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## Socioeconomic Potential: Predicting Income Through the Moderating Effect of Socioeconomic Status on Social Capital

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Socioeconomic Potential: Predicting Income Through the Moderating  
Effect of Socioeconomic Status on Social Capital

Virginia K. Leiter

A thesis submitted to the faculty of  
Brigham Young University  
in partial fulfillment of the requirements for the degree of  
Master of Science

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## ABSTRACT

### **Socioeconomic Potential: Predicting Income Through the Moderating Effect of Socioeconomic Status on Social Capital**

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Social capital is an important predictor of socioeconomic attainment, defined here as household income, but it is less clear how this relationship may vary by socioeconomic status (SES).

Coleman's (1988) theory of social capital suggests that context is likely to influence exchanges of capital. Indeed, theory and research suggest that SES may either intensify or compensate for social capital in its relation to socioeconomic attainment. I seek to identify and understand these potential interactions using data from 101,163 participants of the European Social Survey (ESS).

Results indicate that while social trust and both absolute and relative social involvement—two common measurements of social capital—predict socioeconomic attainment, the link with relative social involvement was stronger for individuals with lower SES, suggesting a compensation effect. Meanwhile, the link between absolute social involvement and socioeconomic attainment was stronger for those with higher SES, suggesting an intensification effect and highlighting that effects may vary across different measures of social capital. More generally, however, it is clear that SES is a meaningful factor in the value or use of at least some features of social capital.

Keywords: social capital, socioeconomic attainment, household income, socioeconomic status, education, income mobility, moderation

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## **Socioeconomic Potential: Predicting Income Through the Moderating Effect of Socioeconomic Status on Social Capital**

Social capital has been theorized (Coleman, 1988) and empirically found (Contreras et al., 2019; Letki & Mierina, 2015) to predict socioeconomic attainment. For example, strong social networks predict higher employment rates (George & Chaze, 2009; Johnson et al., 2011) and wages (Caparrós Ruiz, 2020; Letki & Mierina, 2015). And social trust and group membership also relate to growth in national GDP (Neira et al., 2009). However, whether the relationships between these factors are similar across socioeconomic statuses is still unknown.

Social capital may interact with SES in a manner that intensifies the relationship of social capital with socioeconomic attainment. For example, individuals with higher SES tend to be connected with more people (Ajrouch et al., 2005) who also have more resources (Letki & Mierina, 2015; McPherson et al., 2001). They may therefore find that social capital grants them access to more useful resources, while persons of lower socioeconomic backgrounds may lack the resources or types of connections necessary to achieve better outcomes in spite of the social capital they may possess.

Alternatively, social capital may be more useful for those who have a lower SES, helping them to compensate for the lower quality or quantity of other resources available (Neira et al., 2009). For example, individuals with lower education may rely more on social capital to guide their financial practices (Guiso et al., 2004) or to support their business efforts (Santarelli & Tran, 2013). Social capital may therefore be less important for those with higher SES simply because they rely on it less. The aims of this study are to examine the role of social capital as a predictor of socioeconomic attainment, expressed in household income, and to consider potential moderating effects of socioeconomic status on this relationship. Using data from the ESS, I test



whether the relationship between social capital and socioeconomic attainment is moderated by SES.

### **Foundations of Social Capital Theory**

Although capital has long been a component of economic theory, it received a broader introduction into social theory with the work of Bourdieu (1986), who argued that, in addition to economic capital, cultural and social resources represent unique types of capital that provide advantages to their possessors. Coleman (1988) built on Bourdieu's work, discussing social, financial, and human capital as resources that enable or constrain individual action. This approach characterizes humans as rational beings who possess or control certain resources which can therefore be used to pursue their goals in ways that maximize perceived benefits while minimizing costs (Coleman, 1988; Rogosic & Baranovic, 2016). Within this model, resources are categorized into three main types: financial capital, representing all material resources, human capital, representing personal skills or knowledge, and social capital (Coleman, 1988). This has become a valuable framework to evaluate the management and effects of resources.

### **Social Capital in the Rational Choice Approach**

Social capital describes the resources embedded within relationships. According to Coleman (1988), social capital is primarily defined by its function. Something may be considered social capital if it springs from interpersonal relationships and enables action for at least one of the participants. Thus, a student approaching a family member for extra help with an assignment and an adult using networks to aid a job search are both demonstrating social capital. In each of these situations, expectations have been established based on a relationship or group dynamic before a particular need arises. As each participating individual upholds the expectations placed upon them, they rely on others in the group to do the same (Coleman, 1988).

While social capital differs from financial and human capital in that it stems from relational, rather than personal, resources, Coleman maintained that its value is based on its direct or expected benefits, allowing it to function comparably to these other forms (Coleman, 1988).

### **Social Capital in Prior Literature**

Because social capital is defined functionally, it remains conceptually open to a large number of contributing components (Engbers et al., 2017). As a result, social capital research has been criticized for using imprecise or over-generalized terms or measures (Engbers et al., 2017; van Oorschot et al., 2006) when social capital is a multi-faceted construct with factors that may be only moderately correlated (Engbers et al., 2017). Indeed, multiple dimensional frameworks of social capital have been proposed (Engbers et al., 2017; Johnson et al., 2011; van Oorschot et al., 2006). Common measures have included a variety of components (Neira et al., 2009), and even studies with a similar conceptual focus operationalize social capital in a number of ways, including social network size (Ajrouch et al., 2005; Contreras et al., 2019; George & Chaze, 2009; Letki & Mierina, 2015), network demographics (Ajrouch et al., 2005; Contreras et al., 2019; Shen & Bian, 2018), and support received or accessible (Johnson et al., 2011; Letki & Mierina, 2015; Shen & Bian, 2018). Because social capital is a broad category comprising many constituent parts, it may be impractical to represent it as a whole in many studies, particularly those using secondary data that may not include a formal measure of social capital. This broad conception may mask differences across forms of social capital and their unique roles in relation to other constructs (van Oorschot et al., 2006). It is therefore critical that researchers be precise in their descriptions of social capital variables, focusing more frequently on specific forms than a generalized whole.

In spite of wide variety, there is also some consensus around key themes that are often included to measure social capital. I focus on two here. First, social trust refers to trust in other people or social organizations generally (van Oorschot et al., 2006). It has been widely used as a measure of social capital (Engbers et al., 2017; Neira et al., 2009) and has been found to be a key component of social capital more broadly (van Oorschot et al., 2006). Neira and colleagues (2009) further promote social trust for use in analyses relating social capital to economic outcomes because of its connection with more ready exchanges of material and immaterial resources. Indeed, social trust has been linked to economic growth (Zak & Knack, 2001), though the direction of effects has been called into question (Brandt et al., 2015). On the one hand, social trust is thought to predict people's investment in society (Zak & Knack, 2001) or institutions such as education (Papagapitos & Riley, 2009), which in turn predicts higher economic returns (Papagapitos & Riley, 2009; Zak & Knack, 2001). On the other hand, income inequality (Graafland & Lous, 2019) and changes in personal income (Brandt et al., 2015) are found to predict levels of social trust. It is possible that this may reflect a cyclical relationship, but more research can help to clarify the direction of these effects.

A second common component of social capital is informal social involvement (Engbers et al., 2017; van Oorschot et al., 2006), which offers insight into some features of social networks (van Oorschot et al., 2006). Social involvement is an important feature because of its connection with personalized social bonds (van Oorschot et al., 2006) that are connected with social support (Brüderl & Preisendörfer, 1998) and tend to capture different aspects of social capital than does generalized social trust (van Oorschot et al., 2006). High social involvement may reflect an expectation of returns from engaging in social systems and institutions (Zak & Knack, 2001). Indeed, availability of a social network relates to an individual's socioeconomic

attainment through a greater likelihood of employment (Aguilera, 2002; Contreras et al., 2019; George & Chaze, 2009; Johnson et al., 2011) and higher income (Letki & Mierina, 2015). Social participation similarly relates to lower likelihood of unemployment and higher wages (Caparrós Ruiz, 2020). These findings provide a clear consensus that social involvement is associated with positive outcomes in terms of income and employment. However, some research suggests that persons with lower SES have smaller social networks overall, but no difference in number of close friends (Ajrouch et al., 2005), which may contribute to differences in how social involvement relates to socioeconomic attainment by SES.

In line with these approaches, I focus on social trust and social participation as indicators of social capital. The contrast between these factors supports a more nuanced understanding of the role of social capital, while simultaneously connecting findings with conceptual and empirical work that has drawn on similar ideas of social capital.

### **Interactions Between Social Capital and SES**

Social and human capital in particular are frequently co-involved in transactions. For example, educational institutions, while centered around the development of human capital, also serve as a center for social life for many young people (Usakli & Ekici, 2018). Similarly, both technical and teamwork skills are necessary to create success in many workplaces (European Commission, 2018). The frequent cooccurrence between these factors may increase the likelihood of interaction effects between them (Coleman, 1988), reflecting differences in the degree to which social capital may be useful to individuals with varying levels of other resources (Santarelli & Tran, 2013), or the types of social capital that are most available or efficacious across these groups (Brüderl & Preisendörfer, 1998). SES is a key characteristic that reflects individuals' social standing, and therefore may be especially likely to moderate their use of

social capital. However, the nature of this relationship remains unclear, as two potential types of interactions have been discussed in the literature.

Although many studies now exist to connect both human (Barone & van de Werfhorst, 2011; Rodríguez-Pose & Tselios, 2009) and social capital (Caparrós Ruiz, 2020; Letki & Mierina, 2015) to socioeconomic attainment, few have investigated possible interaction effects. Those that have offer valuable insights but highlight the need for further work to clarify the processes taking place. One study examined data from Vietnamese entrepreneurs and reported that formal network participation increased the positive relationship between levels of education and company profits (Santarelli & Tran, 2013). These results suggest an intensification of benefits, though the authors note that political corruption in Vietnam may have tied these relationships to political, rather than purely economic factors (Santarelli & Tran, 2013). Another study, conducted in Germany, reported that highly educated entrepreneurs, compared to their less-educated counterparts, relied less on support from family and close friends but were more likely to turn to acquaintances or business associates who had a narrower impact on measures of success in the business (Brüderl & Preisendörfer, 1998). Both education and support from family and friends were in turn associated with business success, leading the authors to recommend further investigation of potential compensatory effects (Brüderl & Preisendörfer, 1998).

While these studies suggest the plausibility of interactive relationships, their samples are restricted to specialized populations in culturally contrasting countries. Furthermore, while one focuses solely on the types of relationships through which support is received (Brüderl & Preisendörfer, 1998), the other considers only participation in business networks as an interactive feature of social capital (Santarelli & Tran, 2013). The current study will expand on this work by considering potential moderations with consistent measures of social capital in an international

dataset. A general population sample will also be used to determine whether these relationships are unique to entrepreneurs or can be applied more generally. In conducting this analysis, this study aims to elucidate the nature of possible interactions, particularly considering the opposing forms of relationships, intensification and compensation, demonstrated in these two studies.

### *Intensification or Compensation*

Individuals with a higher SES may have access to social contexts that facilitate higher returns to their social capital. This may lead to a mutually intensifying effect between human and social capital and their respective effects on economic outcomes. For example, high levels of human and social capital are likely to co-occur (Piazza-Georgi, 2002; Ream & Palardy, 2008), and people tend to develop social networks with others who have similar SES or resources (Browne-Yung et al., 2013; McPherson et al., 2001). As a consequence, individuals with higher SES may have access to social capital that is more useful in aiding socioeconomic attainment.

By contrast, additional theory and research suggest a possible compensation effect in which social capital may be particularly relevant for individuals of lower SES, helping equalize socioeconomic attainment between persons of different socioeconomic origins (Neira et al., 2009). This perspective suggests that when both human and social capital contribute to a positive outcome, individuals may draw on any combination of the two, with those who have less human capital more likely to rely on social capital to augment their opportunities (Neira et al., 2009; Piazza-Georgi, 2002). For example, evidence from Italy suggests that social capital is related to financial practices only among the less educated (Guiso et al., 2004) and that it plays a larger role in reducing income inequality in the south of Italy where SES is generally lower than in the north (Odoardi et al., 2020). Although there may be limits to this compensatory effect, this type of relationship offers a measure of flexibility to those seeking to expand their opportunities.

### The Current Study

The current study seeks to build on theoretical and empirical foundations by examining the relationships between socioeconomic status, social capital, and socioeconomic attainment using the European Social Survey (ESS, 2020). The ESS provides a probability sample of individuals 15 years and older across Europe. The broad reach of these data allows for consideration of cultural effects that may differ across nations. These features, along with the large sample size, allow for robust estimation of the hypothesized relationships. Thus, these data are capable of supporting more certain conclusions than a smaller or more centralized dataset would afford.

Within these data, a moderation model was used to explore whether social capital relates to socioeconomic attainment differently for individuals of varying SES. This relies on Coleman's (1988) proposition of interactive effects between social and human capital. While Coleman's original ideas on this subject focused on exchanges between parents and children, this study investigates whether similar effects may be found in other contexts, such as the labor market. Therefore, I propose the following hypotheses:

H1. Social trust, absolute social involvement, and relative social involvement will each positively relate to socioeconomic attainment.

H2. SES will moderate the relationship between each social trust, absolute social involvement, and relative social involvement and socioeconomic attainment.

In addition, I examine the following research question:

RQ1. If SES moderates the relationship between social capital and income, does it resemble an intensification or compensation effect?

Although this research question has theoretical foundations (Coleman, 1988; Neira et al., 2009), incongruence and the limited empirical research available prevents the formation of a firm hypothesis. Rooted in these theoretical ideas, if individuals with higher education garner more benefit from social capital, this pattern would support an intensification interpretation of results (Coleman, 1988). Conversely, results indicating that social capital may be more meaningful for individuals with lower education will support a compensation effect (Neira et al., 2009). Results of this analysis will be discussed in light of these two potential types of relationships to evaluate which process is more likely given the current data.

## **Methods**

### **Participants**

This analysis used aggregated data from rounds four through eight of the ESS, collected from 2008 to 2016, to maximize sample size and diversity. I selected these rounds for their use of consistent measures for key variables. The sample was restricted to individuals aged 25 to 65 years old who indicated involvement in paid work in the week prior to participation. Those whose education level could not be determined were removed, as well as all data from country-round combinations in which data on a key study variable are missing from all cases, resulting in a sample of 101,163 individuals in 31 European countries (see Table 1). On average, participants were 43.9 years of age and 50% female. Thirteen percent had achieved only lower secondary education, with 38% having achieved upper secondary, 16% advanced vocational, and 33% college education. The average household size was 2.9, and 71% of participants lived with a spouse or partner. Seven percent of the sample reported belonging to a group that was discriminated against in their countries. Participants worked an average of 40.6 hours per week. See Table 2 for descriptive statistics of all study variables.



## Procedures

Surveys were prepared in British English by a team of international research specialists representing a range of relevant disciplines. National teams then produced translations and sampling plans relevant to their individual countries, with all procedures being subject to project-wide standards and review processes. Translation teams were required to follow the Translation, Review, Adjudication, Pretesting and Documentation (TRAPD) methodology and sampling designs were required to use random probability sampling at each stage. More methodological information, including sampling design information for each participating country, is available on the ESS website ([www.europeansocialsurvey.org](http://www.europeansocialsurvey.org)). The target population in each country comprised all individuals of any nationality, citizenship, or language, living in a private household within the nation and being 15 years old or above. Sampling based on individual, household, or address were accepted, but any form of substitution, including within a household or address, was disallowed. Survey weights were calculated to account for variation in sampling plans, non-response bias, and varying population size between countries.

After selection, prospective respondents were contacted for face-to-face interviews where trained interviewers asked questions according to the prepared script. This process was also carried out by national teams under the guidance and oversight of project leaders. Successive rounds of data were collected every two years, with the most recent (Round 9) being completed in 2018. All rounds followed the same process, reproducing the nationally representative nature of the survey, but not following specific respondents over time. Because the samples from each wave are representative, this approach captures trends in participating populations. However, at the individual level, each wave represents a distinct cross-section of respondents' experiences.

## Measures

### *Primary Independent Variables*

My first primary independent variable is *socioeconomic status*. Education is consistently related to a variety of socioeconomic advantages (McLanahan & Jacobsen, 2015), and is widely used as an indicator of SES (Conger et al., 2010). In keeping with this educational attainment was used to represent SES in this analysis. Participants reported their highest educational attainment using items specific to their country's educational system. Responses were then harmonized using the ISCED framework by the ESS research team. Categories were further consolidated for parsimony in the current project and dummy variables were created for each level of education. These final categories indicated those who had completed lower secondary, upper secondary, advanced vocational, or college education.

Other primary independent variables relate to *social capital*. Recognizing that any single measure of social capital is unlikely to capture all relevant expressions of social capital (Engbers et al., 2017) and in an effort to represent some of the diversity in social capital, two important conceptualizations will be used in this study: social trust and social involvement.

**Social Trust.** One feature of social capital was measured using three items asking respondents to reflect on their trust in most people in society. Responses were reported on an 11-point scale, with higher values reflecting more trust. A sample item is "Generally speaking, would you say that most people can be trusted, or that you can't be too careful in dealing with people?" Scores were averaged to create an overall scale of social trust ( $\alpha = .79$ ).

**Social Involvement.** Social involvement was measured in two ways. Participants reported an absolute measure of social involvement using one item (How often do you meet

socially with friends, relatives, or work colleagues?) on a 6-point scale. This item was treated continuously, with higher values reflecting more frequent involvement.

Similarly, participants reported a relative measure of social involvement using one item (Compared to other people of your age, how often would you say you take part in social activities?). This item was also treated continuously on a scale from 1 (Much less than most) to 5 (Much more than most).

### ***Dependent Variable***

My dependent variable, measuring *socioeconomic attainment*, is represented by household income. Income forms an important, though not comprehensive, component of financial capital and economic wellbeing, not only providing directly usable resources, but potentially facilitating the accumulation of other types of economic assets (Warren & Britton, 2003). Therefore, income is a key economic indicator that offers insight into the broader socioeconomic attainment of individuals and families. Respondents reported an estimate of weekly, monthly, or annual income overall household income in the interview, depending on which figure was most familiar to them. Reports were categorized into deciles by country, with decile boundaries being specified for each weekly, monthly, or annual income to accord with each reporting period. Higher values represent household income in a higher decile.

### ***Control Variables***

During the interview, participants reported on their age in years and gender (coded female = 0, male = 1). Respondents also self-identified their own membership in a group that is discriminated against in their country (coded non-discriminated = 0, discriminated = 1) as well as whether they were born in their country of residence (coded not born in country = 0, born in country = 1). They also reported their total number of hours worked in a normal week.

Administrative data reflects the round of data collection in which each respondent participated. I then included dummy variables for each round to account for period effects. In addition, I referenced administrative data reflecting participants' country of residence and entered this into the model as a series of dummy variables to account for in-country group effects.

### **Analytic Strategy**

All analyses were conducted in Stata version 17 (StataCorp, 2021). Descriptive statistics were explored. Potential relationships between key study variables were considered using bivariate correlation analyses, which were compared using the Fisher z-transformation. I further examined these relationships using multiple regression analysis to test for main effects and moderation in the context of appropriate controls. Before conducting the regression, missing values were imputed using multiple imputation to maximize variability and mitigate biases related to missing data. To ensure generalizability of my findings, I used the analysis survey weight provided by ESS that accounts for the sampling design, nonresponse, noncoverage, sampling error, and population size differences across countries.

## **Results**

### **Descriptive Statistics**

Correlational analyses (see Table 3) demonstrate a clear relationship between socioeconomic attainment and all forms of social capital (social trust:  $r = .15, p < .001$ ; absolute social involvement:  $r = .05, p < .001$ ; relative social involvement:  $r = .11, p < .001$ ) as well as between socioeconomic attainment and all levels of socioeconomic status (lower secondary education:  $r = -.21, p < .001$ ; upper secondary education:  $r = -.14, p < .001$ ; vocational education:  $r = .01, p < .001$ ; college education:  $r = .28, p < .001$ ). This suggests that each of these variables

has a relationship with household income, though effect sizes suggest notable variance in the strength of these relationships.

Further analyses using the Fisher  $z$ -transformation of correlations between social capital and socioeconomic attainment, divided by levels of socioeconomic status (see Figure 1) reveal significant differences in the strength of correlations for some groups, with upper secondary education used as a reference category. The correlation between social trust and socioeconomic attainment was stronger for individuals with lower secondary education ( $z = -4.03, p < .001$ ) and weaker for those with college education ( $z = 3.04, p < .01$ ) compared to upper secondary education. For absolute social involvement, the correlation with socioeconomic attainment was stronger for those with vocational education ( $z = -2.25, p < .05$ ) and weaker for those with college education ( $z = 4.07, p < .001$ ) compared to upper secondary education. Finally, the correlation between relative social involvement and socioeconomic attainment was weaker for those with college education compared to upper secondary education ( $z = 4.87, p < .001$ ). These findings suggest that moderation is likely, though these correlation analyses do not account for missing data. These relationships will continue to be considered using multiple regression analysis.

### **Regression Results**

Table 4 displays OLS regression results evaluating the research questions. Model 1 assessed main effects for all variables on socioeconomic attainment. Hypothesis one, predicting positive relationships between measures of social capital and income, was supported. Social trust ( $b = 0.07, p < .001$ ), absolute social involvement ( $b = 0.04, p < .001$ ), and relative social involvement ( $b = 0.20, p < .001$ ) were all found to be significantly associated with higher incomes.

Hypothesis 2, which predicted moderation of the link between social capital and socioeconomic attainment by SES, was partially supported by model 2 (see Figure 2). Absolute social involvement was more strongly predictive of socioeconomic attainment for individuals with advanced vocational compared to upper secondary educational attainment ( $b = 0.06, p < .05$ ). In addition, the link between relative social involvement and socioeconomic attainment was weaker for those who had received a college degree compared to upper secondary education ( $b = -0.10, p < .05$ ). No evidence was found for moderation of the relationship between social trust and socioeconomic attainment by any of the levels of SES.

These results suggest the necessity of a nuanced response to research question 1. Of the two moderations found, one suggests an intensification of effects between absolute social involvement and vocational education, while the other suggests compensation between relative social involvement and college education. This mixed result suggests that intensification and compensation may each make important contributions to economic outcomes, with their importance perhaps depending on specific contexts or other relevant factors.

### **Supplementary Analyses**

To further probe these results, I added supplementary analyses to disaggregate these effects based on the economic conditions of these countries. National unemployment rate rates in 2010 among adults aged 25 and older in each country were collected from the ILOSTAT database (ILOSTAT, 2022). Countries were then categorized into low (1), medium (2), or high (3) unemployment based on whether their unemployment rate was above, below, or within one standard deviation of the mean.

The main model was run separately for countries with low, medium, and high unemployment rates (see Tables 5-7). Within these models, only one significant interaction was

found by which having a college degree attenuated the relationship between relative social involvement and income for individuals in countries with medium unemployment rates ( $b = -0.10, p < .05$ ). The lack of other significant findings suggests that, while perhaps playing a small role in some situations, economic context does not more broadly explain the patterns seen between social capital and SES.

### **Discussion**

The purpose of this paper was to consider three features of social capital as predictors of socioeconomic attainment and to investigate potential moderations of this relationship by SES. Coleman's (1988) conception of social capital proposes that it interacts with other forms of capital. In this project, I explored one such interaction between social capital and SES.

I will first note the direct relationships found. Consistent with prior research (Caparrós Ruiz, 2020; Zak & Knack, 2001), higher socioeconomic attainment was predicted by higher social trust and more absolute and relative social involvement. These findings confirm that, controlling for other important factors, individuals across Europe who possess or cultivate social capital are likely to see more positive results in their income and socioeconomic wellbeing. Thus, social capital may provide a useful tool to help individuals navigate socioeconomic climates in pursuit of positive outcomes.

The main contribution of this study was the tested interaction effects. Among the interactions examined, two significant moderation effects were found. First, SES moderated the effect of absolute social involvement such that those with advanced vocational education received stronger returns, in terms of socioeconomic attainment, to their social involvement compared to individuals who completed only upper secondary education. This suggests an intensification effect, where higher SES increases the benefit of social involvement. This may

reflect the tendency that people have to associate with others of a similar SES (Brown-Yung et al., 2013; McPherson et al., 2001). The social ties that are promoted by more frequent social involvement are therefore likely to grant access to greater resources to those who already possess resources associated with higher SES.

Second, for individuals with a college education, social involvement relative to same-age peers was less strongly predictive of socioeconomic attainment compared to those who completed only upper secondary education. This finding supports a compensation, rather than an intensification effect. That is, those who have a lower SES but are more involved relative to their peers achieve similar outcomes in terms of socioeconomic attainment compared to those who are less involved but have a higher SES. In contrast to absolute social involvement, relative social involvement may reflect a social orientation with the potential to distinguish an individual among otherwise similar candidates for hiring or promotions. The findings of this study suggest that educational opportunities and SES do not necessarily reduce the value of this kind of sociability, but that it is particularly salient when other advantages, such as higher education and SES, are unavailable or difficult to obtain. In this way, fostering social involvement may be one way for individuals to pursue a measure of upward mobility or to protect against downward mobility in the face of reduced opportunities to receive an expansive education.

It is important to note the opposite direction of the two moderation effects. In the first instance higher SES intensifies the benefits of social capital, but in the second, higher SES compensates for lower social capital. Because differences exist between various features of social capital (Engbers et al., 2017), the relationships examined here may differ based on the specific measure of social capital involved. Such differences are certainly possible between various forms of social capital, such as investment in informal versus formal networks, but the



strength of this study is that it compares two methods of measuring the same form of social capital. These findings suggest that absolute and relative measures of social involvement may promote socioeconomic attainment through different mechanisms, which may in turn relate to SES differently. Absolute measures of social capital may be more likely to be intensified by SES because individuals with high SES are often the most likely to have higher levels of many forms of social capital, including social network size (Ajrouch et al., 2005) and social trust (Brandt et al., 2015). Alternatively, relative measures of social capital may contribute more often to compensation effects because they distinguish between those who have higher social capital because of their social context, such as growing up with higher SES, and those who are able to distinguish themselves from others. Future research should continue to consider this possibility by comparing absolute and relative measures of a variety of forms of social capital.

Even as comparing absolute and relative measures of social capital may reveal additional nuance, this approach should be weighed against potential difficulties. Social capital is a complex and at times unwieldy construct in research literature, with scholars calling for more unified and systematic approaches to its study (Engbers et al., 2017; van Oorschot et al., 2006). The use of divergent measures, particularly when used under the same labels, contributes to this difficulty (Engbers et al., 2017). Scholars should consider this when using social capital in their research in order to come to a more accurate understanding (van Oorschot et al., 2006). But while using absolute and relative measures of social capital may contribute to complexity, clear and thoughtful definition of these measures would help to ensure it could do so in a systematic and helpful way.

Notably, the nature of and opportunities for social capital as well as economic opportunity vary widely across people and contexts. The main analysis aggregates data from

many countries which vary across a host of factors, including the strength and openness of the economy. In addition, individuals within countries are likely to experience diversity in their circumstances and the opportunities and demands with which they are encountered. These and other factors may contribute to variation in the role or effectiveness of social capital in each of these societies, as well as connections between social capital and SES. Although aggregated analyses such as this can offer a valuable overview, more detailed variation may remain hidden. Supplementary analyses were used to consider whether national economic context may help to better explain the results of these analyses, but these analyses revealed few differences, suggesting that national economic context has limited utility in this regard.

In his work, Coleman (1988) acknowledges the importance of making connections across micro- and macro-level factors. In keeping with this perspective, it may be that the relationships considered here vary on a more nuanced integration of micro-level factors than can be represented in this analysis, such as the nature of individual relationships with professionals in their field, which may matter differently than personal family or friend relationships. Various companies may also have their own features of social orientation that may connect with some individuals more than others, creating differential opportunities within these companies. For example, some companies may value open communication across teams or individuals, while others may expect employees to operate more independently. High social involvement may be seen as openness and cooperation in the first company but as lack of focus in the second. Future research can more fully consider these potential relationships by considering factors such as company characteristics or values, or the degree of overlap between family, friend, and professional networks. Considering these micro-level factors alongside features of the broader society may reveal a more complete picture of social capital (Coleman, 1988).

While this analysis cannot fully disentangle the links between social capital, SES, and socioeconomic attainment, it does suggest that there are underlying patterns taking place. These patterns appear to operate in different ways, incorporating both intensification and compensation effects. While national unemployment was not effective at disentangling these processes, this finding further highlights the importance of considering other types of factors, including micro-level contexts that may be experienced and navigated differently by individuals even within similar social groups. Thus, this study serves as a steppingstone to future research in this area.

### **Limitations**

The findings of this study have important implications, yet there are nevertheless some limitations. The large sample size and probability sampling are a great strength to this project, but using secondary data reduces the potential for nuanced analyses based on detailed probing of key constructs and variables. More specifically, the construction of the original survey necessitated the use of single-item indicators for multiple key variables, which may limit findings. Another limitation is the necessity of considering only a few forms of social capital, rather than a more complete operationalization. While this provides some ability to interpret the findings in greater detail, other relevant features of social capital may have been omitted from the analysis. In addition, although relevant cultural factors are likely related in some degree to unemployment, which is considered, this analysis does not fully account for cultural factors that may relate in important ways to social capital and economic success. Furthermore, the cross-sectional nature of these data prevents conclusions related to the direction of effects. Finally, these data are entirely from European countries and may not generalize to other areas of the world. Nevertheless, the associations reported here offer a greater understanding of two

important predictors of socioeconomic attainment in adulthood and can serve as a guide for future research to address these questions in greater detail.

### **Conclusion**

Resources are a key determinant of humans' opportunities, advancement, and coping. These resources take a wide variety of forms, including financial, human, and social capital, but are not distributed equally. Thus, it is helpful to identify multiple pathways of exchange or interaction that can lead to a desirable result. Social capital, in particular, can play a meaningful role in a variety of situations, but in some cases its effectiveness is related to individuals' pre-existing SES. Results of this study add to previous knowledge by highlighting that some features of social capital can have financial returns. Furthermore, this study clarifies that having a higher SES intensifies the effect of absolute social involvement in predicting socioeconomic attainment. Meanwhile for those with lower SES, social involvement relative to peers becomes a stronger predictor of socioeconomic attainment, providing a compensatory path to optimize financial outcomes and increase the options available to those seeking success or even upward mobility.

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## Appendix A: Tables

Table 1

*Year and Sample Size for Each Country*

Country	Year (year-specific sample size)
Austria	2014 (914), 2016 (1044)
Belgium	2008 (819), 2010 (795), 2012 (858), 2014 (827), 2016 (813)
Bulgaria	2010 (857), 2012 (913)
Croatia	2008 (544), 2010 (510)
Cyprus	2010 (509), 2012 (495)
Czechia	2008 (1065), 2010 (1148), 2012 (1016), 2014 (1115), 2016 (1281)
Denmark	2008 (870), 2010 (785), 2012 (800), 2014 (766)
Estonia	2008 (798), 2010 (790), 2012 (1102), 2016 (1051)
Finland	2010 (846), 2012 (1049), 2014 (944), 2016 (899)
France	2008 (1000), 2010 (804), 2012 (895), 2014 (877), 2016 (902)
Germany	2008 (1392), 2010 (1427), 2012 (1413), 2014 (1549), 2016 (1478)
Greece	2010 (995)
Hungary	2008 (597), 2010 (702), 2012 (866), 2014 (821), 2016 (821)
Iceland	2012 (408), 2016 (517)
Ireland	2010 (865), 2012 (984), 2014 (964), 2016 (1233)
Israel	2010 (931), 2012 (1075), 2014 (1151), 2016 (1172)
Italy	2012 (414), 2016 (1152)
Latvia	2008 (812)
Lithuania	2010 (539), 2012 (968), 2014 (1063), 2016 (1106),
Netherlands	2008 (936), 2010 (936), 2012 (899), 2014 (870), 2016 (774)
Norway	2008 (935), 2010 (877), 2012 (932), 2014 (794), 2016 (837)
Poland	2008 (693), 2010 (780), 2012 (864), 2014 (742), 2016 (799)
Portugal	2008 (864), 2012 (785), 2014 (488), 2016 (580)
Russia	2008 (1167), 2010 (1219), 2012 (1269), 2016 (1264)
Slovakia	2010 (777), 2012 (863)
Slovenia	2008 (570), 2010 (607), 2012 (509), 2014 (493), 2016 (606)
Spain	2008 (1228), 2010 (862), 2012 (803), 2014 (863), 2016 (934)
Sweden	2010 (762), 2012 (923), 2014 (892), 2016 (779)
Switzerland	2008 (987), 2010 (812), 2012 (804), 2014 (785), 2016 (809)
United Kingdom	2010 (1040), 2012 (952), 2014 (1016), 2016 (916)
Ukraine	2008 (696), 2010 (655), 2012 (800)
Total	2008 (15,973), 2010 (21,830), 2012 (23,659), 2014 (17,934), 2016 (21,767)

Note: Year-specific sample sizes are in parentheses.

**Table 2***Descriptive Statistics*

Variables	M(SD)
Social Capital	
Social Trust	5.43(1.85)
Absolute Social Involvement	4.82(1.47)
Relative Social Involvement	2.76(0.88)
SES (Education)	
Lower Secondary	0.13(0.33)
Upper Secondary	0.38(0.49)
Vocational	0.16(0.37)
College	0.33(0.47)
Socioeconomic Attainment (Household Income)	6.28(2.55)
Age	43.91(10.57)
Male	0.50(0.50)
Household Size	2.87(1.34)
Discriminated Against	0.07(0.25)
Native Born	0.90(0.30)
Lives with Partner	0.71(0.45)
Work Hours	40.64(12.88)

**Table 3**

*Correlations Between Study Variables*

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14
<b>1 Social Trust</b>														
<b>2 Absolute Social Involvement</b>	.14***													
<b>3 Relative Social Involvement</b>	.13***	.34***												
<b>4 Lower Secondary</b>	-.10***	-.01***	-.07***											
<b>5 Upper Secondary</b>	-.10***	-.05***	-.04***	-.31***										
<b>6 Vocational</b>	.02***	-.02***	.01**	-.17***	-.35***									
<b>7 College</b>	.16***	.07***	.09***	-.27***	-.54***	-.30***								
<b>8 Household Income</b>	.15***	.05***	.11***	-.21***	-.14***	.01***	.28***							
<b>9 Age</b>	.04***	-.12***	-.02***	.10***	.01***	.01***	-.10***	.01*						
<b>10 Male</b>	-.03***	.02***	.01**	.04***	.06***	-.01**	-.08***	.07***	-.01**					
<b>11 Household Size</b>	.00	-.04***	-.02***	.01**	-.01	-.00	.00	.25***	-.14***	.01**				
<b>12 Discriminated Against</b>	-.06***	.00	-.02***	.01**	-.03***	-.00	.02***	-.06***	-.03***	-.01**	.01***			
<b>13 Native Born</b>	-.01*	.01**	.04***	-.04***	.05***	.00	-.02***	.08***	.02***	.00	-.02***	-.10***		
<b>14 Lives with Partner</b>	.05***	-.08***	.00	-.00	.00	.00	-.00	.36***	.09***	.06***	.46***	-.03***	-.01	
<b>15 Work Hours</b>	-.07***	-.03***	-.02***	-.03***	.00	.01***	.01*	.12***	-.03***	.26***	-.00	-.00	.03***	.01**

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

**Table 4**

*Results for Multiple Regression Analysis Examining Moderation Effects of Socioeconomic Status on the Relationship Between Social Trust and Involvement and Socioeconomic Attainment*

Household Income Variables	Model 1		Model 2	
	b	SE	b	SE
Intercept	0.98***	0.15	1.00***	0.19
Education (reference: upper secondary)				
Lower secondary or less	-0.89***	0.04	-1.26***	0.20
Advanced vocational	0.53***	0.04	0.46*	0.20
College degree	1.48***	0.04	1.68***	0.18
Social Trust	0.07***	0.01	0.07***	0.02
Abs. Social Involvement	0.04***	0.01	0.02	0.02
Rel. Social Involvement	0.20***	0.02	0.22***	0.04
Education x Social Trust (reference: upper secondary)				
Lower secondary or less			0.03	0.03
Advanced vocational			-0.01	0.02
College degree			-0.02	0.02
Education x Absolute Social Involvement (reference: upper secondary)				
Lower secondary or less			0.01	0.03
Advanced vocational			0.06*	0.03
College degree			0.03	0.03
Education x Relative Social Involvement (reference: upper secondary)				
Lower secondary or less			0.07	0.05
Advanced vocational			-0.06	0.05
College degree			-0.10*	0.05
Discriminated Group	-0.31***	0.06	-0.31***	0.06
Native-born	0.64***	0.05	0.64***	0.05
Household Size	0.30***	0.01	0.30***	0.01
Male	0.21***	0.03	0.21***	0.03
Age	0.01***	0.00	0.01***	0.00
Lives with Partner	1.36***	0.04	1.36***	0.04
Work Hours	0.04***	0.00	0.04***	0.00
Work Hours Sq.	-0.00***	0.00	-0.00***	0.00
R-squared	.27		.27	

*Note.* Model also included country and period fixed effects not shown here. N = 101,163

participants. Number of imputations = 20.

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .

**Table 5***Regression Results in Countries with Low Unemployment*

Household Income	Model 1		Model 2	
Variables	b	SE	b	SE
Intercept	-0.01	0.23	-0.09	0.28
Education (reference: upper secondary)				
Lower secondary or less	-0.70***	0.07	-0.92**	0.36
Advanced vocational	0.54***	0.07	0.44	0.41
College degree	1.24***	0.05	1.78***	0.32
Social Trust	0.04**	0.02	0.02	0.02
Abs. Social Involvement	0.05**	0.02	0.08**	0.03
Rel. Social Involvement	0.12***	0.03	0.15**	0.05
Education x Social Trust (reference: upper secondary)				
Lower secondary or less			0.06	0.04
Advanced vocational			0.09	0.05
College degree			0.00	0.03
Education x Absolute Social Involvement (reference: upper secondary)				
Lower secondary or less			-0.01	0.05
Advanced vocational			-0.03	0.06
College degree			-0.08	0.04
Education x Relative Social Involvement (reference: upper secondary)				
Lower secondary or less			-0.02	0.08
Advanced vocational			-0.10	0.09
College degree			-0.02	0.07
Discriminated Group	-0.21*	0.10	-0.21*	0.10
Native-born	0.58***	0.07	0.58***	0.06
Household Size	0.19***	0.02	0.19***	0.02
Male	-0.06	0.05	-0.07	0.05
Age	0.01***	0.00	0.01***	0.00
Lives with Partner	2.02***	0.06	2.02***	0.06
Work Hours	0.05***	0.01	0.05***	0.01
Work Hours Sq.	-0.00***	0.00	-0.00***	0.00
R-squared	.36		.36	

*Note.* Model also included country and period fixed effects not shown here. N = 14,945

participants. Number of imputations = 20.

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .

**Table 6***Regression Results in Countries with Medium Unemployment*

Household Income		Model 1		Model 2	
Variables	b	SE	b	SE	
Intercept	1.01***	0.17	1.02***	0.21	
Education (reference: upper secondary)					
Lower secondary or less	-0.89***	0.05	-1.27***	0.23	
Advanced vocational	0.55***	0.05	0.53*	0.21	
College degree	1.49***	0.04	1.68***	0.19	
Social Trust	0.07***	0.01	0.07***	0.02	
Abs. Social Involvement	0.04**	0.01	0.02	0.02	
Rel. Social Involvement	0.21***	0.02	0.23***	0.04	
Education x Social Trust (reference: upper secondary)					
Lower secondary or less			0.03	0.03	
Advanced vocational			-0.01	0.03	
College degree			-0.02	0.02	
Education x Absolute Social Involvement (reference: upper secondary)					
Lower secondary or less			-0.01	0.04	
Advanced vocational			0.06	0.03	
College degree			0.04	0.03	
Education x Relative Social Involvement (reference: upper secondary)					
Lower secondary or less			0.12	0.06	
Advanced vocational			-0.07	0.06	
College degree			-0.10*	0.05	
Discriminated Group	-0.35***	0.07	-0.35***	0.07	
Native-born	0.57***	0.06	0.58***	0.06	
Household Size	0.30***	0.02	0.3***	0.02	
Male	0.23***	0.03	0.22***	0.03	
Age	0.01***	0.00	0.01***	0.00	
Lives with Partner	1.37***	0.04	1.37***	0.04	
Work Hours	0.04***	0.00	0.04***	0.00	
Work Hours Sq.	-0.00***	0.00	-0.00***	0.00	
R-squared	.27		.27		

*Note.* Model also included country and period fixed effects not shown here. N = 67,613

participants. Number of imputations = 20.

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .

**Table 7***Regression Results in Countries with High Unemployment*

Household Income		Model 1		Model 2	
Variables	b	SE	b	SE	
Intercept	1.02***	0.21	1.08**	0.40	
Education (reference: upper secondary)					
Lower secondary or less	-1.01***	0.09	-1.41***	0.40	
Advanced vocational	0.19	0.11	-1.04	0.55	
College degree	1.56***	0.09	1.50***	0.45	
Social Trust	0.09***	0.02	0.06	0.03	
Abs. Social Involvement	0.07**	0.02	0.07	0.04	
Rel. Social Involvement	0.13***	0.04	0.07	0.08	
Education x Social Trust (reference: upper secondary)					
Lower secondary or less			0.04	0.05	
Advanced vocational			0.07	0.06	
College degree			0.04	0.05	
Education x Absolute Social Involvement (reference: upper secondary)					
Lower secondary or less			-0.02	0.06	
Advanced vocational			0.10	0.08	
College degree			-0.03	0.06	
Education x Relative Social Involvement (reference: upper secondary)					
Lower secondary or less			0.11	0.10	
Advanced vocational			0.15	0.14	
College degree			0.00	0.11	
Discriminated Group	0.01	0.14	0.01	0.14	
Native-born	1.07***	0.11	1.07***	0.11	
Household Size	0.28***	0.03	0.28***	0.03	
Male	0.22***	0.07	0.22***	0.07	
Age	0.00	0.00	0.00	0.00	
Lives with Partner	1.01***	0.08	1.01***	0.08	
Work Hours	0.04***	0.01	0.04***	0.01	
Work Hours Sq.	-0.00***	0.00	-0.00***	0.00	
R-squared		.29		.29	

*Note.* Model also included country and period fixed effects not shown here. N = 18,605

participants. Number of imputations = 20.

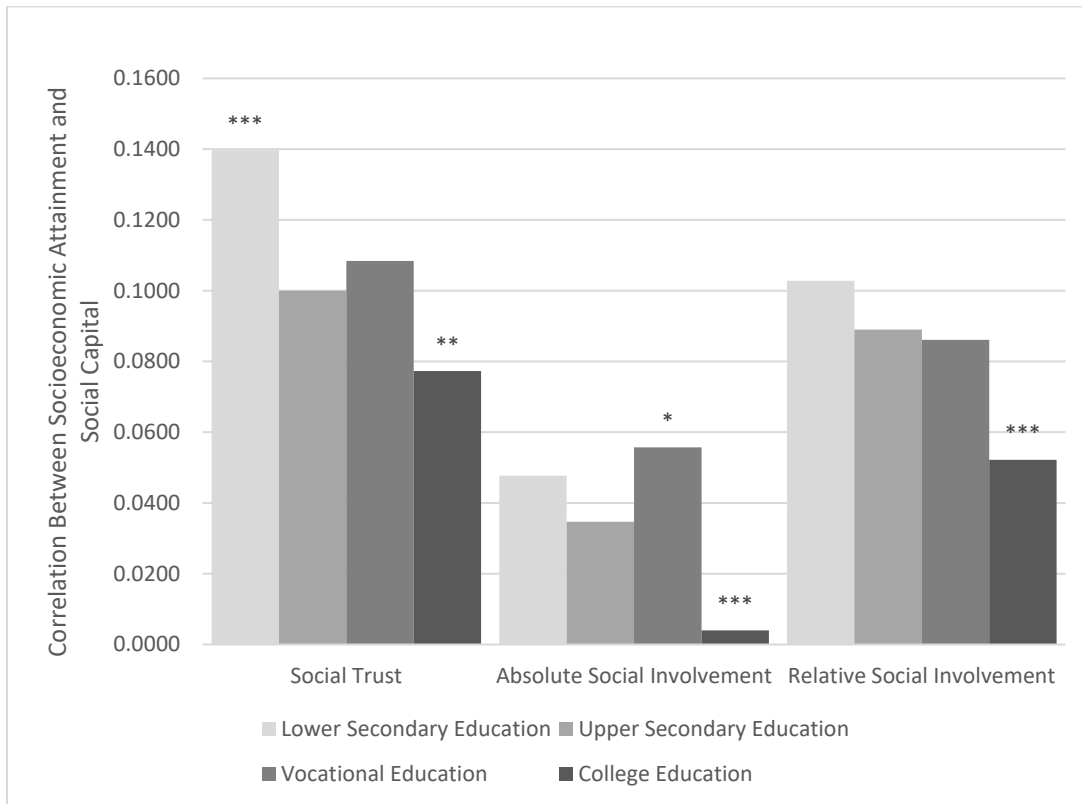
\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .



**Appendix B: Figures**

**Figure 1**

*Differences in the Strength of Correlations Between Social Capital Variables and Socioeconomic Attainment by Levels of SES*



*Note:* Significance testing performed using Fisher’s r to z transformation. Reference: Upper secondary education.

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .

**Figure 2**

*Margins Plots of Significant Interaction Effects*

