Student and Faculty Research Days

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Predictive Modeling of the Non-Profit Sector in the US

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Introduction

The nonprofit sector represents **5.4%** of total **GDP** in the US.

In 2015, the largest source of charitable giving came from individuals at **$268.28 billion**, or **71%** of total giving; followed by foundations (**$57.19 billion** or **16%**), bequests (**$28.72 billion** or 9%), and corporations (**$18.46 billion** or **5%**).

Tuition payments, in education, ticket sales, in sports, and hospital patient revenues, in the health segment, are the sector's main sources of total income; private charitable giving represents almost **14%** of that (total non-profit revenue), growing at a rate of **18.2%** adjusted for inflation; government grants add another **8%,** and corporate donations **5%**.

This research project seeks to help non-profit organizations understand the dynamics of the sector, and improve their fundraising efforts.

Credentials

Andrea Katherine Quevedo-Prince, 19, is a 3.82 GPA PA-Track, Health Science sophomore at **Pace University.** A member of the **Alpha Lambda Delta** honor society and the **Lambda Sigma** sophomore honor society, she has won nine world medals in Karate, of a total of **90** since 2010, between the US, Japan, Cyprus, and Venezuela, **57%** of them gold, and is instrumental in the fundraising efforts of the **WSKF USA Foundation.**

Professor Francisco J. Quevedo has raised funds for amateur sports since 2007, having exceeded **US$ 4,000,000** in revenues, and directly supported winning **205** world medals between 2007 and 2015 in Tokyo and Cyprus. He has also advised several foundations and NGO's in the US, Japan and Venezuela. He is a Trustee of the **WSKF USA Foundation.**

PREDICTIVE MODELING FOR THE US NON-PROFIT SECTOR: FROM A MACRO TO A MICRO PERSPECTIVE

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please support our fundraiser thank you!

Predictive Modeling for the US Non-Profit Sector: From a macro to a micro perspective

Research objectives

To define a predictive model for the non-profit sector at a macro level, that is, determine the variables that dictate the ups and downs of total revenue from donations.

To pinpoint mediators and moderators in the model, like commitment to the social cause, and the economic situation.

To define which communication strategies and tools work best in fundraising., and to corroborate this experimentally and statistically.
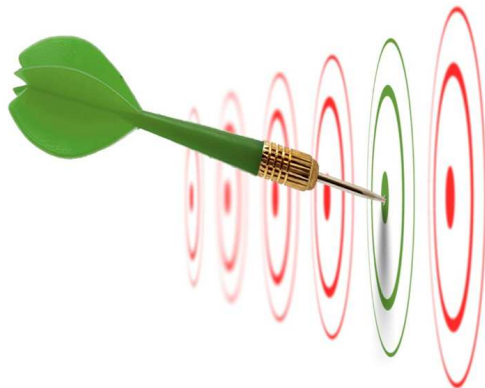
Methodology

Macro phase (first and second goals): extensive literature review, Factor, Regression, and Confirmatory Factor Analysis, to extract the appropriate variables that best fit the model.

Micro phase (third goal): considering the context, sample individual donors to test different strategies and tools, and corroborate findings.

Our Model

Non-Profit Revenues are a function of Disposable Personal Income and the level of public awareness regarding the cause:

$$NPR = -4401.542 + 528.327(DPI) + 23.121(TVCoverage) + \varepsilon$$

Our Model
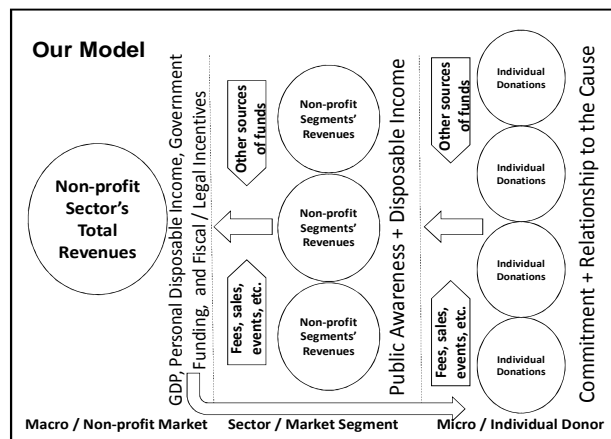
Application

Fundraisers must increase the public's awareness as to their social cause through newsletters, blogs, a coordinated social media campaign that integrates a single message, and a coherent PR strategy, that translates into positive press coverage.

Fundraisers must target deeper pockets, and combine different sources of funds, individual, corporate or government, and deploy a mix of fundraising activities to be successful.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.935[a]	.874	.852	456.072	1.004

a. Predictors: (Constant), TV coverage, Disposable Income

b. Dependent Variable: Environment NPR

Coefficients[a]

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	-4401.542	1473.477		-2.987	.012
	Disposable Income	528.327	142.949	.405	3.696	.004
	TV coverage	23.121	3.346	.757	6.911	.000

a. Dependent Variable: Environment NPR
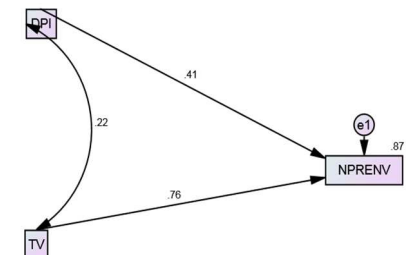
Covariance			Estimate	S.E.	C.R.	P	Label
DPI	<-->	TV	7.292	9.290	.785	.432	N/S