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Article

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# Assembling the Puzzle of the Nonprofit-Economic Development Linkage

**Abstract:** This study seeks to quantify the impact of the nonprofit sector on economic development by more clearly defining the diverse roles that nonprofits may play in development – instrumental, expressive, and connective. We begin by summarizing existing research on nonprofit organizations and economic development. Using secondary data, we test our model in 360 U.S. metropolitan areas for the years 2001–2006. Do nonprofit organizations produce economic growth? Our statistical findings suggest, "Not really" and "It depends." While some forms of nonprofit organizations (business associations) are positively related to growth, others such as congregations and social and fraternal associations may have a dampening effect. Overall, our findings suggest complex relationships between individual forms of capital, organizational structures, and development that may be place and time dependent. While our findings currently provide little guidance for policy makers attempting to promote economic development, our findings do have important implications for nonprofit and public policy scholars. Any attempt to explore the relationship between nonprofit activity and development must untangle indicators of individual behavior (church attendance or census return rates) from indicators of organizational structures (such as the number of specific organizations). Second, any effort to understand the impact of the nonprofit sector should disaggregate sector measures based upon a conceptual understanding of the diverse roles of various organizational types (for example, human service organizations versus social and fraternal organizations). Finally, growth and development and the role of the sector are contextual, exhibiting significant regional and temporal variation.

**Keywords:** economic development, social capital, creative capital, human capital

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## Introduction

Scholars continue to puzzle over the diverse rates of economic growth across geographic communities. While a region's physical endowments and the accumulation of individual level attributes have commonly been used to explain these differences, a growing body of literature focuses on the institutional and organizational determinants of economic outcomes (Easterly and Levine 2003; North 1990; Rodrick, Subramanian, and Trebbi 2004). Studies exploring business clusters (Saxenian 1993), the creative city (Markusen and Schrock 2006), the productive value of social capital (Putnam 1993), or some combination of the above (Hoyman and Faricy 2009) have all explored how various forms of organizational activity affect development. Despite the diversity of these studies, they all assume that economic development occurs within the broader political and social fabric of the community, supported by diverse community organizations and institutions.

While scholars drawing upon such conceptual approaches to economic development increasingly use measures of nonprofit activity in economic development models, there is very little overlap between nonprofit and economic development scholars. Our article seeks to answer two nonprofit questions that emerge from the economic development literature. First, what is the relationship between nonprofit organizations and economic development? Do nonprofits have an effect over and above a region's aggregated individual level characteristics? Many studies include both individual and organizational measures of capital but do not seek to disentangle the effects of individual and organizational resources. Second, what are the impacts of diverse types of nonprofits on development? Various measures of nonprofit activity figure prominently in a growing body of economic development studies (Flora et al. 1997; Hoyman and Faricy 2009; Rupasingha, Goetz, and Freshwater 2002); however, most include the nonprofit sector as an indicator of social capital (Rupasingha, Goetz, and Freshwater 2000) and do not consider the diverse roles that nonprofits may play in economic development. This analysis is a "first step" at cross-fertilization of two fields which had until now proceeded on parallel paths.

## A review of the literature

A growing body of empirical research supports conceptual models of an organizational approach to economic growth. Organizations may be more important to economic development than the aggregated sum of individual characteristics

or the financial impact of the sector. Organizations, as a structure for human activity, offer a developmental advantage. They (1) foster enduring relationships that activate human and financial resources; (2) efficiently coordinate specialized activities; (3) provide a space for conversation and action; and (4) create the legal, financial, and social boundaries that form identity and norms (Markusen and Schrock 2006; North 1990; Nahapiet and Goshal 1998; Oldenburg 1991; Putnam 1993). The organizational perspective is particularly relevant in today's knowledge-based economies that are heavily dependent on the production and exchange of knowledge and the risk innovation process, both socially interactive activities (Cooke and Morgan 1998; Nahapiet and Goshal 1998).

Research supports the relationship between a diverse body of organizations, such as human service organizations (Sampson, Morenoff, and Gannon-Rowley 2002), business associations (Cohen and Fields 2000; Crowe 2007; Maennig and Ölschläger 2011), civic, fraternal, and recreational groups (Putnam 1993), universities (Cohen and Fields 2000; Zucker, Darby, and Brewer 1998; Hoyman and Faricy 2009), cultural organizations (Markusen 2006), and a variety of indicators of community well-being. Nonprofit organizations are prominent in many of these fields and may play unique roles in providing economic value.

We posit that nonprofit organizations may affect economic development through three distinctive roles: instrumental, expressive, and connective (Frumkin 2005; Salamon, Hems, and Chinnock 2000). Through instrumental roles, nonprofits provide benefit to a larger public by providing innovative and efficient services to meet needs largely unmet by the market or government. Nonprofits are also expressive organizations, providing opportunities for like-minded individuals to come together to express and act upon their values. Finally, nonprofits fill a connective role, facilitating social connections that foster trust and reciprocity. In each role, nonprofit organizations lend permanence to activities that otherwise would be essentially transient, provide structure and bounds for human interactions, and enable organizations to secure resources. In the sections that follow, we explore these nonprofit roles and their relationship to economic development.

## Instrumental organizations and economic development

Nonprofit organizations have increasingly filled a void left by government cutbacks and reductions in force in the human services area (Mettler 2011; Tolbert,

Lyson, and Irwin 1998; Young 2000) and are now viewed as a routine part of community service delivery systems (Grønbjerg 2001). By 2010, nonprofits accounted for 87% of the employment in the human services field – a field that includes health, education, and social services (Salamon, Geller, and Sokolowsi 2012). These nonprofits fill instrumental roles – they provide essential human services to the public at large. Examples of instrumental nonprofits include both local (food pantries and tutoring programs) and nationally affiliated organizations (YMCA, Boy Scouts of America). Such organizations not only respond to the needs of individuals disadvantaged in the marketplace but also develop the human skills necessary for a modern economy (Abzug and Webb 1996).

Some studies report a positive relationship between the presence of instrumental nonprofits and a wide variety of economic measures. For example, Sampson, Morenoff, and Gannon-Rowley (Sampson, Morenoff, and Gannon-Rowley 2002) find that the quality, quantity, and diversity of organizational resources in instrumental nonprofits are positively associated with many indicators of community well-being. Przybylski, Littlepage, and Rosentraub (1996) find a positive relationship between the fiscal health of municipalities and the amount of United Way contributions.[1] Many scholars also note that a certain subset of instrumental nonprofits, educational institutions, have a positive impact on economic development (Blackwell, Cobb, and Weinberg 2002; Mellander and Florida 2007; Saxenian 1993; Zucker, Darby, and Brewer 1998).

However, not all research supports a discernible impact. Using an inclusive measure of the density of 501c(3) organizations, which included instrumental nonprofits, Hoyman and Faricy (2009) find no relationship between the density of nonprofits and economic growth. Others find a statistically significant but small relationship between various measures of instrumental nonprofit activity and fiscal health (Carroll, Gamsey, and Stater 2008; Clemente, Marcuello, and Fernando 2008).

## Expressive organizations and economic growth

Nonprofit organizations, particularly arts and culture and religious congregations, also provide opportunities for individuals to express their unique values and collectively act on those values (Frumkin 2005). Arts organizations include

1 As a national level instrumental nonprofit, contributions to the United Way serve as a proxy for contributions to the health and human service field.

large cultural institutions, such as the Museum of Modern Art and Lincoln Center for the Performing Arts, which may affect the economy through wages paid and the multiplier effect on other local businesses (McCarthy et al. 2004). Arts organizations may also be small organizations, such as local dance troupes or community theatres. While having a limited direct impact on the local economy, such small grassroots organizations may improve the attractiveness of the local community to visitors, residents, and businesses (Markusen and Schrock 2006). Florida (2002) proposes that much of the recent urban development in the United States has been fueled by individuals in "creative occupations" and that such individuals and their employers are drawn to areas that offer a quality of life experience, nurture artistic development, and provide opportunities to network (Markusen, 2006).

The research on the link between religious organizations and economic development provides mixed results. At the organizational level, places of worship may reinforce values and traits that are conducive to economic development. Religious institutions may offer their members strong incentives to follow a moral code based on trust, honesty, and benevolence – and these incentives may contribute to economic development by reducing transaction costs (Isserman, Feser, and Warren 2009; McCleary and Barro 2006). However, while individual religious values may be positively associated with development (McCleary and Barro 2006; Rupasingha and Chilton 2009), Tolbert, Lyson, and Irwin (1998) find that the number of religious congregations in an area is associated with higher poverty rates and higher rates of unemployment.

## Connective organizations and economic development

Many economic development models incorporate measures of the nonprofit sector as one indicator of social capital. These models assume that nonprofits play connective roles, bringing together individuals with similar interests to engage in a common cause or activity. National level connective organizations range from advocacy organizations like the American Association of Retired Persons to fraternal orders like the Elks or Woodsmen, which have local chapters. Local connective organizations include business associations (McCormick, Hawley, and Melendez 2008) and many of the civic/social and fraternal organizations, such as gardening clubs and bowling leagues, popularized in recent studies of regional development (Putnam 2000). Some connective organizations, such as Chambers of Commerce, actively promote economic development.

Connective organizations promote development by encouraging members to interact in ways that foster trust, facilitate problem solving, encourage resource sharing, and promote future collective action (Flora et al. 1997; Maennig and Ölscläger 2011). Associations structure relationships and "…instill in their members habits of cooperation, solidarity, and public-spiritedness" (Putnam 1993, 89–90). Rupasingha, Goetz, and Freshwater (2002) demonstrate a clear and positive relationship between connective organizations and economic growth. They find that both member serving associations and civically oriented organizations have a positive effect on economic growth in U.S. counties and a negative effect on poverty rates. Putnam (1993) concludes his study of development in Italy noting, "…economics does not predict civics, but civics does predict economics, better than economics itself" (p. 157).

Although there appears to be a great deal of interest in the effect of connective nonprofits on development, other studies offer conflicting results. Knack and Keefer (1997) and Huber (2009) find that although trust and civic cooperation are generally associated with stronger economic performance, connective nonprofit activity is not necessarily associated with economic growth or investment. Other scholars challenge the assumption that interactions within civic and social associations drive development. Using Silicon Valley as an example, Cohen and Fields (2000) attribute growth to the intensity of professional interactions between firms and regional institutions, rather than social interactions in social or civic organizations. Similarly, Cooke, Clifton, and Oleaga (2005) find that regional innovation is associated with firm level interactions opposed to individual social capital.

## Hypotheses

Despite the growing interest in the impact of various types of organizations on economic development, our review of the literature notes that existing empirical studies provide mixed evidence of the relationships between various types of nonprofit organizations and development. For the purposes of structuring our analysis, we posit a positive relationship between each nonprofit activity and development.

Hypothesis 1 (H1) – Nonprofit human service organizations are positively associated with economic growth.

Hypothesis 2 (H2) – Nonprofit institutions of higher education are positively associated with economic growth.

Hypothesis 3 (H3) – Nonprofit arts and culture organizations are positively associated with economic growth.

Hypothesis 4 (H4) – Religious congregations will be positively associated with economic growth.

Hypothesis 5 (H5) – Nonprofit business associations are positively associated with economic growth.

Hypothesis 6 (H6) – Nonprofit social and fraternal organizations are positively associated with economic growth.

## Data and methodology

Our study models the impact of various forms of nonprofit organizational level activity on changing regional economic productivity between 2001 and 2006.[2] Our unit of analysis is the metropolitan area statistical area (MSA) level and includes 360 metropolitan areas in the United States (based on the 2004 OMB metropolitan area classifications).[3] Our data are assembled from several sources.

Our dependent variable for all models is the ratio of gross metropolitan product (GMP) in 2006 to GMP in 2001. We calculate GMP with data from the Bureau of Economic Analysis's Regional Economic Information System (REIS) and gross state product (GSP) tables. We estimate the metropolitan area contribution to GSP by calculating the ratio of county-level personal income to state-level personal income (from REIS) and then multiplying this ratio with the total GSP for the state in which the county resides for the years 2001 and 2006. We then aggregate these county-level estimates of GSP contribution to the MSA level for each year. Economic development is often measured by an increase in welfare, change in GDP per capita, or other measures of wages and productivity (Goetz and Rupasingha 2003; Rupasingha and Chilton 2009). We measure change in GMP as the ratio of GMP in 2006 to GMP in 2001. This is an explicit change calculation where higher ratios represent higher positive change and lower ratios represent lower positive or negative change.

Our key independent variables are measures of nonprofit organizational activity in the fields of human service and higher education, arts and culture, and social, business, and recreational associations. This nonprofit data comes from the 2001 National Center for Charitable Statistics (NCCS) Business Master

**2** We chose the years 2001 and 2006 to capture the endpoints of the latest growth cycle. We chose not to use the year 2007, because many metropolitan areas in the United States, by this time, were leading into the negative growth phase of our latest national economic recession.

**3** Missing data for some counties forced us to exclude many metropolitan areas in our estimations.

Files (BMF)[4] of c(3) and c(other) organizations. From BMF of c(3) organizations, we use the National Taxonomy of Exempt Entities 12 major codes[5] to identify human service organizations (HU), higher education institutions (BH), and arts organizations (AR). From the BMF files of organizations other than charitable organizations, we use the subsection code to identify two types of connective organizations: business and social/fraternal. We create an aggregate sum of social and recreation clubs (c(7)) and fraternal organizations (c(8) and c(10)). We include a separate measure of business associations (c(6)), consistent with our review of the literature (Cohen and Fields 2000). The number of congregations is available from the Association of Religion Data Archives (ARDA).

We then calculate all organizational variables as the density of organizations: the number of organizations per 10,000 residents. Consistent with other studies of economic development (Rupasingha, Goetz, and Freshwater 2002), we use a measure of organizational density, as opposed to a measure of economic activity. Economic activity is concentrated in a small number of the very largest nonprofits, and a measure of economic activity may underestimate the important roles that many small organizations and associations play in local communities.

In accordance with other models of economic development, our model controls for individual measures of human, creative, and social capital (Hoyman and Faricy 2009). Our measures of individual human capital are education rates, measured as percent of adult population 25 years and above with a bachelor's degree, and poverty rates, measured as the percent of

**4** It is important to note the limitations of using the BMF files for research. First, the data files only contain those organizations that have registered with the IRS and are *active*. The file probably overestimates the number of registered, active organizations, because closed organizations may remain in the dataset. In addition, the file does not contain those organizations that are not required to register with the IRS, which includes those organizations that anticipate less than $5,000 in gross receipts, churches and their auxiliary programs, and many local chapters of national organizations (for example, local Red Cross chapters). For further information, see the Guide to Using NCCS Data http://nccsdataweb.urban.org/kbfiles/468/NCCS-data-guide-2006c.pdf.

**5** It is important to recognize that a particular nonprofit organization may play multiple roles. For example, a church, largely an expressive organization, may also operate a day care center and a food pantry, serving very instrumental roles for its members and the larger community. On the other hand, the YMCA and the Salvation Army, both provide essential social services to local communities within the context of a unique value orientation. Similarly, many private universities and colleges, for example, Notre Dame and Wake Forest, are affiliated with religious denominations. By relying upon the NCCS classification scheme, we are only able to capture the primary role of each organization as determined by the institutional classification system.

population that falls below the official poverty line, which is defined by the Department of Health and Human Services and calculated annually by the Bureau of the Census. Both measures come from the U.S. Bureau of the Census. The creative class data for the individual level are provided by the Economic Research Service (ERS) at United States Department of Agriculture. The ERS data refine Florida's definition by excluding occupations that primarily service the local economy (such as health care technicians and school teachers).[6] We used the ERS measure of creative class occupations/employment broadly and the more narrowly defined arts occupations/employment for our models. This measure eliminates many of the occupations that have low creativity requirements (Isserman, Feser, and Warren 2009; McGranahan and Wojan, 2007) and further distinguishes between creative and artistic occupations. We also include a measure of civic engagement – 2000 census return response rates (NERCRD) – and individual religiosity – number of religious adherents (ARDA).

Our model also includes several general control variables that are commonly found in economic development and growth models. We use the measure of GMP in 2001 to control for existing levels of economic development and metropolitan size for each region, accounting for convergence in development (Fallah and Partridge 2007). To control for the impact of racial diversity and community polarization, we calculated a White's Clustering Measure (RCL) of racial segregation for each metropolitan area. This measure of spatial clustering compares the average distance between $X$ minority members and $Y$ majority members. It equals 0 when minority members display the same clustering as the majority and increases as minority members display greater clustering than is typical of the majority (Massey and Denton 1988). Since indices were available at the county level, we created a MSA measure. We multiplied the county populations with the county index scores, aggregated to the MSA level, and then divided by population to arrive at the MSA index value. In our third model, we also include regional dummy variables (Northeast, South, and West) to control for differences in economic growth accounted for by geographic region (Rupasingha, Goetz, and Freshwater 2002). See Table 1 for a summary of variables.

Table 2 provides the descriptive statistics for our model variables, including logarithmic transformations of our continuous independent and dependent variables. We have included measures of skewness and kurtosis to illustrate the need for logarithmic transformations of our key variables. Across most

6 See http://www.ers.usda.gov/Data/CreativeClassCodes/methods.htm for a more in-depth discussion of this refinement.

**Table 1:** Key model variables and sources.

| Variable | Variable type | Form | Data source |
|---|---|---|---|
| Change in Gross Metropolitan Product per worker, 2001–2006 | Dependent variable | – | Bureau of Economic Analysis |
| Percentage of adult population with bachelor's degrees, 2000 | Individual level | Human Capital | Bureau of the Census |
| Percent employment in arts industries, 2000 | Individual level | Creative Capital | Bureau of the Census |
| Percent of the population that are religious adherents, 2000 | Individual level | Social Capital | Association of Religious Data Archives |
| Census response rate, 2000 | Individual level | Social Capital | Northeast Regional Center for Rural Development |
| Percent of population in poverty, 2000 | Control | – | Bureau of the Census |
| Residential clustering of white households, 2000 | Control | – | Arizona State University GeoDa Center |
| Gross Metropolitan Product, 2001 | Control | – | Bureau of Economic Analysis |
| Human services organizations per 10,000 population, 2000 | Organizational level | Instrumental | National Center or Charitable Statistics |
| Nonprofit higher education organizations per 10,000 population, | Organizational level | Instrumental | National Center or Charitable Statistics |
| Arts organizations per 10,000 population | Organizational level | Expressive | National Center or Charitable Statistics |
| Number of religious congregations per 10,000 population | Organizational level | Expressive | Association of Religious Data Archives |
| Number of business associations per 10,000 population | Organizational level | Connective | National Center or Charitable Statistics |
| Number of social and fraternal associations per 10,000 population | Organizational level | Connective | National Center or Charitable Statistics |

measures, the estimates of skewness and kurtosis lie outside of the recommended range of −1 to +1 which illustrates closeness to normality (based on Hair et al. 1998, 38; 70–3). Log transformations greatly improved most variables in terms of skewness and kurtosis and yielded data more in line with the normality assumptions of multiple regression. Save for the regional variables,

**Table 2:** Model variable descriptive statistics.

| Variable | Mean | St. Dev. | Skewness | Kurtosis |
|---|---|---|---|---|
| Ratio of 2006 GMP to 2001 GMP | 1.38 | 0.14 | 0.87 | 1.64 |
| Percent of adult population with bachelor's degrees, 2000 | 14.31 | 4.53 | 0.94 | 1.62 |
| Percent of the population that are religious adherents, 2000 | 48.70 | 12.31 | 0.39 | 0.00 |
| Percent employment in arts industries, 2000 | 2.78 | 0.98 | 1.17 | 2.74 |
| Census response rate, 2000 | 66.18 | 6.09 | −0.77 | 2.99 |
| Gross metropolitan product, 2001 ($ Billion) | $23.66 | $23.66 | 8.17 | 89.78 |
| Percent of population in poverty, 2000 | 11.57 | 3.85 | 1.50 | 4.19 |
| Residential clustering of white households, 2000 | 0.47 | 0.58 | 2.22 | 6.45 |
| Human services organizations per 10,000 population, 2000 | 6.23 | 2.12 | 1.03 | 1.88 |
| Nonprofit higher edudation organizations per 10,000 population | 0.16 | 0.11 | 1.22 | 2.51 |
| Arts organizations per 10,000 population | 2.67 | 1.13 | 2.24 | 11.47 |
| Religious congregations per 10,000 population | 10.39 | 4.25 | 0.96 | 0.79 |
| Business organizations per 10,000 population | 2.71 | 1.57 | 2.68 | 9.91 |
| Social and fraternal organizations per 10,000 population | 9.49 | 3.86 | 3.21 | 27.66 |
| Log of the ratio of 2006 GMP to 2001 GMP | 0.14 | 0.04 | 0.51 | 0.6 |
| Log of the percent of adult population with bachelor's degrees, 2000 | 1.17 | 0.13 | 0.01 | −0.03 |
| Log of the percent of the population that are religious adherents, 2000 | 1.67 | 0.11 | −0.29 | −0.11 |
| Log of the percent employment in arts Industries, 2000 | 0.29 | 0.07 | 0.56 | 0.56 |
| Log of the census response rate, 2000 | 1.83 | 0.04 | −1.63 | 8.32 |
| Log of Gross Metropolitan Product, 2001 | 9.95 | 0.51 | 1.05 | 0.99 |
| Log of the percent of population in poverty, 2000 | 1.08 | 0.12 | 0.32 | 0.5 |
| Log of the residential clustering of white households, 2000 | 0.38 | 0.09 | 1.42 | 2.32 |
| Log of human services organizations per 10,000 population, 2000 | 0.84 | 0.12 | 0.13 | −0.09 |
| Log of nonprofit higher edudation organizations per 10,000 population | 0.06 | 0.04 | 0.85 | 1.12 |
| Log of arts organizations per 10,000 population | 0.55 | 0.12 | 0.49 | 1.29 |
| Log of religious congregations per 10,000 population | 1.03 | 0.16 | 0.13 | −0.51 |
| Log of business organizations per 10,000 population | 0.54 | 0.15 | 0.99 | 1.83 |
| Log of social, fraternal, civic organizations per 10,000 population | 1.00 | 0.14 | −0.01 | 1.45 |

we will use the logarithmic transformation of each variable in our models. For our analysis, we estimate an Ordinary Least Squares model that regresses GMP change on measures of organizational and associational activity, while incorporating measures of individual capital, community size, and geographic location as controls.

## Statistical results

Table 3 shows the bivariate correlations for the variables previously discussed. The correlations show significant associations between our dependent variable, percent change in GMP per worker from 2001 to 2006, and several independent variables. Although the one-to-one relationships between changing productivity and the several independent variables cannot be classified as strong associations, statistical significance is present at both the individual level and the organizational level for many of our independent variables (for this correlation matrix, any one-to-one *r*-value greater than 0.087 or less than −0.087 is statistically significant). This represents a first hurdle passed and justifies our goal to explore our hypotheses using regression analysis. In addition, the weak correlation between religious adherents and density of congregations supports the findings of others that these variables represent two distinct phenomena (Rupasingha and Chilton 2009). Despite the high correlations between some of the independent variables indicated in bold (for example, the high bivariate correlations between bachelor's degree percent (individual level) and several individual and organization level variables), we will keep these variables in our model based on our review of the literature and our desire to represent the best linear unbiased estimation of our hypothesized relationships.[7]

Table 4 shows the results of our regression modeling process. We have modeled the relationship between nonprofit factors and economic growth in three steps. Model 1 shows the influence of the individual level factors, including key control variables, on economic growth. This model explains ~20% of the variation in our dependent variable. Important individual predictors of increased productivity include poverty rate (positive, statistically significant), the percentage of religious adherents (negative, marginally significant), the MSA level estimate of white residential clustering (negative, statistically significant),

7 We conducted sensitivity analyses of the individual regression models and found that the exclusion of the bachelor's percent variable did not substantially impact the size or direction of the other beta coefficients for those models.

**Table 3:** Bivariate correlation matrix of model variables.

| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Log of the ratio of 2006 GMP to 2001 GMP | 1.000 | | | | | | | | | | | | | | | | |
| 2 | Log of the percent of adult population with bachelor's degrees, 2000 | 0.031 | 1.000 | | | | | | | | | | | | | | | |
| 3 | Log of the percent of adult population that are religious adherents, 2000 | −0.004 | −0.106 | 1.000 | | | | | | | | | | | | | | |
| 4 | Log of the percent employment in arts industries, 2000 | 0.132 | 0.775 | −0.124 | 1.000 | | | | | | | | | | | | | |
| 5 | Log of the census response rate, 2000 | −0.275 | 0.208 | 0.186 | 0.086 | 1.000 | | | | | | | | | | | | |
| 6 | Log of gross metropolitan product, 2001 | −0.014 | 0.447 | 0.034 | 0.459 | 0.066 | 1.000 | | | | | | | | | | | |
| 7 | Log of the percent of population in poverty, 2000 | 0.260 | −0.562 | −0.047 | −0.386 | −0.552 | −0.245 | 1.000 | | | | | | | | | | |
| 8 | Log of the resdential clutering of white households, 2000 | −0.334 | −0.005 | 0.091 | −0.035 | 0.221 | 0.054 | −0.258 | 1.000 | | | | | | | | | |
| 9 | Log of human service organzations per 10,000 population, 2000 | −0.173 | 0.486 | −0.077 | 0.265 | 0.410 | −0.074 | −0.409 | 0.118 | 1.000 | | | | | | | | |
| 10 | Log of nonprofit higher education organizations per 10,000 Population | −0.266 | 0.035 | 0.106 | −0.081 | 0.223 | −0.117 | −0.158 | 0.180 | 0.379 | 1.000 | | | | | | | |
| 11 | Log of arts organizations per 10,000 population | −0.037 | 0.686 | −0.074 | 0.521 | 0.226 | −0.005 | −0.404 | 0.031 | 0.754 | 0.187 | 1.000 | | | | | | |
| 12 | Log of religious congregations per 10,000 population | −0.148 | −0.310 | 0.276 | −0.430 | −0.006 | −0.565 | 0.154 | −0.038 | 0.030 | 0.110 | −0.026 | 1.000 | | | | | |
| 13 | Log of business organizations per 10,000 population | 0.003 | 0.474 | 0.014 | 0.182 | 0.314 | 0.031 | −0.302 | 0.012 | 0.671 | 0.213 | 0.567 | 0.021 | 1.000 | | | | |
| 14 | Log of social and fraternal organiztion per 10,000 population | −0.277 | 0.452 | 0.023 | 0.232 | 0.410 | −0.027 | −0.420 | 0.200 | 0.724 | 0.404 | 0.603 | 0.049 | 0.590 | 1.000 | | | |
| 15 | Northeast | −0.234 | 0.156 | 0.139 | 0.101 | 0.056 | 0.146 | −0.227 | 0.404 | 0.128 | 0.251 | 0.213 | −0.151 | −0.079 | 0.185 | 1.000 | | |
| 16 | Sooth | 0.285 | −0.186 | 0.078 | −0.209 | −0.497 | −0.081 | 0.427 | −0.262 | −0.427 | −0.224 | −0.320 | 0.273 | −0.253 | −0.383 | −0.314 | 1.000 | |
| 17 | Weet | 0.273 | 0.048 | −0.301 | 0.206 | 0.035 | 0.036 | 0.107 | −0.225 | 0.086 | −0.209 | 0.118 | −0.249 | 0.035 | −0.170 | −0.191 | −0.431 | 1.000 |

**Table 4:** Three regression models.

| Determinants of GMP change (2001–2006) | | | | | | |
|---|---|---|---|---|---|---|
| | Mode1 1: individual | | Model 2: individual and organization | | Model 3: individual, organization and region | |
| | *ß* | *t*–statistic | *ß* | *t*-statistic | *ß* | *t*-statistic |
| (Constant) | 0.293 | 2.197 | 0.436 | 3.286 | 0.373 | 2.951 |
| Percent of adult population with bachelor's degrees, 2000 (log) | 0.016 | 0.552 | 0.048 | 1.382 | 0.009 | 0.251 |
| Percent of the population that are religious adherents, 2000 (log) | 0.034 | 1.837 | 0.061 | 3.225*** | 0.078 | 4.208*** |
| Percent employment in arts industries, 2000 (log) | 0.135 | 2.909** | 0.106 | 2.195* | 0.094 | 1.993* |
| Percent census response rate, 2000 (log) | −0.140 | −2.404* | −0.099 | −1.688 | −0.062 | −1.041 |
| Gross metropolitan product, 2001 (log) | −0.005 | −1.184 | −0.022 | −4.038*** | −0.021 | −4.214*** |
| Percent of population in poverty, 2000 (log) | 0.075 | 3.160** | 0.066 | 2.969** | 0.008 | 0.346 |
| Residential clustering of white jouseholds, 2000 (log) | −0.116 | −4.824*** | −0.087 | −3.764*** | −0.044 | −1.858 |
| Human services organizations per 10,000 population, 2000 (log) | | | −0.015 | −0.480 | −0.028 | −0.938 |
| Nonprofit higher education organizations per 10,000 population (log) | | | −0.117 | −2.219* | −0.046 | −0.902 |
| Arts organizations per 10,000 population (log) | | | −0.012 | −0.391 | −0.010 | −0.319 |
| Religious congregations per 10,000 population (log) | | | −0.064 | −3.995*** | −0.080 | −5.092*** |
| Business organizations per 10,000 population (log) | | | 0.065 | 3.406** | 0.064 | 3.419*** |
| Social and fraternal organizations per 10,000 population (log) | | | −0.074 | −3.618*** | −0.019 | −0.897 |
| Northeast | | | | | 0.005 | 0.656 |
| South | | | | | 0.040 | 6.124*** |
| West | | | | | 0.042 | 6.100*** |
| *$p$ <0.05, **$p$<0.01, ***$p$<0.001 | Adj $R^2$ | | Adj $R^2$ | | Adj $R^2$ | |
| | 0.198 | | 0.289 | | 0.382 | |

employment in Arts Industries (positive, statistically significant), and census response rate (negative, statistically significant). In this truncated model, the variance inflation factors (VIFs) for each variable showed indications of small amounts of multicollinearity. Hair et al. (1998, 188–93) proffer that VIFs less than 10 indicate normal to moderate multicollinearity that have minimal impact on model results (the VIFs for any variable did not approach this level in any of the three models specified).

Model 2 shows the results for our model when adding in the nonprofit organizational density variables. This model adds explanatory power by accounting for variation in the dependent variable at a 29% level, adding an additional 9 percentage points to the truncated model (with the adjusted *r*-squared increasing from 0.20 to 0.29). In this model, arts employment, poverty, and residential clustering remain significant. The census response rate variable goes from statistically significant to marginally significant – and the GMP for 2001 becomes significant (in the same direction as before, negative) for this specification. While the measure of religious adherents is not significant in the individual model, it becomes significant when adding organizational measures. In addition, the following nonprofit density variables are also significant in this model: nonprofit higher education organizations per 10,000 population (negative), religious congregations per 10,000 population (negative), business organizations per 10,000 population (positive), and civic, social, and fraternal organizations per 10,000 population (negative). For this specification, collinearity increases slightly across several variables, but all VIFs are still less than 10.

Model 3 shows results for our final specification that includes all previous variables as well as regional variables (Northeast, West, and South with Midwest as the comparison base region). The addition of the regional dichotomous variables reallocates variation away from some of the previous individual level and nonprofit variables toward a stronger regional explanation and also increases the explanatory value of the independent variables by another 9 percentage points (with the adjusted *r*-squared increasing from 0.29 to 0.38). Percent of population who are religious adherents remains a significant predictor. For the nonprofit density variables, the number of religious congregations per 10,000 population and the number of business organizations per 10,000 population remain significant. The census response rate and the poverty rate are neither significant nor nonprofit higher education organizations per 10,000 population or civic, social, and fraternal organizations per 10,000 population. Being an MSA's located in the American South and West is positively related to change in GMP. The VIFs increase slightly, but collinearity still appears to have a minimal impact on our final model.

## Discussion

Salamon, Hems, and Chinnock (2000) encourage nonprofit scholars to go beyond studying the size and the structure of the nonprofit sector for understanding the societal impact of this diverse body of organizations. Do nonprofit organizations contribute to economic growth? What roles do nonprofits play in development? Our statistical findings suggest, "Not really" and "it depends." We find no support for the instrumental roles of nonprofits in economic development in our model. Nor does our analysis support our hypotheses that expressive organizations contribute to economic growth. While arts employment is positively related to growth, the presence of arts organizations is not. Furthermore, the presence of organizations appears to activate the economic value of religiosity, while the density of religious congregations dampens growth. Finally, our study does not confirm Robert Putnam's assertion that connective associations improve growth. While business associations are positively associated with growth, social and fraternal organizations are negatively related to growth, when not controlling for region. What can we learn from these results?

First, our findings seem to contradict optimistic growth strategies (such as Richard Florida's concept of the creative class) that one can change the fate of a region from a "loser to winner" by supporting the development of cultural institutions, or other types of organizations, that attract or support a certain class of workers. Our findings also challenge the importance of social and fraternal organizations in economic development. Knack and Keefer (1997) distinguish between distributional coalitions that seek to retain or redistribute benefit and those organizations that create the conditions that build capital. Recent studies of social capital and economic development have provided more "fine-grained" examinations of associational activity. Our findings are consistent with those challenges to the social capital literature that recognize the multidimensional nature of social capital and connective organizations. Differentiating between the connections that occur within social organizations and the interactions that occur within and across economic institutions (Cohen and Fields 2000; Cooke, Clifton, and Oleaga 2005) may be key to understand the connective role that nonprofits play in the development process.

While incorporating dimensions of the nonprofit organizational structure into our model improves the explanatory value of our model, consistent with individual models of economic development, we find that a region's stock of individual capital and regional resources matters. For example, in our analysis, while religious adherents (a community measure of individual behavior) are

positively associated with growth, the density of religious congregations is negatively associated with growth. Consistent with previous studies that explore the relationship between religiosity and economic development, we suspect that community measures of adherence may reflect a shared value structure – trust, honesty, benevolence, and work ethic – that is associated with economic well-being (Rupasingha and Chilton 2009). It is also particularly important to note that this productive value becomes significant in the presence of organizational activity. Further analysis is needed to explore the moderating and mediating relationships between individual and organizational level variables.

On the other hand, the density of nonprofits may represent community fragmentation, similar to our measure of residential racial clustering, which reduces the likelihood that individuals and organizations will work together to promote growth. As others have noted, community polarization impedes development (Rupasingha, Goetz, and Freshwater 2002). Rather than measuring some form of civic capacity, some measures of nonprofit activity, such as density of congregations or the density of civic associations, may actually measure the fragmentation of communities across a range of private values.

Others have suggested that some forms of associational activity actually create costs by diverting resources away from more productive activities (Rupasingha and Chilton 2009). In contrast, business associations may at least share common development goals that enable diverse community interests to come together (Flora and Flora 1993). Our findings do support local policies that encourage the development and engagement of diverse business associations. Rather than solely pursuing the self-interests of their members, such business associations may connect diverse community interests and promote local problem solving and commitment to local issues. Business associations may promote local and extra-linkages that encourage discussion and promote the passage of bonds and other initiatives that are necessary for industrial recruitment and other self-development efforts (Crowe 2007; Flora et al. 1997).

Our results also provide evidence that the drivers of development may be contextual. We seriously doubt that universities actually contribute to economic decline. We suspect that our findings are associated with both the unique time of our study and the regional drivers of economic development. For example, if we examine the 50 regions with the highest growth rates during this time, all are located in the south or west. Much of this growth during this time occurred in the extractive/natural resource industries, in places such as Cheyenne Wyoming, and the service/construction sectors, in Naples, Florida. The south and west are also home to fewer major private educational institutions. There is a lower return on educational investment and achievement in traditionally low-wage regions (Goetz and Rupasingha 2003), where most of the growth during this time

has occurred. When controlling for region, the density of educational organizations is no longer significant. Second, although most nonprofit human service organizations provide local services, universities may be a large net exporter of value. The value of universities may largely accrue to the individuals who attain an education and then leave the area, rather than to the regions in which institutions are located (Florida 1999). These findings may suggest that local leaders should consider community engagement strategies within the context of the local economic structure.

Finally, nonprofit organizations are regionally distributed, and similar organizations may exert varying levels of influence across regions. Comparing the density of fraternal and social organizations across regions, we find that on average there are 4.5 associations per 10,000 residents in the south and west, there are 7.6 and 6.6 associations per 10,000 residents in the midwest and east, respectively. The south has historically been characterized by low levels of social capital (Putnam 2000) and in extractive economies or economies dominated by multi-national retail or service corporations, local associations may have limited connective value (Tolbert 2005). Our findings suggest the importance of understanding both time and place, as we seek to interpret studies of the impact of the nonprofit sector and generalize to other situations.

There are some important methodological caveats to our study. Economic modeling can be complex and subjective, especially when one attempts to capture the dynamic of metropolitan economic growth. Using the past literature as a guide, we have endeavored to specify the most appropriate models while acknowledging that there are alternative specifications that may lead to different results. Our model was conceptually reliant on Rupasingha, Goetz, and Freshwater (2002). Some of the important choices considered were representing the dependent variable as a ratio, exclusion of the population variable as a control due to the use of density measures (which include population in the denominator) and the use of a lagged GMP (which was highly correlated with population). Both of these decisions may have introduced biased $\beta$ estimations through inappropriate variable inclusion and exclusion. We also addressed normality issues within our data by transforming our model variables logarithmically, possibly introducing subsequent prediction of bias issues related to the $\beta$ estimations.

Our research has important implications for future scholarship. Any attempt to explore the relationship between nonprofit activity and development must continue to untangle indicators of individual behavior (church attendance or census return rates) from indicators of organizational structures (such as the number of specific organizations). Organizations matter beyond the effects of individuals and place. Second, future efforts to study the impact of the sector

should continue to disaggregate sector measures based upon a conceptual understanding of the diverse roles of various organizational types. Scholars often use aggregated measures of nonprofit activity to explain economic development (Rupasingha, Goetz, and Freshwater 2000); however, such measures may understate the complexity of the nonprofit sector. Finally, the relationship between development and the role of the sector are contextual, exhibiting significant regional and perhaps temporal variation. Nonprofit scholars should further explore the role of the nonprofit sector across diverse geographies and even across time. While we are not quite ready to conclude that the nonprofit sector negatively affects, or at best minimally affects, economic development, we can conclude that any efforts to study such questions need to proceed with caution, involving more refined conceptual modeling and measurement.

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