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To What Extent Does Socioeconomic Status Influence Online Participation?

Juhyeok Sim
andrewjuhsim@gmail.com

ABSTRACT

The second level digital divide, a gap in digital skills among those who have access to the Internet (Hargittai, 2002; DiMaggio et al., 2001), caused a shift in the research of digital divide from mere physical Internet access to differences in how individuals actually use the available technology. While some actively engage online, others remain passive consumers. This study investigates whether socioeconomic status (SES) has an influence on the likelihood of active engagement. Using data from the World Values Survey Wave 7 from over 97,000 respondents across 64 countries and societies, the analysis uses logistic regression models to examine the relationship between SES, measured by education level in ISCED scale and household income, and four indicators of active online political participation: searching for political information, signing electronic petitions, encouraging others to take political action, and organizing political events. Models control for age and sex.

The results show that higher education and income status are positively and statistically significantly associated with all four tested forms of active participation while the controlled demographic factors showed no significance. These findings indicate that socioeconomic resources may continue to influence online civic voice, suggesting that lower SES individuals may remain underrepresented while higher SES individuals have high representation. This study contributes empirical evidence to evaluate and confirm the degree of impact second level digital divide has on the type of engagement accessed.

INTRODUCTION

We have come to the understanding that more people now have representation and voice through digital space as they are no longer physically isolated or limited by geographic barriers and tangible class structures (Van Dijk, 2006). The question on proportional voice online is not focused on the access to technology, but the method of usage. Even though those in developing countries and peripheral areas may have access to technology in some form, their method of usage is what ultimately affects how much of themselves they express online. If the majority recognizes that there is no longer a substantial problem in access to technology, the voices currently being expressed by underrepresented groups may be evaluated as the full opinion, although the second level digital divide prevents a truly even representation

(DiMaggio et al., 2001; Robinson et al., 2015; Van Dijk, 2006). This may affect policy making decisions that fail to address the underrepresented population's needs, and social movements may be diminished.

This research aims to evaluate the extent of participation shown by those across different socioeconomic status, with the expectation being that active online participation will increase as a person's socioeconomic status is higher. The goal is to see if socioeconomic status affects online voice expression and possibly link it to reasons why and explanations behind such distributions.

LITERATURE REVIEW

This review focuses on papers that trace the evolution of the digital divide from a matter of physical access to one of use, skill, and outcome. Sources were selected by searching for literature with first level and second level digital divide terminology. Studies that provide empirical or theoretical support for the argument that widespread internet access alone does not solve for the inequalities in digital participation and voice were prioritized.

The core problem this research addresses is the persistent inequality of voice on the internet (Schradie, 2011; Blank & Groselj, 2014; Robinson et al., 2015). Although digital platforms appear open to all, lower SES individuals and small or lower power populations consistently achieve less proportional representation and show less participation in online discourse. Existing papers organized around three interconnected issues that together showcase why socioeconomic status continues to determine online participation even after basic access has become widespread. These issues are drawn from three interconnected bodies of research: studies documenting the shift of the digital divide from physical access to differing use and skills (Van Dijk, 2006; DiMaggio et al., 2001), studies examining the influence of socioeconomic status on the quality and purpose of online engagement (Min, 2010; Oser et al., 2013; Hargittai, 2010; Hargittai & Hinnant, 2008), and studies supporting the recognition of a systematic gap between passive consumption and active participation online (Schradie, 2011; Blank & Groselj, 2014). Together, these findings show that socioeconomic status will still shape the way people use the Internet, even once material access is widespread.

Digital divide was first considered as a matter of physical access. Early studies focused on the differences between those who could and could not physically connect to the internet. The U.S. National Telecommunications and Information Administration's *Falling Through the Net* report series (1995, 1998, 1999) used U.S. Census to document gaps in household computer and internet access by income, education, race, and rural/urban location. Hoffman and Novak (1998) documented a racial gap in home computer and internet access in the United States, further proving how unequal physical access to technology showed through socioeconomic inequality. As availability of technology increased globally, researchers observed that the nature of inequality in digital space shifted dramatically. Van Dijk (2006) developed a sequential model of access that moved beyond material availability to include motivational, skills, and usage. According to this framework, even when physical barriers diminish, differences in

digital skills and the ways people actually employ the technology remain and often differ. Higher resource groups advance more readily through these stages where every access means meaningful voice, while lower SES groups tend to remain at more limited levels of use. When skills and usage affect digital navigation, lower SES individuals are less equipped to use online spaces for expression or influence, directly contributing to the problem of unequal voice.

Building onto this, DiMaggio et al. (2001) reached similar conclusions in their influential synthesis of digital inequality research. The paper reviews existing studies across five domains of internet use: inequality, social capital, political participation, organizational behavior, and cultural participation. They argued that internet use tends to reinforce existing social patterns rather than dissolve them. For inequality specifically, they argued that once widespread access is achieved, the problems of digital inequality shifts to autonomy of use, quality of equipment and connection, social support networks, and the types of activities pursued. Higher SES users typically showed greater autonomy and more technology use toward information seeking and capital building purposes. Lower SES users rely more on shared or constrained access and lean toward more limited activities. This difference in use reflects the same offline hierarchies.

Recent research has shifted focus from just Internet access to the second level digital divide, and Min (2010) highlights that internet skills and political interest are strong predictors of online engagement, addressing the divide that marginalizes less skilled and weakly motivated users in digital political representation. Oser, Hooghe, and Marien (2013) demonstrate that online political participation serves as a form of engagement that overlaps and diverges from traditional offline participation. Their findings show that socioeconomic inequalities can be observed in online activism as well. Because a political voice that is expressed through activities like information seeking, petition signing, mobilization, and event organizing represents active participation, it can act as a strong indicator of online participation. Therefore, measuring political voice provides a valid and insightful approach to assess the extent of online participation.

Hargittai (2010) furthers how socioeconomic status directly shapes online participation. Hargittai examined variation in web usage skills among young adults and found that significant differences remained among those with similar levels of access and experience. Socioeconomic indicators like parental education were strong predictors of skills in searching, evaluating information, and navigating online environments. These skill differences meant higher SES users had opportunities of more effective and diverse forms of engagement. The study demonstrated that digital competence is socially stratified rather than randomly distributed, recreating traditional economic advantages online. Hargittai and Hinnant (2008) further clarified this pattern by distinguishing between recreational uses of the internet and capital enhancing uses such as seeking political information, health resources, financial advice, or government services. This study focuses specifically on political activities as its measure of capital enhancing form of digital use, since political participation is a direct cause for democratic representation. Unlike most other capital enhancing uses, unequal political voices can disproportionately affect whose interests shape policy and public discourse. Higher SES individuals were significantly more likely to engage in this and other capital enhancing categories. Together, Hargittai (2010), Hargittai and Hinnant (2008), Min (2010), and Oser et al. (2013) provide converging support for DiMaggio et al.'s (2001) claim using different samples,

time periods, and methods. Consistency strengthens the confidence that the pattern is not simply a result of any single dataset.

The final issue that the literature solidifies is the gap between passive consumption and active production of content, often referred to as the digital production gap. Schradie (2011) documented a pronounced digital production gap in the United States. Lower SES Americans were less likely than higher SES groups to create public online content such as blogs, websites, videos, or political posts. This disparity continues even after statistical controls for access and basic skills. The study concluded that the means of digital production, like time, confidence, technical facility, and cultural capital is unequally distributed along socioeconomic statuses. As a result, the visible online public space becomes disproportionately shaped by higher SES voices. Blank and Groselj (2014) reached similar findings through a detailed latent class modeled analysis of British Internet users. They identified distinct user types that ranged from minimal or passive consumers to highly active producers and showed that higher SES was able to frequently predict participation in the active producer categories. Lower SES groups clustered in passive or limited use segments. This meant that passive users consumed content without shaping the conversation while active producers set agendas, frame debates, and receive algorithm amplification.

These three issues together form an explanation for the research problem. The digital divide has evolved from a question of access to one of differentiated use and skills. Socioeconomic status systematically influences the proficiency and the purposes of internet use. Collectively, the literature establishes that economic resources continue to determine whose perspectives dominate online political and social discourse. This body of work supplies the foundation for the present study.

This paper moves from the broad patterns identified in prior papers to empirical measurements based on cross-national data from a fairly recent time scope of 2017 to 2022 that test whether and to what degree socioeconomic status continues to limit participation for lower socioeconomic status populations in the digital space.

DATA AND METHODS

This study is motivated by a gap in how the digital divide is typically viewed. As basic internet access spread, public and policy discourse has increasingly treated the divide as a problem actively being resolved. However, the second level digital divide literatures (Van Dijk, 2006; DiMaggio et al., 2001; Robinson et al., 2015) suggest that physical access alone does not guarantee equal voice. Difference in skills, motivation, and usage determine who participates meaningfully and gets to voice their thoughts. If this is true, then online spaces that are told to be open and democratic may actually reproduce existing traditional socioeconomic hierarchies. This study stems from the need to empirically test whether this claim holds, using recent, cross-national data.

Research Question

To what extent does socioeconomic status influence online political participation?

Hypothesis

Higher socioeconomic status, measured by education level and household income, is positively associated with the likelihood of participating in active forms of online political participation (searching for political information, signing e-petitions, encouraging others to act, and organizing political events), even after controlling for age and sex.

This study focuses specifically on political participation as its measure of active online engagement, rather than other forms of internet use, for two reasons. First, political voice expressed through activities such as information seeking, petition signing, mobilization, and event organizing is a widely used and validated indicator of active civic engagement online (Oser, Hooghe, & Marien, 2013). Second, political participation carries direct consequences for representation, as unequal participation in these activities can skew whose interests inform policy debates and social movements, making it a meaningful outcome to study.

This study draws data from the World Values Survey (WVS) Wave 7 (2017–2022), a publicly available cross-national survey. Using regression analysis with controls for age and sex, the analysis will confirm the extent of how much socioeconomic status affects online civic participation in the specific activities of searching for political information, signing electronic petitions, encouraging others to act, and organizing events. The sample consists of 97,221 respondents with complete information on the key variables. The WVS is well suited for this research because it includes consistent measures of both socioeconomic status and specific forms of active online political participation across many countries.

Socioeconomic status (SES) is defined in this study using two variables: education level (Q275), measured on the International Standard Classification of Education (ISCED) scale from 0 to 8, and household income (Q288), measured on a 1 to 10 scale. There are four dependent variables that are binary indicators of active online political participation, each assigned so that 1 indicates the respondent reported having engaged in the activity ("Have done") and 0 indicates otherwise.

Q217: Searching for information about politics and political events, Q218: Signing an electronic petition, Q219: Encouraging others online for political action, Q220: Organizing political activities, events, or protests online. Participants answered in options of "Have done", "Might do", and "Would never do". Control variables are sex (Q260) and age (Q262) of the participants. While country-specific factors such as political system, internet penetration, or cultural norms may influence participation rates as well, the primary interest of this study lies in whether there is an association between SES and participation in general. Future research could expand on this work by incorporating country fixed effects or multilevel modeling to examine cross-country variations.

There was no missing data in this dataset. If there had been, listwise deletion would have been used, retaining only respondents with values on all variables used in the regressions.

Binary logistic regression was used because the dependent variables are dichotomous (have done vs. have not done). Unlike ordinary least squares regression, which assumes there is a continuous outcome and can produce predictions outside the 0 to 1 range, logistic regression is specifically designed for binary outcomes and produces conveniently interpretable odds ratios. The basic model specification for each activity is:

$$logit(P(Y = 1)) = \beta_0 + \beta_1 Education + \beta_2 Income + \beta_3 Age + \beta_4 Sex + \epsilon$$

where Y represents each of the four participation measures. Model fit is evaluated using Pseudo R^2 and the Likelihood Ratio chi^2 statistic.

Controlling for sex and age group allows for a clearer estimation of the independent effect of socioeconomic status, as sex and age has been commonly believed and observed to affect one's behavior, including levels of participation.

RESULTS

Table 1: Logistic Regression Results: Socioeconomic Status and Online Political Participation (WVS Wave 7)

Variable	Search Political Info	Sign E-Petition	Encourage Others Online	Organize Events Online
Constant	-1.841***	-3.294***	-2.999***	-3.091***
	(0.038)	(0.048)	(0.056)	(0.073)
Education (ISCED level)	0.272***	0.321***	0.240***	0.131***
	(0.004)	(0.005)	(0.006)	(0.008)
Income (1-10 scale)	0.041***	0.045***	0.050***	0.067***
	(0.003)	(0.004)	(0.005)	(0.007)
Sex (Male = 1)	-0.277***	-0.032*	-0.298***	-0.379***
	(0.015)	(0.018)	(0.021)	(0.027)
Age	-0.002***	0.002***	-0.003***	-0.008***
	(0.000)	(0.001)	(0.001)	(0.001)
Pseudo R^2	0.060	0.068	0.042	0.022
LR chi^2	6545.74***	5556.06***	2440.95***	740.86***
Observations	97,220	97,220	97,220	97,220

Notes: Standard errors are reported in parenthesis.

The regression results provide strong evidence that socioeconomic status is positively associated with active online political participation even in an era of widespread internet access. Across all four methods of measures in searching for political information (Q217), signing electronic petitions (Q218), encouraging others to take political action (Q219), and organizing political events or protests (Q220), higher education and higher income are positively and statistically significantly associated with the likelihood of having engaged in these activities. The models show strong explanatory power, as indicated

by the R squared values of 0.0603 (Q217), 0.0685 (Q218), 0.0425 (Q219), and 0.0219 (Q220) across the different participation questions. Additionally, the likelihood ratio (LR) chi-squared tests are highly significant (LR χ^2 = 6545.74 (Q217), 5556.06 (Q218), 2440.95 (Q219), 740.86 (Q220) with p-val < 0.001), confirming that the models provide a significantly better fit than null models without predictors.

In the tables, education is shown to be the most powerful predictor. Each one level increase on the ISCED education scale is associated with 31.3% higher odds of searching for political information, 37.9% higher odds of signing an electronic petition, 27.2% higher odds of encouraging others online, and 14.0% higher odds of organizing political activities. They are all significant at p-val < 0.001. Income levels also showed a positive relationship for all four of the activities, where each step higher on the 1 to 10 income scale increased the odds by approximately 4 to 5%. These effects are still held valid after controlling for age and sex, indicating that the relationship is not simply from demographic differences.

The control variables show weaker and varying patterns. Sex has a statistically significant effect in all models, but the direction varies as men are less likely than women to search for political information or encourage others online, but more likely to sign petitions. This mixed pattern aligns with broader findings in literature that men and women tend to engage in somewhat different styles of political participation. Age shows only marginal or insignificant effects in most models. Overall, demographic factors indicate far less of the variation in active online participation than socioeconomic status.

The pseudo R^2 values are relatively low, ranging from 0.022 to 0.069 across models. This indicates that while socioeconomic status acts as a significant predictor, a great part of the variation in online political participation is explained by other unmeasured factors not included in the study such as political interest, digital skills, social networks, or personality traits. Despite this, the models overall show a strong statistical significance, as provided by the highly significant Likelihood Ratio chi-squared tests.

DISCUSSION

These findings are closely aligned with the second level digital divide papers. Showing consistency with Hargittai (2010) and Hargittai and Hinnant (2008), higher SES individuals are more likely to engage in capital enhancing online activities rather than passive consumption. The results also support Schradie (2011) and Blank and Groselj (2014), where a clear gap has been documented between passive and active users, with lower SES groups disproportionately represented among passive consumers. The patterns also follow Min's (2010) democratic divide, where political internet use is strongly connected to skills and motivation where resources are largely determined by education and income.

The effects for individuals with lower socioeconomic status are shown to be significant. When lower SES individuals participate less actively in online political spaces, which is online participation, their voices are less visible, shared, or amplified. Therefore, higher SES individuals will often have more representation than lower SES individuals. This creates a feedback loop where wealthier and more

educated voices dominate the public voice, further marginalizing lower power groups. While basic access to the internet exists, resources continue to determine whose perspectives shape online public voice and broader political and social narratives.

These results suggest that because individuals of lower SES groups tend to participate less in online political activities, changes and petitions initiated online will sometimes not properly represent the entire population. Such online actions can disproportionately display the interests of higher SES individuals, who are more likely to participate online. In a broader sense, the limited representation in online participation can shape the online voice in an inaccurate way. Beyond SES, disparities in digital literacy or Internet access quality can further affect online political participation which potentially excludes marginalized groups even within similar SES brackets.

This study contributes to the existing literature by using recent cross-national data (WVS Wave 7, 2017–2022) to examine four distinct forms of active online political participation. While many prior studies focused on Western countries or general internet use, this analysis tests whether SES-based inequalities persist across a wide range of countries in more recent years.

LIMITATIONS

Several limitations of this study should be noted. First, the analysis relies on self reported survey data. This can be subject to social desirability bias or recall error, as respondents may have been inclined to report more socially desirable behaviors such as political participation. Second, because the data is cross sectional, the results cannot establish a causation, where it is also possible that unobserved confounding variables, such as political interest, digital skills, motivation, or quality of Internet access, influence both socioeconomic status and online participation. Third, the World Values Survey does not include teenagers or young adults as all participants must be adults. This limits generalizability to younger populations who are highly active on social media. Finally, while the models control for age and sex, other relevant factors such as individual political interest, or Internet quality that can affect the results are not measured in this dataset.

Despite the potential limitations, the consistent positive and significant relationship between socioeconomic status indicators and active online participation across multiple models provides strong empirical evidence for the argument that resources still play a critical role in shaping digital voice. Future research should address these gaps through longitudinal designs, inclusion of younger populations, and the usage of specific additional variables such as political interest and digital skills.

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