprofit organizations⁵⁷. Specifically, nonprofit organizations will make an effort to reduce public resource dependency by government contracts, governmental appropriation, and government grants when nonprofit organizations want to boost autonomy and flexibility in their behavior and actions. This study reveals that a high dependency on public resources has a negative effect on goal setting, participatory decision making, and flexibility in the nonprofit sector.

⁵⁷ About 75 percent of targeted nonprofit organizations (134/179) obtain their resources from governmental grants (see Table 13 in Chapter 4). About 60 percent of nonprofits (109/179) have two to four different types of financial resources (see Figure 4 in Chapter 4).

Outside stakeholders and external funders build up and keep a competitive environment for obtaining necessary financial resources in order to boost nonprofits' performance. The result suggests that a nonprofit's efforts for getting resources compared to other nonprofit organizations has a positive relationship with organizational performance. In addition to such competition, a nonprofit organization should have a diversified resource dependence pattern for boosting organizational performance. In other words, nonprofit organizations should get their resources from various funding sources and their dependency on each funding should be balanced and decentralized if it is possible.

Limitations of the Study

At the organizational level, this study explores: how the five dimensions of RDP affect goals, decision making, hierarchy/formalization, and communication (organizational behavior); how the RDP are related to nonprofit performance, and; how organizational behavior influence nonprofit performance. There are some limitations in data collection, analytic method, measurement, and research design.

First, data collection by survey method heavily relies on survey respondents' perceptions for acquiring the necessary information. The survey method includes the likelihood that perceptual measures may not be the right reflection of the given reality even though the survey method is a common tool for observing social phenomena (Moon, 1998). Accuracy of the gathered

information about organizational behavior (OB), the resource dependence pattern (RDP), and organizational performance may be distorted by subjective judgments of financial officers and executive managers in nonprofit organizations.

Second, it is not easy for the latitudinal and statistical dataset to reflect the whole picture for the dynamics among RDP, OB, and organizational performance. Conducting qualitative research methods such as in-depth case study or analyzing longitudinal data mitigates this limitation – i.e. the two research methods enable researchers to conduct more comprehensive and dynamic analysis for RDP, organizational behavior, and organizational performance.

Third, this study hardly considers various individual behavioral factors such as individual differences and traits, motivation, compensation, leadership, etc. In nonprofit organizations, RDP may have critical impacts on individual factors and organizational performance may be significantly influenced by individual factors. Future study should pay attention to the effects of diverse individual behavioral factors in order to grasp more comprehensive and synthesized images between RDP and organizational performance.

In spite of these limitations, the importance of this study cannot be ignored in that it can provide both academic and practical fields with useful information about nonprofit resources, behavior, and performance. Synthesized and systematic analysis of the appearance of resources inflow will help external funders including governments, foundations, and individual donors to understand the

fiscal environment that a nonprofit organization faces. Study of nonprofits' RDP will enable external resource providers to have a better understanding of nonprofit performance. This study will practically contribute to the effective management of nonprofit organizations. In addition, understanding RDP will theoretically contribute to consolidating and expanding the resource dependence perspective.

Future Research

Future research should have a more comprehensive and more elaborate research design for precisely reflecting the reality that (nonprofit) organizations face. First, future study needs to consider classification of nonprofit organization – i.e., what nonprofit organizations mainly do. This study does not consider the difference in type of nonprofit organizations; however, what nonprofits do will considerably affect organizational structures and behavior, organizational performance, and the interaction between external resource funders and nonprofit organizations. For instance, Korean nonprofits that are engaged in government monitoring (politics) or labor movements (unions) are more likely to face a tough environment for obtaining the necessary resources in that governments as major external resource providers can take a conservative and passive attitude for providing these organizations with grants and funding. In-depth case study will help understand the effects of RDP on organizational behavior, structures, and performance by what organizations do.

Second, future study needs to examine thoughts or attitudes of external resource providers on RDP, behavior, and performance of nonprofit organizations. This study is mainly interested in opinions and judgments of internal organizational members⁵⁸. The interests of resource providers may offer more sophisticated and richer findings on RDP and its impacts on organizational behavior and performance.

Third, development of more objective indicators for measuring the RDP is required for future research. Subjective judgments or perceptions of survey respondents considerably affect estimating RDP in this study. In particular, respondents' perceptions are important to measure resource competitiveness according to its definition⁵⁹. Future study should make an effort to develop objective and quantitative measurements for specifying the RDP and these can help contribute to boosting validity and reliability of research.

Fourth, future study needs to add other organizational behavior variables and governance structures – this study focuses on hierarchy/formalization as an organizational structure, organizational goals (clarity and displacement), decision making, and communication. For instance, the RDP may affect behavior, communication, and decision making of boards of directors power issues,

⁵⁸ As mentioned above, main survey targets are financial/business officers or executive managers in nonprofit organizations.

⁵⁹ Resource competitiveness is described as “the perception of competitiveness for obtaining resources from external funders. This is a sample question for measuring the strength of resource competitiveness: to what extent does your organization compete with other organizations for obtaining financial resources.

specialization, autonomy, or organizational culture. Organizational performance is not free from the effects of these factors. Adding new variables will provide researchers with a more realistic image for the relationship among the RDP, organizational behavior, and organizational performance in nonprofit organizations.

Last, future study needs to explore internal dynamics among organizational behavior variables. Initially, this study assumed that organizational behavior factors independently influence nonprofit performance – i.e., there is no relationship among goal clarity, hierarchy/formalization, goal displacement, decision making, and communication; however, path analysis points out the likelihood that there are direct causal relationships among some organizational behavior variables: (1) hierarchy/formalization and goal clarity; (2) communication and goal clarity, and; (3) goal displacement and communication. Future research should theoretically and practically examine whether these relations are valid and reliable. In-depth exploration for understanding interactions among organizational behavior will make future study richer and more elaborate.

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APPENDIX A.
RECRUITMENT SCRIPT

I am JungWook Seo under the direction of Professor N. Joseph Cayer in the School of Public Affairs at Arizona State University. I am conducting research for exploring organizational behavior and organizational performance on Resource Dependence Patterns (RDP). I am recruiting interviewees to understand organizational behavior, actions, and performance in Korean nonprofit organizations. The survey will take approximately 30 to 40 minutes. Your participation is voluntary and you must be older than 18 years. If you have any questions about the study, please call me at (480) 529-4252 or send an email to jseo3@asu.edu.

APPENDIX B.
SURVEY COVER LETTER

Date:

Dear Madam or Sir:

I am a doctoral student under the direction of Professor N. Joseph Cayer in the School of Affairs at Arizona State University. I am investigating the relationship between resource dependence patterns and organizational performance and behavior. I am hoping that you will take the time to assist me. I am looking for your input on this important subject through the attached survey. Most questions make use of rating scales: five-point scale or seven-point scale. Please make a check (v) to the answer that best describes your opinion. Some questions ask you to answer using your own words. There are no correct or incorrect responses; we are merely interested in your personal view. Your participation is voluntary and you can skip questions if you wish. You are by no means obligated to complete the survey and must be older than 18 years to participate. I anticipate the survey taking 30 to 40 minutes to complete.

Resource acquisition and the appearance of resource inflow are crucial issues because they are directly related to behavior, high performance, and even survival of nonprofit organizations. Your responses are very important for us to go ahead with the research. There are no foreseeable risks or discomforts due to participation. All individual responses will be kept confidential and anonymous. The collected data will be used only for the purposes of this research and will be

reported in consolidated format only. If you have any questions regarding the survey, you can contact (480.529.4252; jseo3@asu.edu 602.496.0451) or (602.496.0451; cayer@asu.edu). If you have any questions about your rights as a subject/participation in the survey or if you feel you have been placed at risk, you can also contact the Chair of the Human Subjects Institution Review Board through the ASU Office of Research Integrity and Assurance, at (480) 965-6788. Return of the survey questionnaire will be regarded as your consent to participate.

Sincerely,

N. Joseph Cayer

602-496-0451

joe.cayer@asu.edu

·
JungWook Seo

480-529-4252

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APPENDIX C.
SURVEY QUESTIONNAIRE

Part 1. Demographic Questions

1.1 Respondent's Gender:

- Male
- Female

1.2 Respondent's Age:

- 18 to 29
- 30 to 44
- 45 to 54
- 55 to 64
- 65 or older

1.3 Respondent's highest level of education:

- High School
- Some College
- Four-year College graduate
- Master's Degree
- Ph. D
- Other Professional Degree

Part 2. General Questions

2.1 What is your current position or title in your organization?

2.2 How many years have you served for your organization?

- Less than three years
- Three to less than five years
- Five to less than ten years
- Ten to Less than fifteen years
- More than fifteen years

2.3 What type of work does the nonprofit organization you work for do?

- Culture and recreation
- Education and research
- Health

- Welfare (social) services
- Environment
- Development and housing
- Law, advocacy, and politics
- Religion
- Business and professional associations, unions
- Other (please, specify)

2.4 Which of the following methods for improving external relationship does your organization use? Please check as many as apply

- Collaboration
- Mergers
- Strategic planning
- Media Relations
- Fund-raising
- Other
- I don't know

2.5 Please give a brief description of this effort to improve your organization's performance

2.6 Is there any effort to improve your organization's performance?

- Yes
- No
- I don't know

2.6.1. If your answer is 'yes', what kind of efforts are used for your organization? (Please check as many as apply.)

- A crisis or shock to the organization
- Increasing demand for services
- Pressure from clients or other stakeholders
- A particular problem with your organization
- Availability of funding to work on organizational development
- Ideas or concerns expressed by your board or staff members
- Publications or discussion with professionals
- Other (Please, specify)

2.7 *Did you have any outside funding to cover this effort?*

- Yes
- No
- I don't know

2.8 *Did the funding appropriately cover this effort?*

- (Very Few) 1 2 3 4 5 6 7 8 9
10 (All)

2.9 *Thinking about all the financial resources you had, is this fund enough to realize organizational goals or missions?*

- (Not adequate at all) 1 2 3 4 5 6 7 8 9 10
(Very adequate)

2.10 *Please indicate how much each of the following people was involved in the effort to improve performance. (Great deal; Fair amount; Not too much; Not at all; I don't know)*

- The board
- Senior Staff
- Middle Management
- Frontline Staff

2.11 *Age of organization*

- Fewer than 2 years
- 2 to 4 years
- 5 to 7 years
- 8 to 10 years
- Over 10 years

2.12 *Number of staff in your organization*

- Fewer than 6
- 6 to 9
- 10 to 13
- 14 to 17
- 18 to 20
- Over 20

2.13 *The size of your organization's annual budget*

2.14 *Did your organization's annual budget increase in the last three years?*

Yes

No

I don't know

2.14.1 *If your organization's annual budget had changed in the last three years, to what extent does your organization's annual budget change?*

(Very low) 1 2 3 4 5 6 7 (Very high)

To what extent

2.15 *Does your organization have multiple layers of authority?*

(Few layers of authority) 1 2 3 4 5 6 7 (Many layers of authority)

2.16 *Does your organization have hierarchical processes for implementing programs?*

(Few hierarchical processes) 1 2 3 4 5 6 7 (Many hierarchical processes)

2.17 *Does your organization have rules, regulations and procedures?*

(Very low) 1 2 3 4 5 6 7 (Very high)

2.18 *Are written procedures and rules important in your organization?*

(Not important at all) 1 2 3 4 5 6 7 (Very important)

2.19 *Does your organization have flexible decision making processes?*

(Not flexible at all) 1 2 3 4 5 6 7 (Very flexible)

2.20 *Does your organization encourage employees to participate in decision making process?*

(Very low) 1 2 3 4 5 6 7 (Very high)

2.21 *Does your organization have available channels for communicating between non-executive employees and managers (directors)?*

(Very few) 1 2 3 4 5 6 7 (Many)

2.22 *Does your organization set its own objectives without any external approvals?*

(Very low) 1 2 3 4 5 6 7 (Very high)

2.23 *Does your organization have clearly defined goals or missions?*

(Very low) 1 2 3 4 5 6 7 (Very high)

2.24 *Does your organization change goals or missions?*

(Not at all) 1 2 3 4 5 6 7 (Very frequent)

2.25 *Does your organization have conflicts among goals or missions?*

(Not at all) 1 2 3 4 5 6 7 (Very frequent)

2.26 *Does your organization compete with other organizations for contracting or grants?*

(Not at all) 1 2 3 4 5 6 7 (Very frequent)

2.27 *Are your external stakeholders satisfied with your organization's performance?*

(Not satisfied at all) 1 2 3 4 5 6 7 (Very satisfied)

2.28 *Is your organization's performance important to acquire resources from outside stakeholders (resource providers)?*

(Not important all) 1 2 3 4 5 6 7 (Very important)

2.29 *Are customers satisfied with your organization's goods and services?*

(Not satisfied at all) 1 2 3 4 5 6 7 (Very satisfied)

2.30 *Does your organization use resources effectively?*

(Not effective at all) 1 2 3 4 5 6 7 (Very effective)

2.31 *Do your organizational goals respond to community's demands?*

(Very low) 1 2 3 4 5 6 7 (Very high)

2.32 *Where do your organization's resources come from? (Please check as many as apply)*

____ Donations from individuals

- ___ Donations from corporations
- ___ Grants from foundations
- ___ Contracts from foundations
- ___ Grants from governments
- ___ Contracts from governments
- ___ Regular appropriations from governments
- ___ User charges and fees
- ___ Selling products to customers
- ___ Other resource (please, specify)

2.33 Please, rank the following financial resources according to competitiveness to acquire. Place a "1" next to the financial resource that is most competitive, a "2" next to the financial resource that is next most competitive (no two financial resource have the same ranking).

- ___ Donations from individuals
- ___ Donations from corporations
- ___ Grants from foundations
- ___ Contracts from foundations
- ___ Grants from governments
- ___ Contracts from governments
- ___ Regular appropriations from governments
- ___ User charges and fees
- ___ Selling products to customers
- ___ Other resources (please, specify and rank financial resource)

2.34 Approximately, what percentage of your funding comes from: (Note: should add to 100 %)

- ___ % Donations from individuals
- ___ % Donations from corporations
- ___ % Grants from foundations
- ___ % Contracts from foundations
- ___ % Grants from governments
- ___ % Contracts from governments
- ___ % Regular appropriations from governments
- ___ % User charges and fees
- ___ % Selling products to customers
- ___ % Other resources (please, specify)

APPENDIX D.

APPROVAL DOCUMENT BY THE INSTITUTIONAL REVIEW BOARD



Office of Research Integrity and Assurance

To: N Cayer
UCENT

From: Mark Rocsa, Chair
for Soc Beh IRB JTR

Date: 11/08/2010

Committee Action: Exemption Granted

IRB Action Date: 11/08/2010

IRB Protocol #: 1010005659

Study Title: Resource Dependence Patterns and Organizational Performance in Nonprofit Organizations

The above-referenced protocol is considered exempt after review by the Institutional Review Board pursuant to Federal regulations, 45 CFR Part 46.101(b)(2).

This part of the federal regulations requires that the information be recorded by investigators in such a manner that subjects cannot be identified, directly or through identifiers linked to the subjects. It is necessary that the information obtained not be such that if disclosed outside the research, it could reasonably place the subjects at risk of criminal or civil liability, or be damaging to the subjects' financial standing, employability, or reputation.

You should retain a copy of this letter for your records.

APPENDIX E.

REGRESSION ANALYSIS FOR THE EFFECTS OF THE RESOURCE
DEPENDENCE PATTERN ON THE SIZE OF ORGANIZATION

A.1. ANOVA Results

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	32.782	5	6.556	1.770	.122
Residual	626.075	16	3.705		
Total	658.857	174			

A.2 Result of Multiple Regression Analysis

Variables	Unstandardized Coefficient	Standard Error	Standardized Coefficient (Beta)
<i>Constant</i>	1.764	1.195	
<i>Resource Competitiveness</i>	-.096	.102	-.079
<i>Resource Dependency</i>	.654	.540	.115
<i>Resource Certainty</i>	-.113	.459	-.021
<i>Resource Abundance</i>	.312**	.137	.180
<i>Resource Diversity</i>	.261	.228	.104

Note: Dependent Variable = Number of Regular Staff;

$R^2 = .189$; Adjusted $R^2 = .156$; Sample size = 175.

* Significant at .1 level; **Significant at .05 level; ***Significant at .01 level

APPENDIX F.

VITA

VITA

JungWook Seo

Education

M.P.A. Nelson A. Rockefeller College of Public Affairs & Policy, 2007

The State University of New York at Albany, Albany, New York

M.A. in Public Administration Yonsei University, Seoul, South Korea, 2004

B.A. SungKyunKwan University, Seoul, South Korea, 2001

Experience

Teaching Assistant, School of Public Affairs, Arizona State University

(Fall 2011)

Research Assistant, School of Public Affairs, Arizona State University

(Fall 2007 – Spring 2009)

Graduate Teaching Assistant, Department of Public Administration,

Yonsei University (Fall 2002 – Spring 2004)

Honors and Awards

2011 Teaching Assistantship, School of Public Affairs, Arizona State University

2011 Forum Travel Funding, Beihang University, Beijing, China

2010 Winning the Second Prize, The Korea Social Security Association Research
Paper Contest for Graduate Student.

2010 Member of National Public Administration Honor Society, Pi Alpha Alpha

2009 University Graduate Fellowship, Arizona State University

2008 Conference Travel Funding , Graduate College, Arizona State University

2008 Conference Travel Funding, School of Public Affairs, Arizona State
University

2007 -2009 Researching Assistantship, School of Public Affairs, Arizona State University

2007 University Graduate Fellowship, Arizona State University

2002 – 2004 Teaching Assistantship, Yonsei University, Seoul, South Korea