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What do cross-country surveys tell us about social capital?

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November 2020

Abstract

We validate survey measures of social capital with a new behavioral data set that examines whether citizens report a lost wallet to its owner. Using data from more than 17,000 lost wallets across 40 countries, we find that survey measures of social capital — especially questions concerning generalized trust or generalized morality — are strongly and significantly correlated with country-level differences in wallet reporting rates. A second finding is that lost wallet reporting rates predict unique variation in the outputs of social capital, such as economic development and government effectiveness, not captured by existing measures.

Keywords — Social capital, Trust, Honesty, Field Experiment, Surveys

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Social capital is generally thought of as a collection of values and beliefs that limit opportunistic behavior and facilitate cooperation (Guiso, Sapienza, and Zingales 2011). As such, social capital encapsulates several distinct constructs, and chief among them are honesty and trust among strangers (Fukuyama 1995; Glaeser et al. 2000). Social capital is also considered a fundamental factor underlying persistent differences in economic development (Arrow 1972; Mokyr 2009), and has been linked to a country’s gross domestic product (GDP), financial development, innovation, crime, and performance of its governance and institutions (Algan and Cahuc 2010; Djankov et al. 2003; Fountain 1998; Knack and Keefer 1997; Lederman, Loayza, and Menendez 2002; Guiso, Sapienza, and Zingales 2004, 2011; La Porta et al. 1997; Putnam, Leonardi, and Nanetti 1993; Tabellini 2008).

One of the more difficult issues in studying social capital is how to properly measure the construct. Standard practice across the social sciences has been to use data from large-scale surveys administered across countries,¹ such as the World Values Survey (WVS). While cross-country surveys have a number of attractive features, this approach also comes with a number of limitations. For example, cross-country comparisons of survey data are potentially biased due to cultural differences in how questions are interpreted (e.g., Laajaj et al. 2019), how participants make use of response scales (Johnson et al. 2005), and the degree that responses are influenced by social desirability concerns (Bernardi 2006). That such response biases may vary across countries presents a challenge for drawing clean comparisons through the use of survey data.² Layered on top of these concerns is whether survey responses translate to concrete, meaningful behaviors despite various cognitive biases and social desirability effects (Bertrand and Mullainathan 2001; Krosnick 1999). These limitations raise the possibility that subjective surveys of social capital have little correspondence with objective measures of social capital.³ As a point of comparison, survey data on corruption perceptions

1. Past research has explored experimental measures of trust in economic games (Glaeser et al. 2000; Karlan 2005), but lab experimental measures are not widely available at the scale needed for cross-country comparisons (see Fehr et al. 2003 and Bellemare and Kröger 2007 for representative experiments in Germany and the Netherlands). It also remains an open question as to what extent behavior in the lab generalizes to the field (Levitt and List 2007). Researchers have also used behavioral proxies of social capital such as voter turnout and blood donations per capita (Guiso, Sapienza, and Zingales 2004; Nannicini et al. 2013). Because such behaviors are subject to different rules and regulations across countries, they have primarily been used to examine variation in social capital within rather than across countries.

2. Many survey measures are also conducted using face-to-face interviews, which likely exacerbate the variation in response biases across countries (e.g., for the WVS, see <https://www.worldvaluessurvey.org/AJDocumentation.jsp?CndWAVE=7&COUNTRY=>).

3. Our data can directly speak to the issue of social desirability bias in survey responses. In addition to our lost wallet data, we conducted nationally representative surveys in the United Kingdom, Poland, and the United States. Respondents were given a detailed description of the wallet-drop off procedure (along with pictures of the wallet contents) and asked to report the likelihood that, if facing such a situation, they would contact the owner to return the lost item. The median response in all three countries was 100%. These estimates are considerably higher than actual wallet return rates.

has been found to correspond poorly with observable levels of corruption, both when looking at the correspondence within communities (Olken 2009) and across countries (Razafindrakoto and Roubaud 2010).

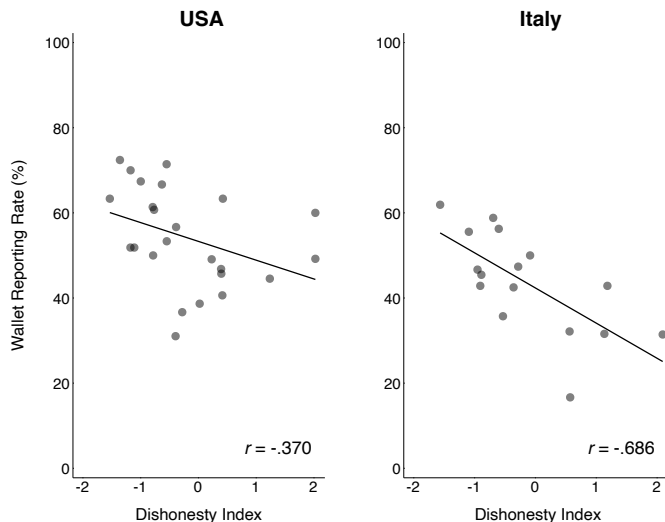
This paper provides a cross-country behavioral benchmark for studying social capital. We recently conducted a large international field experiment in which we turned in lost wallets with varying amounts of money at public and private institutions and measured whether recipients emailed the owners to return the wallets (Cohn et al. 2019). In total, we deposited over 17,000 wallets in 355 cities spanning 40 countries. Returning a lost wallet contains elements of honesty towards strangers, and has been viewed as a representative instance of social capital (Gintis 2016).^{4,5} Like multi-country surveys, our data is designed to be portable across countries. Unlike survey studies, our data set examines a commonplace yet consequential behavior, and one in which respondents were unaware their behavior was observed by others. In the Online Appendix, we report a number of robustness checks that support the validity of our lost wallet paradigm, including that wallet reporting rates are unlikely to be confounded by risk of detection, legal regulations, beliefs about finder’s fees, or cross-country differences in email usage. Furthermore, Figure 1 illustrates that wallet reporting rates in our experiment are negatively correlated with objective behavioral proxies of dishonest behavior (such as cheating on taxes and corruption of public officials) that are available at the regional level for the US and Italy (see the the Online Appendix for details). Together, the results suggest that our measure captures important variation in honest behavior across countries.

Our behavioral measure of social capital can serve as a benchmark for a number of widely-used survey measures of social capital. Within economics, researchers have focused on survey questions that measure preferences or beliefs related to cooperation and prosocial behavior. The most popular measure of this sort centers on *generalized trust*, in which social capital

4. In reviewing the literature on different measures of social capital, Paldam (2000) states “the famous wallet-test is an attempt to measure trust in a more general way: Here N wallets are ‘forgotten’ in public places and the test is how many that are handed back” (p. 644). Survey data also suggests that returning a lost wallet is viewed as an act of social capital. For example, when surveying nationally representative samples in the United Kingdom, Poland, and the United States, we found that the large majority of respondents (89%) viewed keeping a lost wallet as “somewhat inappropriate” or “very inappropriate” (Cohn et al. 2019).

5. Knack and Keefer (1997) compared trust scores to data from a lost-wallet study conducted by Reader’s Digest. However, the sample size of the Digest study was considerably smaller than our current data set, at only 400 wallets total. Furthermore, this data is compromised by potential confounds which our study took explicit steps to remove. As an example, Reader’s Digest dropped wallets in public spaces, which allows for selection effects (i.e., individuals who select into the study by deciding to pick up a lost wallet may be different from those who do not). By contrast, in our study we returned lost wallets to employees at the front desk of different institutions, thereby providing greater experimental control over who participated in the experiment. In the Online Appendix we provide a number of other robustness checks that rule out other potential measurement confounds. For these reasons, our data likely represent a substantial improvement in comprehensiveness and fidelity compared to previous lost wallet studies.

Figure 1: Wallet Reporting Rates and Dishonesty



Notes: The y-axis represents the percentage of recipients in each city reporting a lost wallet in the US (left panel) and Italy (right panel). The x-axis represents city-level dishonesty index scores, with higher numbers reflecting greater dishonesty. For the US, our dishonesty index was constructed by extracting the first principal component from (1) the share of self-employed individuals in a city who reports an income in 2009 within US \$500 of the first Earned Income Tax Credit (EITC) kink, as a percentage of individuals with non-zero self-employment income, as a measure of cheating on taxes (Chetty, Friedman, and Saez 2013), and (2) the number of federal court convictions for corrupt practices between 1976 and 2002 per 10,000 public officials in the state that the city belongs to (Glaeser and Saks 2006). For Italy, our dishonesty index was constructed by extracting the first principal component from (1) municipality-level rates of compliance or payment of a television licensing fee (Buonanno et al. 2019), (2) the difference between the cumulative amounts of public money allocated to capital expenditures and existing amounts of physical infrastructure (Golden and Picci 2006), and (3) historical data on prosecutors’ requests to proceed with a criminal investigation against a member of Parliament (Nannicini et al. 2013). Lines represent the best fit to the data based on OLS estimation.

is measured as the aggregate response to the question, “generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?” Another common measure involves survey responses concerning *norms of civic cooperation* (Guiso, Sapienza, and Zingales 2011; Herrmann, Thöni, and Gächter 2008). This index is based on the degree of disapproval of actions that impose social costs onto others — such as cheating on taxes, avoiding fares on public transit, and accepting bribes. Yet another measure examines *generalized morality* or *universal moral values* (Tabellini 2008; Enke 2019), which emphasize norms of appropriate conduct and behavior with others beyond one’s immediate family, kinship, or social group. More recent data sets such as the Global Preferences Survey (Falk et al. 2018) also measure various forms of *prosocial preferences* related to social capital. Within sociology and political science, social capital researchers have focused on survey questions related to *social connectedness* — the advantages and opportunities accruing to

people through their social networks or membership in certain communities (Bourdieu 1986; Putnam, Leonardi, and Nanetti 1993). Here, social capital is measured as the average number of voluntary social groups a survey respondent belongs to (e.g., Knack and Keefer 1997). Unlike the measures of social capital that focus on commonly-held values or beliefs, social connectedness emphasizes the number and strength of social ties to a community.

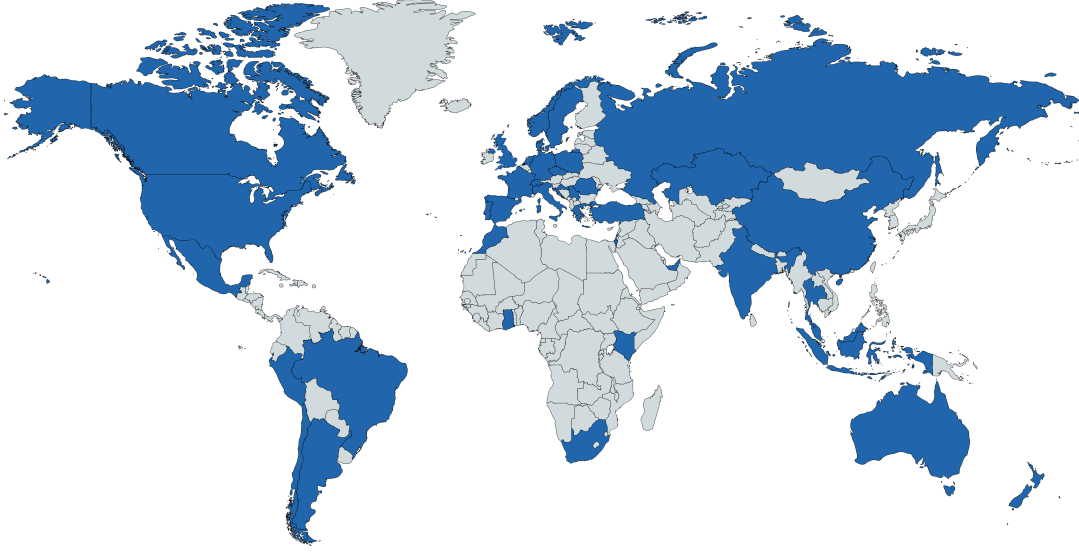
We compare the performance of these various survey measures of social capital to our behavioral measure of social capital (i.e., reporting a lost wallet), and document two main findings. The first is that only some survey measures of social capital meaningfully correlate with our behavioral measure of social capital. The best predictors of wallet reporting rates are generalized trust, generalized morality, and norms of civic cooperation. Other survey measures, including social connectedness and social preference measures from the Global Preferences Survey, do not reliably predict wallet reporting rates. The fact that only some survey measures are predictive of honest behavior (e.g., generalized trust from the WVS) while other seemingly-similar measures of social capital are not (e.g., generalized trust from the GPS) highlights the importance of using behavioral measures to validate survey responses. The second finding is that wallet reporting rates in our data also serve as a strong predictor of the economic outputs associated with social capital. In fact, wallet reporting rates outperform virtually every survey measure in predicting country-level differences in GDP, total factor productivity and indicators of government effectiveness. We conclude with implications of our lost wallet data for research on social capital.

A Global Field Experiment

We use behavioral data from a field experiment we recently conducted that consists of 17,303 lost wallets from 355 cities across 40 countries (Cohn et al. 2019). Figure 2 provides an overview of the countries covered in our data set. We typically turned in 400 wallets in the six to eight largest cities of each country. Wallets were turned in at one of five different institutions: (i) banks; (ii) theaters, museums, or other cultural establishments; (iii) post offices; (iv) hotels; and (v) public offices, such as police stations, courts of law, or town halls. We focused on these institutions because they serve as essential pillars of civic life, and typically have a public reception area that allowed us to perform the drop-offs.

Experimenters in our study handed over a lost wallet (that they ostensibly found outside on the street) to a front-desk worker and asked them to take care of the wallet. The experimenter would then promptly leave without requesting written proof of the transaction. By telling recipients that the wallet was found outside the building, we prevented possible concerns that the owner might come back and look for the wallet at that exact institution (or at least

Figure 2: Coverage of Lost Wallet Data (Blue Countries)



provided wallet recipients with plausible deniability of having received the wallet). After performing the wallet drop-off and exiting the building, experimenters would immediately record several recipient characteristics and situational factors. For recipient characteristics, experimenters made note of the recipient’s gender and approximate age (i.e., whether the person was 40 years or older). For situational factors, experimenters made note of whether other coworkers or bystanders were present during the transaction, which we use as a proxy for how busy or observable the recipient was.⁶ Experimenters also noted whether a computer was visible at the recipient’s desk, which we use as a proxy for lower effort costs of contacting the owner.

For our wallets we used transparent business card cases, allowing the recipient to inspect its content without having to open the wallet. Each wallet contained three identical business cards in order to contact the owner, and we typically created three fictitious male owners for each country using common local names. The wallets also contained a grocery list, a small dimple key, and (depending on experimental treatment) some money. To signal that the owner of the wallet was likely a resident, the business cards and shopping list were always provided in the country’s local language and any money inside the wallet was always in local currencies. Business cards in each wallet were associated with a unique email address, allowing us to identify individual wallets that were reported. Our dependent measure was whether a wallet was reported to its owner by email within 100 days. For detailed information on the study procedure we direct the reader to the Supplemental Materials of Cohn et al. (2019). Data for

6. In the Online Appendix we report additional analyses which suggest that concerns of being observed do not influence country differences in wallet reporting rates.

the study is publicly available at <https://doi.org/10.7910/DVN/YKBODN>.

In the experiment we randomly varied the amount of money inside the wallet, with wallets usually containing either no money or the equivalent of US \$13.45 (adjusted for purchasing power parity). We also ran additional treatment arms in the United States, United Kingdom, and Poland, including a high stakes version in which wallets contained the equivalent of US \$94.15 and another version that excluded the dime key from the wallet. Country-level reporting rates were strongly correlated across experimental treatments — for example, the rank-order correlation between the \$13.45 condition and the condition without money was 0.939 — so we combine data across conditions for the present analysis. The results we report below are virtually unchanged when we restrict our analysis only to wallets containing no money, or only to wallets containing money.

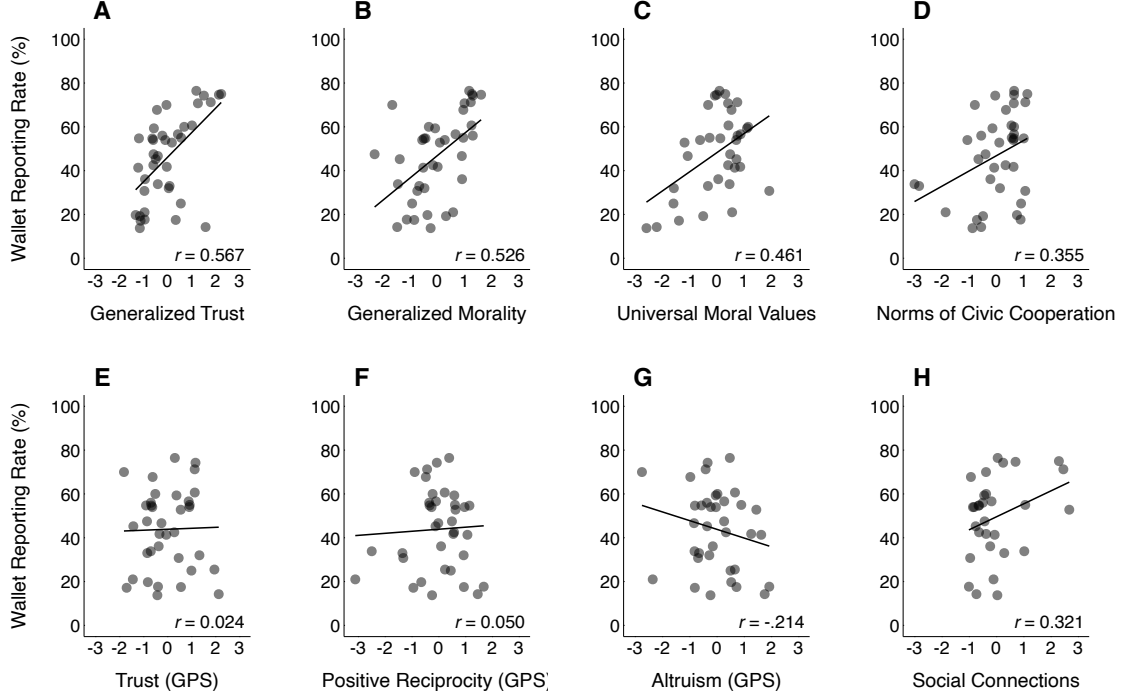
Unless stated otherwise, for all analyses we regress wallet reporting rates on country-level variables of social capital using ordinary least squares (OLS) estimation. Observations are coded as 100 when a wallet was reported and 0 otherwise, and country-level explanatory variables (e.g., survey measures of generalized trust) are standardized to have a mean of zero and standard deviation of one. With this coding scheme, regression coefficients can be interpreted as the percentage point difference in reporting rates associated with a one standard deviation change in the explanatory variable. For all country-level explanatory variables, we use data from the same time period as when we conducted our field experiment; if country-level data was not available during that time period, then we use the most recent data available following the completion of our field experiment (see the Online Appendix for details). All regressions also include fixed effects for treatment condition, type of institution that wallet drop-off was performed at, as well as recipient and situational characteristics. Standard errors were adjusted for clustering at the country-level, and we also correct p -values to account for the false discovery rate that may arise from multiple hypothesis testing (Benjamini and Hochberg 1995). In the Online Appendix, we show that our results are robust when not including our set of control variables in the analyses, or when using probit rather than OLS models.

Results

Validating Survey Measures of Social Capital

Figure 3 illustrates the country-level correlations between survey measures of social capital and wallet reporting rates, and Table S3 in the Online Appendix lists pairwise correlations between all measures.

Figure 3: Wallet Reporting Rates and Measures of Social Capital



Notes: Scatterplots display the country-level relationship between wallet reporting rates and (A) generalized trust from the World Values Survey, (B) generalized morality (“respect and tolerance for others”) from the World Values Survey, (C) universal moral value scores from the Moral Foundations Questionnaire (Enke 2019; Graham et al. 2011), (D) an index of civic cooperation norms from the World Values Survey (Guiso, Sapienza, and Zingales 2011), (E–G) trust, positive reciprocity, and altruism scores from the Global Preferences Survey (Falk et al. 2018), (H) an index of social connectedness from the World Values Survey (Knack and Keefer 1997). For each graph the y-axis represents wallet reporting rates in a given country (from 0-100%) and the x-axis represents the explanatory variable (standardized at the country-level to have a mean of 0 and standard deviation of 1). Lines represent the best fit to the data based on OLS estimation.

Of the eight survey measures of social capital, generalized trust from the WVS is the strongest predictor of wallet reporting rates (country-level $r = 0.57$). Table 2 provides regression coefficients that adjust for our set of controls listed earlier. Column 1 (Panel A) indicates that a one standard deviation change in generalized trust is associated with an 9.0 percentage point increase in reporting a lost wallet ($p = 0.005$). To give a sense of the magnitude of this effect, a 9 percentage point increase represents roughly half a standard deviation in the total variation of wallet reporting rates across countries.

The second notable predictor of wallet reporting rates was a survey measure of generalized morality, or the tendency to adhere to norms of appropriate conduct and behavior towards anonymous strangers.⁷ Following Tabellini (2008), we use the WVS measure which asks

7. Consistent with the results reported here, in Cohn et al. (2019) we report additional results showing that country level characteristics associated with generalized morality — such as whether a national language

respondents to indicate whether “tolerance and respect for other people” is one of the top five qualities children are encouraged to learn at home.⁸ Shown in column 2 of Table 2 (Panel A), this measure is associated with an 8.3 percentage point increase in reporting a lost wallet, equivalent to a 0.42 standard deviation in the total variation of wallet reporting rates across countries ($p = 0.005$).

Another measure of generalized morality proposed by Enke (2019) takes the difference score between “universal” and “particularist” moral values from the Moral Foundations Questionnaire (Graham et al. 2011). This survey measure is based on a theoretical framework from moral psychology which distinguishes between impersonal (universal) values such as fairness and individual rights, and group-specific (particularist) values such as in-group loyalty and respect for established hierarchies. Higher scores on this measure reflect societies that emphasize universal, impersonal values relative to group-specific ones. Column 3 of Table 2 (Panel A) indicates that this measure is associated with a 6.8 percentage point increase in wallet reporting rates, equivalent to a 0.35 standard deviation in the total variation of wallet reporting rates across countries ($p = 0.015$).

Next we examine norms of civic cooperation, which measure the degree of disapproval for actions that confer a private benefit while imposing a social cost on others (Knack and Keefer 1997). Following Guiso, Sapienza, and Zingales (2011), we extract the first principal component from three WVS items which ask opinions about claiming public benefits one is not entitled to, free riding on public goods, and accepting bribes. Using this index we find that norms of civic cooperation also predict wallet return rates, albeit less strongly than generalized trust. Shown in column 4 of Table 2 (Panel A), civic cooperation is associated with a 5.5 percentage point increase in wallet reporting rates, equivalent to a 0.28 standard deviation in the total variation of wallet reporting rates across countries ($p = 0.015$).

We also examine three measures of prosocial beliefs and preferences collected from the Global Preferences Survey — generalized trust, altruism, and positive reciprocity (Falk et al. 2018). Despite their apparent similarity to other measures of social capital, all three of these items do a relatively poor job of predicting country-level wallet reporting rates. The

does not permit the dropping of first person pronouns (Kashima and Kashima 1998), a country’s share of Protestants (Putnam, Leonardi, and Nanetti 1993; Weber 1930), weaker family ties (Alesina and Giuliano 2014), and communities with historically low pathogen prevalence (Fincher et al. 2008; Fincher and Thornhill 2012) — are also positively correlated with wallet return rates.

8. Tabellini’s index of generalized morality varies across papers. In Tabellini (2008) the index is a composite of the generalized trust and respect items from the WVS, and in Tabellini (2010) the index also includes a measure of obedience towards parents and locus of control. We decided to use the single respect item as our measure of generalized morality because (a) this item appears to most closely resemble the construct of interest (i.e., has the highest face validity), and (b) so that cleaner comparisons can be made in relation to generalized trust. When we use the other indices used by Tabellini we find similar results to those reported above.

trust item from the GPS is negatively and not significantly correlated with wallet reporting rates ($p = 0.995$), and both the positive reciprocity and altruism questions are also not significantly correlated with wallet reporting rates (p -values are 0.995 and 0.372, respectively). The null result for trust responses from the GPS is particularly surprising given the relatively strong performance of the generalized trust measure from the WVS.⁹ These results, however, are consistent with recent work suggesting that the GPS measures, which were validated using a sample of German participants, do not necessarily generalize to other populations (Bauer, Chytilová, and Miguel 2020). Table S3 in the Online Appendix also suggests that the GPS measures tend to correlate weakly with other survey measures of social capital besides generalized trust.

Our last survey measure concerns social connectedness, or the strength of voluntary social ties among group members (Bourdieu 1986; Putnam, Leonardi, and Nanetti 1993). Following Knack and Keefer (1997), we proxy social connectedness using the average number of voluntary social groups (such as religious, professional, or political organizations) that citizens in each country reported belonging to. Social connectedness is associated with a 2.3 percentage point increase in wallet reporting rates, an amount not significantly different from a null of zero association ($p = 0.206$).

Lastly, we were able to examine the role of measurement error for our estimates of generalized trust, as we had near-identical measures of both generalized trust and wallet reporting rates (as suggested by Gillen, Snowberg, and Yariv 2019). Using an “obviously related” instrumental variables (ORIV) regression¹⁰ for the subset of countries in which we can apply the correction ($n = 30$), we find that the country-level correlation between generalized trust and wallet reporting rates increases from 0.54 (without correction) to 0.62 (with correction). This modest increase suggests that our measures are unlikely subject to serious measurement error concerns, at least at the country-level.

Using wallet reporting rates to predict economic and institutional performance

Ultimately of interest to economists is the usefulness of social capital measures in explaining variation in economic development. We compare our lost wallet data to survey measures of social capital in its ability to predict economic and institutional performance. Unlike our previous analysis we now treat wallet reporting rates as a right hand side variable and, to

9. The trust item used in the GPS asked respondents to rate (from 0 “does not describe me at all” to 10 “describes me perfectly”) the statement, “As long as I am not convinced otherwise, I assume that people have only the best intentions.” For the 60 countries that overlap, Falk et al. report a country-level correlation between trust from the WVS and trust from the GPS of $r = 0.49$ ($p < 0.01$). For the 35 countries that overlap in our data set, the country-level correlation is $r = 0.64$ ($p < 0.01$).

10. We provide full details on our ORIV specification in the online appendix.

facilitate comparison, we aggregate all measures at the country-level and standardize these measures (including wallet reporting rates) to have a mean of zero and standard deviation of one. Our aim here is not to establish causality, but rather to examine the extent that our behavioral measure contains new information, relative to existing survey measures of social capital, in explaining economic development.

Table 2 illustrates the additional predictive value of wallet reporting rates, over and above each survey measure of social capital, in explaining country-level variation in economic and institutional performance. Column 1 reports the bivariate relationship between each survey measure of social capital and GDP per capita,¹¹ and column 2 reports the multivariate model where wallet reporting rates are included alongside each measure of social capital. The same exercise is repeated for total factor productivity in columns 3 and 4 of the table. Two patterns clearly emerge from the table. First, wallet reporting rates explain substantial variation in economic productivity above existing measures of social capital. For instance, when predicting GDP per capita, adding wallet reporting rates alongside generalized trust increases the model *R*-squared by over 70% (from 0.36 in the bivariate model to 0.62 in the multivariate model). Second, for the multivariate models, wallet reporting rates outperform (in terms of coefficient size) nearly every survey measure of social capital, and often substantially so.

The last four columns of Table 2 illustrate that wallet reporting rates also explain unique variation in institutional performance across countries. Columns 5–8 of the table report the same analysis used in the previous paragraph, but with World Bank government effectiveness ratings and a behavioral measure of institutional efficiency (i.e., the proportion of incorrectly addressed international mail that is returned; Chong et al. 2014) as outcome variables.¹² Similar to our economic productivity measures, we find that wallet reporting rates explain substantial variation in institutional performance not captured by existing survey measures of social capital.

To quantify the relative contribution of wallet reporting rates in explaining economic outputs, we performed a series of pairwise dominance analyses (Azen and Budescu 2003; Budescu 1993). This procedure decomposes the total *R*-squared from a multivariate model into the relative contribution provided by each variable in the model, with contribution weights standardized to sum to one. We conducted a dominance analysis for all 32 comparisons provided in Table 2 (eight multivariate models for each of our four outcome variables). Results

11. We conducted our lost wallet experiment from 2013 to 2016, so we use GDP and total factor productivity indices from 2017. Data are from Penn World Tables.

12. The World Bank has five other indices of governance quality: (1) voice and accountability, (2) political stability and absence of violence, (3) regulatory quality, (4) rule of law, and (5) control of corruption. Compared to government effectiveness ratings, we find even more pronounced effects of wallet reporting rates in predicting these other indices.

are reported in Table S4 in the online appendix. For 31 of the 32 comparisons, we find that wallet reporting rates contribute the majority of variance explained in the model. In 25 of the comparisons wallet reporting rates outperform its survey counterpart by more than a factor of two. Thus, a country’s propensity to report a lost wallet appears to contain considerable new information above existing survey measures in explaining cross-country differences in economic performance.

Conclusion

In this paper we use a behavioral measure from Cohn et al. (2019) to validate survey measures of social capital, and establish two stylized facts. First, some survey measures of social capital, such as generalized trust and generalized morality, are strongly correlated with country differences in reporting a lost wallet. This finding validates the large and widespread use of cross-country survey data as a proxy for social capital, and suggests that skepticism over survey measures of social capital may be unwarranted (see also Bjørnskov 2020). It is also reassuring that the most widely used survey measure of social capital — the generalized trust measure from the WVS — is most predictive of wallet reporting rates. Other measures, such as prosocial preference measures from the recently developed Global Preferences Survey, performed relatively poorly in predicting wallet reporting rates. Additional tests and validation may be needed to establish whether such measures can serve as useful proxies of a country’s social capital.

A second finding is that lost wallet reporting rates explain additional variation in economic and institutional performance across countries, suggesting that our measure contains unique information not captured by existing measures of social capital. When feasible, researchers may wish to use lost wallet reporting rates from our data, alone or in combination with existing survey measures, to help understand the causes and consequences of social capital.

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Table 1: Survey Measures and Wallet Reporting Rates

	Panel A			
	(1)	(2)	(3)	(4)
Generalized Trust	8.987** (2.748)			
Generalized Morality		8.279** (2.776)		
Universal Moral Values			6.840** (2.202)	
Civic cooperation				5.510** (2.157)
Controls:				
Institution FE	yes	yes	yes	yes
Recipient FE	yes	yes	yes	yes
Situation FE	yes	yes	yes	yes
Treatment FE	yes	yes	yes	yes
Observations	16,895	16,621	15,494	16,321
Countries	39	38	35	37
	Panel B			
	(5)	(6)	(7)	(8)
Trust (GPS)	-1.201 (2.766)			
Positive Reciprocity (GPS)		-0.187 (2.881)		
Altruism (GPS)			-3.895 (2.611)	
Social Connections				2.298 (2.242)
Controls:				
Institution FE	yes	yes	yes	yes
Recipient FE	yes	yes	yes	yes
Situation FE	yes	yes	yes	yes
Treatment FE	yes	yes	yes	yes
Observations	15,895	15,895	15,895	13,623
Countries	36	36	36	30

Notes: OLS estimates with standard errors clustered at the country-level. The dependent variable in all models takes a value of 100 if a wallet was reported and 0 otherwise. All models include controls for the type of institution the wallet drop-off was performed at, characteristics about the recipient of the lost wallet (gender, age), situational characteristics of the wallet drop-off (the presence of a computer, coworkers, or other bystanders), and treatment condition. For full details on control variables see Cohn et al. (2019). Significance levels after correcting for the false discovery rate (Benjamini and Hochberg 1995): * $p \leq 0.10$, ** $p \leq 0.05$, *** $p \leq 0.01$.

Table 2: Predictive Value of Wallet Reporting Rates

	Log GDP per capita		Log Productivity (TFP)		Government Effectiveness		Letter Grade Efficiency	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Generalized trust	0.424*** (0.093)	0.177** (0.065)	0.108* (0.049)	0.001 (0.046)	0.554*** (0.078)	0.334*** (0.079)	0.074 (0.041)	−0.008 (0.038)
Wallets		0.436*** (0.084)		0.196*** (0.052)		0.387*** (0.076)		0.144*** (0.047)
N	39	39	38	38	39	39	39	39
R^2	0.358	0.615	0.122	0.403	0.506	0.673	0.073	0.263
Generalized morality	0.410*** (0.076)	0.220*** (0.045)	0.175*** (0.039)	0.119*** (0.036)	0.545*** (0.088)	0.348*** (0.072)	0.090** (0.033)	0.021 (0.037)
Wallets		0.367*** (0.075)		0.112*** (0.035)		0.380*** (0.082)		0.134** (0.050)
N	38	38	37	37	38	38	38	38
R^2	0.417	0.650	0.385	0.489	0.503	0.67	0.106	0.271
Universal Moral Values	0.263** (0.099)	0.032 (0.078)	0.179*** (0.044)	0.105 (0.059)	0.165 (0.116)	−0.116 (0.076)	0.118** (0.041)	0.069 (0.041)
Wallets		0.522*** (0.095)		0.167*** (0.049)		0.635*** (0.086)		0.111*** (0.034)
N	35	35	35	35	35	35	35	35
R^2	0.153	0.593	0.335	0.545	0.046	0.540	0.219	0.360
Civic Cooperation	0.256** (0.087)	0.096 (0.087)	0.138*** (0.034)	0.081 (0.043)	0.276** (0.098)	0.087 (0.067)	0.086* (0.043)	0.040 (0.054)
Wallets		0.451*** (0.086)		0.144*** (0.048)		0.536*** (0.075)		0.131** (0.053)
N	37	37	36	36	37	37	37	37
R^2	0.158	0.586	0.229	0.431	0.128	0.547	0.095	0.286
Trust (GPS)	0.319** (0.140)	0.308*** (0.099)	0.061 (0.072)	0.050 (0.050)	0.333** (0.113)	0.321*** (0.065)	−0.016 (0.050)	−0.018 (0.039)
Wallets		0.496*** (0.086)		0.197*** (0.048)		0.523*** (0.064)		0.133*** (0.043)
N	36	36	34	34	36	36	36	36
R^2	0.196	0.616	0.035	0.383	0.197	0.628	0.003	0.213
Positive Reciprocity (GPS)	0.118 (0.11)	0.095 (0.092)	−0.020 (0.053)	−0.027 (0.045)	0.096 (0.100)	0.072 (0.064)	0.009 (0.040)	0.003 (0.044)
Wallets		0.499*** (0.102)		0.201*** (0.047)		0.527*** (0.084)		0.133** (0.044)
N	36	36	34	34	36	36	36	36
R^2	0.027	0.450	0.005	0.367	0.017	0.454	0.001	0.209
Altruism (GPS)	0.051 (0.116)	0.160 (0.964)	−0.009 (0.052)	0.026 (0.050)	0.040 (0.119)	0.155 (0.085)	−0.033 (0.037)	−0.006 (0.037)
Wallets		0.541*** (0.108)		0.205*** (0.049)		0.566*** (0.075)		0.132*** (0.043)
N	36	36	34	34	36	36	36	36
R^2	0.005	0.480	0.001	0.366	0.003	0.485	0.015	0.209
Social Connections	0.242*** (0.066)	0.101 (0.071)	0.094** (0.038)	0.044 (0.039)	0.413*** (0.076)	0.261*** (0.072)	0.071** (0.031)	0.042 (0.035)
Wallets		0.472*** (0.077)		0.168*** (0.045)		0.503*** (0.089)		0.096* (0.045)
N	30	30	30	30	30	30	30	30
R^2	0.155	0.620	0.105	0.367	0.277	0.601	0.091	0.222

Note: OLS estimates with robust standard errors in parentheses. Outcome variables are log GDP per capita, log total factor productivity (relative to the United States), government effectiveness ratings from the World Bank, and the proportion of incorrectly addressed international mail from a country that is returned to sender (Chong et al. 2014). All explanatory variables are aggregated at the country-level and standardized to have a mean of zero and standard deviation of one. Significance levels after correcting for the false discovery rate (Benjamini and Hochberg 1995): * $p \leq 0.10$, ** $p \leq 0.05$, *** $p \leq 0.01$.