



The Influence of Revenue Stability and Diversity on the Financial Health of Nonprofit Organizations

**Nathan J. Grasse, Georgia Southern
University**

**Andrew C. Holman, Helen Bader Institute
University of Wisconsin-Milwaukee**

**Douglas M. Ihrke, University of Wisconsin-
Milwaukee**

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The Importance of Nonprofit Finance

- As economic conditions place additional pressure on nonprofit organizations, their finances are of increased importance
- Increased importance of pursuing revenues
- Nonprofits need the best possible information to make choices



Revenue Diversity

- Diversity has been proposed as a means to reduce risk (Chang and Tuckman, 1991)
- Increases flexibility if external forces influence one revenue stream
- Has been identified as an influence on organizations' survival (Hager, 2001)



Evaluating Revenue Streams

- Revenue streams can be evaluated on a number of dimensions (Kearns, 2007)
 - Mission appropriateness
 - Significance
 - Risk
 - Opportunity costs
 - Threats to autonomy



Data

- National Center for Charitable Statistics
1998-2003
- All organizations required to file returns



Risk

- Measured as Unit Standard Deviation
- $\sigma = \sqrt{((\sum((R_{it} - R_{i\bullet})/R_{i\bullet}))/m-1)}$
- R_{it} = Revenue from i th tax in period t
- $R_{i\bullet}$ = Mean revenue from i th tax in period 1 through m
- M = number of time periods in analysis

Table 1. The Stability of Revenue Streams (Expressed in Unit Standard Deviations)

	Contributions	Government Grants	Program Services	Membership Dues	Indirect Support	Dividends and Investments	Special Events	Net Sales of Inventory
Median	2.73	2.70	1.57	2.14	4.06	2.93	3.86	5.36
10th Percentile	0.24	0.08	0.04	0.07	0.07	0.47	0.30	0.32
25th Percentile	0.82	0.62	0.24	0.63	0.67	1.09	1.01	1.42
50th Percentile	2.73	2.70	1.57	2.14	4.06	2.93	3.86	5.36
75th Percentile	8.68	10.10	5.90	8.90	13.42	8.60	12.19	13.42
90th Percentile	15.64	15.00	13.49	15.00	17.32	16.37	17.32	21.21



Risk and Organizational Performance

- Logistic regressions
- Use savings indicator (SI) as dependent variable
- **SI= Revenue – Expenses
Total Expenses**



Models

- 1st Model examines all organizations
- 2nd Set of models examines organizations by size
- 3rd Models look at smallest organizations (under \$250K in revenue) by subsector
 - Arts, Education, Housing, Human Services, Philanthropy, and Public Benefit (organized by NTEE code)

Table 2. Logistic Regression Models of Asset Growth and Revenue Stability

	Coefficient	S.E.	Significance
Stability of Government Grants	0.028	0.017	0.111
Stability of Contributions	0.249***	0.110	0.000
Stability of Program Services	0.305***	0.010	0.000
Stability of Member Dues	0.256***	0.013	0.000
Stability of Indirect Support	-0.108	0.019	0.000
Stability of Dividends and Investment	0.294***	0.010	0.000
Stability of Special Events	0.301***	0.012	0.000
Stability of Nets Sales of Inventory	0.102***	0.015	0.000
Revenue Diversity	0.000	0.000	0.671
Management Expenses	-0.009	0.009	0.341

p < .10*, p < .05**, p < .01***

Table 3. Logistic Regression Models of Asset Growth and Revenue Stability

	25K-249K	250K-499K	500k-999K	1M-1.999M	2M-4.999M	5M-9.999M	Over 10M
	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient
	(p-value)	(p-value)	(p-value)	(p-value)	(p-value)	(p-value)	(p-value)
Stability of Government Grants	-0.040 (0.191)	0.092** (0.019)	0.048 (0.288)	0.169*** (0.002)	0.148** (0.017)	0.294*** (0.002)	0.153* (0.082)
Stability of Contributions	0.376*** (0.000)	0.319*** (0.000)	0.282*** (0.000)	0.224*** (0.000)	0.228*** (0.000)	0.251 (0.000)	0.053 (0.394)
Stability of Program Services	0.266*** (0.000)	0.109*** (0.000)	0.132*** (0.000)	0.169*** (0.002)	0.403*** (0.000)	0.473*** (0.000)	0.563*** (0.000)
Stability of Member Dues	0.359*** (0.000)	0.192*** (0.000)	0.090** (0.042)	0.086 (0.111)	-0.005 (0.939)	0.191** (0.044)	0.065 (0.481)
Stability of Indirect Support	-0.019 (0.588)	-0.084 (0.054)	-0.084 (0.027)	-0.011 (0.830)	-0.219 (0.000)	-0.153 (0.103)	0.001 (0.992)
Stability of Dividends and Investment	0.116*** (0.000)	0.288*** (0.000)	0.327*** (0.000)	0.366*** (0.000)	0.395*** (0.000)	0.443*** (0.000)	0.698*** (0.000)
Stability of Special Events	0.415*** (0.000)	0.157*** (0.000)	0.082** (0.036)	0.121*** (0.010)	0.067 (0.208)	0.026 (0.747)	0.199** (0.021)
Stability of Nets Sales of Inventory	0.174*** (0.000)	0.059 (0.177)	-0.051 (0.309)	-0.057 (0.313)	0.092 (0.140)	0.034 (0.710)	0.189** (0.013)
Revenue Diversity	0.000 (0.754)	0.033 (0.349)	-0.005 (0.939)	-0.348*** (0.000)	-0.301*** (0.003)	-0.509*** (0.001)	-0.740*** (0.000)
Management Expenses	-0.27*** (0.000)	0.111 (0.134)	0.336*** (0.001)	0.094 (0.478)	0.202 (0.202)	-0.055 (0.825)	0.240 (0.262)

p < .10*, p < .05**, p < .01***

**Table 4. Logistic Regression Models of Asset Growth and Revenue Stability
Organizations under \$250,000 in Revenue by Subsector**

	Arts	Education	Housing	Human Services	Philanthropy	Public Benefit
	Coefficient (p-value)	Coefficient (p-value)	Coefficient (p-value)	Coefficient (p-value)	Coefficient (p-value)	Coefficient (p-value)
Stability of Government Grants	-0.231 (0.000)	0.021 (0.856)	-0.234 (0.033)	-0.049 (0.571)	-0.469 (0.060)	0.082 (0.861)
Stability of Contributions	0.147*** (0.001)	0.345*** (0.000)	1.074*** (0.000)	0.452*** (0.000)	0.639*** (0.000)	0.441** (0.013)
Stability of Program Services	0.333*** (0.000)	0.317*** (0.000)	0.061 (0.461)	0.291*** (0.000)	0.437*** (0.001)	0.500*** (0.003)
Stability of Member Dues	0.354*** (0.000)	0.288*** (0.000)	0.382** (0.024)	0.184*** (0.008)	0.307*** (0.008)	0.468*** (0.009)
Stability of Indirect Support	-0.167 (0.101)	-0.131 (0.252)	0.111 (0.486)	-0.024 (0.772)	-0.089 (0.640)	0.059 (0.858)
Stability of Dividends and Investment	0.124*** (0.007)	0.260*** (0.000)	-0.200** (0.014)	0.045 (0.419)	0.450*** (0.000)	0.486*** (0.006)
Stability of Special Events	0.281*** ✓ (0.000)	0.482*** ✓ (0.000)	0.590*** ✓ (0.000)	0.331*** ✓ (0.000)	0.511*** ✓ (0.000)	0.510** ✓ (0.023)
Stability of Nets Sales of Inventory	0.208*** ✓ (0.000)	0.135*** ✓ (0.001)	0.752*** ✓ (0.000)	0.305 ✓ (0.000)	-0.118 ✓ (0.451)	0.077 ✓ (0.798)
Revenue Diversity	0.038 ✓ (0.406)	-0.204*** ✓ (0.000)	0.713*** ✓ (0.000)	0.410*** ✓ (0.000)	0.651*** ✓ (0.000)	0.280* ✓ (0.087)
Management Expenses	-0.118 ✓ (0.178)	0.004 ✓ (0.921)	0.234 ✓ (0.169)	0.037 ✓ (0.748)	-0.292** ✓ (0.048)	-0.151 ✓ (0.650)

p < .10*, p < .05**, p < .01***



Conclusions

- Variation in stability across revenue streams
- Stability of revenues is important to one measure of organizations' health
- Aim to expand research in order to:
 - Identify what factors influence variability of revenues (do fundraising expenditures generate stable revenues in contributions or special events?)
 - Analyze the total covariance of revenue streams, with the potential to analyze ideal mix of revenues—the mix that maximize returns while minimizing risk (suggested by Kingma)