I. Rational and Significance

According to Coleman, social capital is defined as those features of social structure (such as trust, norms, and sanctions), appropriable social institutions, and informational channels that facilitate collective action. Though there are multiple competing definitions and measures of social capital, most researchers agree on two components of the concept of social capital. The structural component of social capital includes the extent and intensity of participation in social networks (e.g., political participation, civic participation, religious participation, and volunteering). The cognitive component includes people's perceptions of the level of interpersonal and interracial trust, reciprocity, and mutual help.

Though social capital has been linked to economic outcomes at the national level (Fukuyama, 1995; Guiso, Sapienza, & Zingales, 2004; Knack & Keefer, 1996) and at the individual level (Glaeser, Laibson, & Sacerdote, 2000; Lin, 1998), there has been little empirical research at the community level. Furthermore, the question of how community-level social capital facilitates economic outcomes at the individual level has not been studied before. In this study, thus, we seek to examine how community-level social capital influences individual economic outcomes, in particular, the racial gap in employment.

Prior work has explored racial inequality using standard wage equations in the neoclassical economic tradition. However, even though Robert Putnam has brought much attention to the importance of contextual characteristics such as social capital as explanations for regional differences in social outcomes, prior work has ignored the differential level of social capital at the community level and how they affect the structure of opportunity for two main reasons. First, considerable problems with the measurement of social capital at the community-level have plagued the field, thereby rending difficult the identification a reliable measure of community-level differences. Second, the ability to simultaneously test multi-level predictors—in this case, individual- and community-level—in a single model has been difficult, if not impossible, until recently.

However, recent advances in the field have made these obstacles more manageable. In addressing the first obstacle, there are now new data sources with multidimensional measures of social capital for 89 communities in the United States. By employing direct measures of community-level social capital, we can investigate if levels of trust and social cohesion at the community level, i.e., social capital, improve labor market outcomes for vulnerable populations. For the second obstacle, a new econometric method, multilevel hierarchical linear modeling allows one to estimate simultaneous influences of individual-level and community-level factors.

This work has several likely policy implications. If we find that social capital is an important determinant of racial economic inequality, then this provides policy-makers interested in reducing inequality with another set of policy levers to pull. If social capital is found to be unrelated to various measures of economic inequality, then this provides more support for those who argue that individual agency is more important than structures of opportunity.

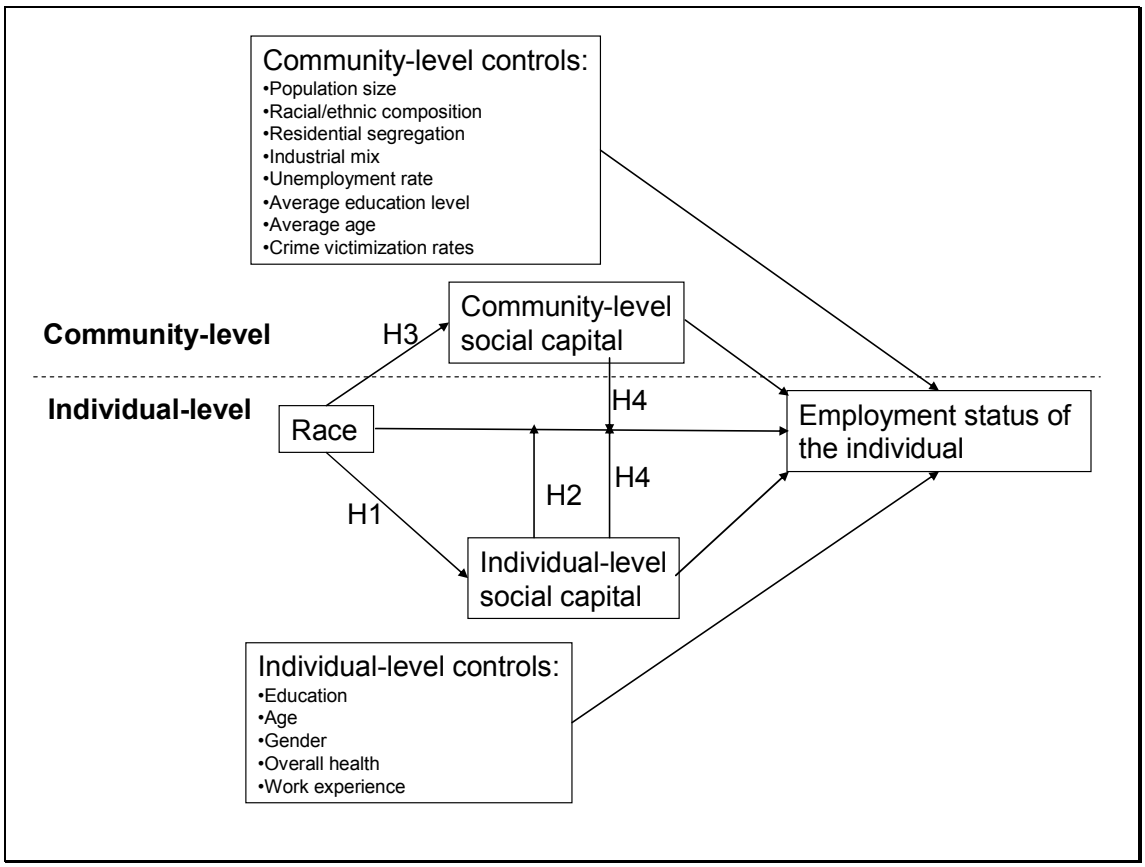
II. Research Questions

In this project, we want to look at how social capital influences racial differences in employment. Existing research suggests that employment outcomes vary geographically. For example, Reimers (2000) suggested that the chance of being employed for Black and Hispanic men and women varies significantly across US regions and is related to community-level factor such as the area unemployment rate, education level and age structure. Rodgers and Freeman (2000) found similar results for 44 metropolitan statistical areas. These researches attributed racial differences in employment to a number of individual factors, such as education, criminal activity, and family background, and to regional economic factors such as the tightness of the labor market.

But despite the major contribution that these and other studies have made, there are several significant gaps in the research literature. First, the influence of area social capital has not been accorded the same prominent attention as economic factors. As a result, we do not know much about whether and how social capital in the region influences employment rates of racial minorities. Furthermore, little is known about whether social capital influences racial minorities in the same way as it does for majority population. The processes and mechanisms by which social capital facilitates or inhibits racial minorities to gain employment need to be empirically explored. Finally, within minority populations, we do not know much about the impact of social capital in terms of gender and ethnic subcategories. For example, does social capital reduce or increase wage disparities among Hispanic women in the same way as it influences Black males?

As diagrammed in Figure 1, the theoretical model postulates that employment status of the individual depends on social capital at both individual- and community-level, controlling for other factors.

Figure 1. Theoretical model.



We will thus test the following set of hypotheses:

H1. Individual-level social capital mediates the relationship between race and employment status. The magnitude of the race coefficient will fall when individual-level social capital is entered into the model.
H2. There is a significant interaction present between individual-level social capital and race such that social capital is even more strongly associated with the probability of employment for racial minorities. The magnitude of the coefficient on the race*individual level social capital term is greater than that of the individual level social capital term.
H3. Community-level social capital mediates the relationship between race and employment status. The magnitude of the race coefficient will fall when community-level social capital is entered into the model.
H4. There is a significant interaction present between individual- and community-level social capital such that individual-level social capital has a stronger effect when community-level social capital is low. The magnitude of the race coefficient will decrease more than the race coefficient in H1 or H3 when the interaction term is present in the model.

III. Research Design and Methods

The social capital measures come from two recently issued datasets. The first dataset, The 2000 Social Capital Benchmark Survey, contains state of the art questions on social capital. This

survey is one of the first attempts to characterize "social capital" across diverse communities in the United States and to establish benchmarks for future research. A total of 3,003 respondents, representing 40 US communities spanning 29 US states, were interviewed through a probability sample between July and November 2000. Blacks and Latinos were over-sampled across the continental United States enabling analysis of these groups. The participation rates within community samples ranged from a low of 30.2% (Denver, CO) to a high 57.2% (Newaygo County, MI). Sample sizes within these areas range from 500 to 1,500, and except for a few questions of special local interest, the survey instrument used is identical. The data were provided by the Roper Center for Public Opinion Research (Storrs, CT).

Another dataset measuring social capital comes from the Community Indicators Project initiated by Knight Foundation. The surveys track the same communities over time. So far two rounds of surveys have been made public: the 1999 surveys and the 2002 surveys. Each round of surveys has social capital information for 49 US communities spanning 19 US states. Like the 2000 Social Capital Benchmark Survey, Blacks and Latinos were oversampled across the continental United States. Sample sizes within these areas range from 500 to 1,500, and except for a few questions of special local interest, the survey instrument used is identical. The data were provided by the Howard W. Odum Institute for Research in Social Science at the University of North Carolina at Chapel Hill.

Because the wording of social capital measures in each survey is somewhat different, we will test the model separately for each survey in the different set of communities. If we find supports for the hypotheses in both surveys, this will strongly support the generalizability of the theoretical model.

For each of the 89 communities, we will also collect information on demographic, economic, and social indicators from a number of sources. They will serve to control for other sources of community influences on employment. For example, from the US Census, we will assemble data on such as percent poor, percent minority, population density, level of residential segregation and aggregate wage levels. The US Department of Labor will provide estimates of economic indicators such as unemployment rate by race and sex, employment by industrial sector, and aggregate job growth. Social indicators, such as quality of life indices, crime victimization rates, and health care access.

This research project will use two different methods. First, we will use hierarchical linear models (HLM) for the individual analysis. For the aggregate community-level analysis, we will use OLS regression. The aggregate analysis will serve as a robust check for the multi-level analysis.

Multi-level models are appropriate in this case because we are interested in an individual-level outcome that is affected by both individual-level and community-level variables. To simply aggregate individual-level wage and employment information into a community-level dependent variable would overlook the individual-level processes that affect racial inequality. To model an individual-level outcome as a function of individual-level and community-level variables using OLS regression would overlook characteristics of the error structure resulting from the commonalities of individuals within communities, which violate the assumptions of the OLS

regression model. Hierarchical models, on the other hand, explicitly incorporate both individual-level and community-level error.

In the first level of our model, we will use the standard employment models from the economic literature. Neoclassical economics views an individual labor force participation decision as a function of human capital (education level, work experience), age, marital status, region, sex and race.

In the second level of our model, we will add in contextual factors that should be correlated with the structure of racial opportunity in the labor market. In particular, we will include characteristics of the labor force (average age, education level, population growth, unionization), characteristics of the economic sector (industrial mix, unemployment level), social indicators (residential segregation, crime victimization rates, quality of life index), and social capital

To make sure the multi-level analysis is not an artifact of the statistical technique we used, we will then duplicate the study using the aggregate dataset. For each of the 89 communities, we will estimate a model predicting the racial gap in employment as a function of the characteristics of the labor force (average age, education level, population growth, unionization), characteristics of the economic sector (industrial mix), social indicators (residential segregation), and social capital. The aggregate analysis will closely follow the second level of analysis from the multilevel model, but with a different dependent variable. Following closely on the work of Cohn and Fossett (1995), we will define our dependent variable as the ratio of the white odds of employment to the black odds of employment in the community. We will restrict our analysis to prime aged men and women age 25-59 to avoid area variation in levels of schooling and retirement. As a specification check we will estimate models separately for men and women and also with both genders pooled. Statistically significant relationships between social capital and racial inequality, controlling for other community level variables would support our argument.

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