"The Big Society", Public Expenditure, and Volunteering

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Abstract

The debate on volunteering has paid insufficient attention to the relationship between public spending and volunteering. Recently, the importance of this relationship was highlighted by the current British government's "Big Society" plan, which asserts that withdrawing public agencies and spending will be compensated by an increase in volunteering. This idea is based on the widely held belief that a high degree of government intervention decreases voluntary activities. This paper uses a multidisciplinary approach to develop a more refined understanding of how public spending affects the decision to volunteer. A theoretical model conceptualizes this relationship in terms of time donation by employed individuals. The model is empirically developed through an econometric analysis of two survey data sets and interpretative analysis of narratives of local volunteers and public professionals. The results suggest that volunteering is likely to decline when government intervention is decreased and recommend a collaborative approach to sustaining volunteering.

Keywords: volunteering, labor supply, public goods, altruism.

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During the 2010 British elections, the debate did not evolve around the financial crisis, public expenditure, and the necessity of severe cutbacks per se, but more fundamentally reflected diverging ideologies about the relationship between state and society for delivering public services (Smith 2010). While the Labour Party sought to continue increasing public spending and taxation, the Conservative Party proposed a radical turn to a small government and a "Big Society". Eventually, the Conservatives formed a coalition government with the Liberal-Democrats and launched their plan for the Big Society. The main idea is that "rolling back big government" will lead "communities" to start running public services (Cabinet Office 2010). The idea that voluntary activity should, can, and will emerge as a perfect substitute for the welfare state has reinvigorated debate on the relationship between government and society, or, more specifically, between public spending and volunteering.

Ever since the launch of the Big Society in May 2010, commentators have vilified the plan for the dominance of rhetorical power over practical feasibility. The plan proposed to bring about "a new era of people power" through policy measures such as providing volunteering training to local citizens, especially young people, giving financial support to mutuals, co-operatives, charities and social enterprises to take over and run public services, and giving a general power of competence to local councils (Cabinet Office 2010). Concerns about its practical feasibility increased when Liverpool Council withdrew as one of the four pilot projects (BBC 2011a). Criticism grew that the coalition government was only meeting its affectionate rhetoric with lukewarm initiatives and little concrete promises (Alcock 2010), and, moreover, used the Big Society as a symbolic device to legitimize excessive cuts on public services and voluntary sector funding, consequently destroying the basic texture of voluntary programs and activities (BBC 2011b).

The crucial issue at stake here is whether less public spending indeed leads more people into volunteering: does voluntary work automatically emerge as a perfect substitute

for government activity? Whether the Big Society is successful hinges on the occurrence of a strong *crowding out effect* to counter the cuts in public spending: i.e., an increase (decrease) in public expenditure brings about a significant decrease (increase) in citizens' propensity to volunteer. Academic and policy debates are divided between the conventional beliefs that the relationship between government expenditure and volunteering is either a matter of crowding out or crowding in. But there is surprisingly little theoretical and empirical support for either position. This paper aims to fill that gap.

This paper contributes in two important ways to recent debate in this journal about volunteering policy (Nesbit and Brudney 2010; Reinglod and Lenkowsky 2010) and voluntary organizations (Smith 2008; LeRoux 2009; Shea 2010) in the United States. First, focusing on the British situation draws attention to the crucial, yet under-studied, relationship between public spending and volunteering. A review of the relevant literature shows that concentrating on employed individuals can especially lead to new insights for volunteering policy, because this pivotal target group has to make a decision between allocating their time to working in the market or in volunteering.

Second, the paper uses a multidisciplinary approach to refine theoretical and empirical understandings of the relationship between public spending and volunteering on the macro and micro level. The analysis integrates (1) an analytical model that conceptualizes the relationship between public spending, the individual decision to volunteer, individual abilities, and volunteering infrastructure; (2) an econometric analysis of four cross-country European datasets and British panel data showing that the decision of employed individuals to volunteer depends positively on government expenditure; and (3) a narrative analysis of qualitative interviews revealing how collaborative working is crucial to make citizens feel that volunteering is worth their time.

The analysis concludes that less public spending reduces the likelihood of (successful) volunteering. Lower public spending increases the probability of setbacks and frustrations for volunteers and decreases the availability of adequate support structures and professional skills. This leads to three conclusions and recommendations: (1) public spending is needed to prevent volunteering levels to drop, (2) employed individuals do voluntary work if they see it as worth their time, and (3) for public spending to increase volunteering, governments and voluntary organizations should cultivate local abilities and volunteering infrastructure based on collaborative relationships.

Public Spending and Volunteering by Employed Individuals

The literature provides important insights about the determinants of voluntary work for the total population or specific segments. Studies focusing on the total population showed that people can decide to volunteer, or give money to charity, because of pure altruism or warm-glow altruism (Andreoni 1990), a desire to personally "make a difference" (Duncan 2004), impatience to receive a certain good (Bilodeau and Slivinski 1996), social pressure (Della Vigna et al. 2011), obliging social norms (Olken and Singhal 2009), or because giving can enhance their wellbeing (Meier and Stutzer 2008). The decision to volunteer can also be influenced by the socioeconomic or ethnic composition of the neighborhood or community (Alesina and La Ferrara 2000; Atkinson and Kintrea 2001; Goodlad and Meegan 2005).

However, the decision to volunteer might depend more strongly on macro-economical factors than on individual, social, or geographical characteristics (Hastings 2003; Amin 2005; Atkinson et al. 2005; New Economics Foundation 2010). An important stream of research explores how a change in the size of the welfare state influences the decision to volunteer (e.g., Khanna and Sandler 2000; Van Oorschot and Arts 2005; Hackl et al. 2012). These

studies focus either on the entire population or specific age groups (young people and retired people).

At an aggregate population level, Hackl et al. (2012) find evidence for a crowding out effect due to an increase of the welfare state, while Van Oorschot and Arts (2005) do not. Menchick and Weisbrod (1987) showed that tax rates influence the opportunity costs of volunteering. Khanna and Sandler (2000) detected a crowding in effect in a study regarding money donations in the UK.

For specific age groups, firm evidence exists that citizens tend to start volunteering later in life, mainly after retirement (Mutchler et al. 2003). In fact, old age is a key characteristic of "the usual suspects" who dominate volunteering (Barnes et al. 2007). At the same time, the voluntary work of young citizens was found to enhance their human capital and prospects of a higher income (Day and Devlin 1998).

But perhaps the most crucial type of citizen is the employed individual who has to allocate time between working in the market and volunteering. Government expenditure and taxation influence employed agents' decisions about their time allocation. By considering volunteering as *work*, unpaid labor, or productive activity (Musick and Wilson 2007, 111-112), like any other type of work, it consumes resources, produces services to people, and requires certain abilities. The time employed individuals have at their disposal is scarce and their decision on what type of work to spend it on depends on their perception of whether that work is worth their time. Public spending affects this perception, because, in an impure altruism framework, individuals receive utility from the total amount of volunteering in society as well as from the result of their personal volunteering (Andreoni 2006).

Whether an employed agent will be willing and able to allocate time to volunteering also depends on their abilities. Citizens with more skills and experience are more prone to

volunteer and are more effective in it. A key problem of voluntary work is getting other people than just “the usual suspects” to participate (Barnes et al., 2007; Taylor et al. 2011).

This effect can be mediated by the presence of a volunteering infrastructure that enables recruiting, training, facilitating, and sustaining volunteers (Osborne et al. 2002; Nesbitt and Brudney 2010, S110-S111). Volunteering infrastructure does not only refer to the structures and procedures of voluntary sector organizations, but can also take the form of a school built, handbooks with practical knowledge and know-how, or the practices of public professionals who manage volunteering programs. It can embody physical capital (materials that facilitate production), human capital (skills and capabilities of individual persons), and social capital (structure of the relationships between actors) (Coleman 1988, S98, S100) used in the production of the public good.

In conclusion, the literature has identified many factors that affect the willingness of citizens to volunteer, but the influence of government expenditure on employed individuals has been insufficiently explored. However, this relationship is fundamental to the widely held belief that public expenditure impairs volunteering. This paper explores this issue in greater theoretical and empirical detail based on a multidisciplinary approach that combines analytical modeling, econometric analysis, and narrative analysis. This approach enables, on the one hand, to conceptually grasp and empirically test the individual decision to volunteer in response to public spending as a complex macro-economical phenomenon in terms of general causal patterns, and, on the other, to interpret it as an intricate social phenomenon through qualitative analysis of micro-level practices. Despite epistemological differences between these methods, there is widespread support for multidisciplinary research that uses positivist methods to identify broad causal patterns on the macro-level and interpretivist methods to explain these in detail on the micro-level (Lin 1998; Seale 1999; Della Porta and Keating 2008).

An Economic Model of Public Spending and Volunteering

Despite its ideological stance, the Big Society plan is coupled with hardwired economic considerations. Therefore it is useful to explicitly make a brief economic analysis by means of a theoretical model, admittedly simple but hopefully not too simplistic, to generate a set of predictions about the relationship between public spending and volunteering. This model takes an extremely optimistic view of the government's economic achievements, by analyzing the Big Society in a pure situation of balanced budget, full employment, and perfectly rational individuals. By using these classical assumptions, the model deliberately avoids making an "easy" criticism of the current British government's policies based on more or less Keynesian considerations about the recessionary effects of austerity measures. Similarly, in this ideal laboratory economy, it is assumed that government debt does not exist any longer, thereby ruling out any potentially misleading effects of past policy mistakes or global financial troubles.

This section sketches the main aspects of the theoretical model (which the interested reader can find in the Appendix) and its main predictions. Since the focus is on volunteering and public expenditure, the model uses both an individual perspective (micro) and a country perspective (macro): the tool of general equilibrium helps to handle such a framework. Since macro variables evolve over time, also dynamic aspects (physical and social capital accumulation and depletion) are incorporated in this model. Volunteering infrastructure enters the model as a stock of volunteering experience inherited from previous generations. In fact, it seems realistic to acknowledge that past voluntary activities leave a positive trace in the community. The analytical model stylizes the factors influencing time allocation between

working and volunteering and determines their relationship with public policy at the macroeconomic level. Four main modeling steps are undertaken, which are summarized here.

The first step is making a number of simplifying assumptions about the economy, some standard and some more innovative. Most notably, the model builds on a utility function which represents the interests of individuals about volunteering and working, and defines what makes them more or less happy. The utility function satisfies the following assumptions: individuals 1) like consuming market goods and leaving some wealth to their children; 2) care for doing some volunteering to help the community; 3) enjoy having some public good provided by taxes and by volunteering; and 4) suffer the hardships of working, whether it is for free or for a market salary. Assumptions 2) and 4) put together imply that while individuals dislike to some degree both kinds of labor efforts, they suffer volunteering less, due to the additional gratification aspect involved in that activity.

Second, the utility of individuals, assumed heterogeneous in terms of abilities, is maximized subject to the constraints that derive from the market and the government's policy. Moreover, both volunteering and market production require individual abilities and hours of work. Finally, the government manages to run a balanced budget, which guarantees that government spending cuts translate automatically into lower income tax rates. Of course, it is realized that this is a very optimistic and long-term perspective, assuming a governmental policy consistently pursued for a generation.

Third, the results of all the individual units' maximizations are aggregated by the perfectly competitive markets, in general equilibrium, so that (along with other important variables) the optimal amount of hours spent working for the market and volunteering are determined as a function of governmental policies.

Figure 1 shows a graphic representation of the model:

[Figure 1 here]

As a result, the first proposition can be mathematically derived, containing the first result of the model: a decrease in the tax rate causes a decrease in the optimal volunteering hours, and vice versa.

A second proposition is obtained stating that an increase in taxation increases the voluntary and the public expenditure components of the public good, provided tax rates are not too high. That is, a Laffer-curve pattern arises, as shown in figure 2.

[Figure 2 here]

Finally, considering the subgroup of inactive agents shows that, in equilibrium, the third proposition is that they are indifferent to taxes and therefore might not be affected by the public expenditure. This clarifies the importance of empirically studying the employed fraction of the population.

Econometric Analysis

Two datasets were used to test the main predicted relationship between government expenditure and volunteering for employed individuals suggested by the theoretical analysis. The first dataset is the British Household Panel Survey (BHPS), which contains unbalanced panel data about UK citizens from 1991 to 2007 [1]. As the focus is on employed individuals only, agents older than 60 or non-employed are eliminated from the sample. Nevertheless, the dataset is substantial: 45,376 observations from 12,378 different individuals. In this way, time and individual elements become central in the analysis. The data have been collected through

face-to-face interviews, or telephone interviews if impossible otherwise (Taylor et al. 2010). Data about UK government expenditure were extracted from the OECD UK statistical profile, and were divided, for each year, by the GDP. The constructed dataset contains also information about English, Scottish, Welsh and Northern Irish government expenditure, obtained from PESA documents (Public Expenditure Statistical Analyses – HM Treasury) for each available issue (1999-2009), which also contained information for the time period 1991-2008. Statistics from PESA are not necessarily fully consistent for different years, but their introduction in the analysis was used to check the robustness for general UK government expenditure.

The second dataset contains data about OECD countries and countries included in the European Values Survey Wave 1 (1981), 2 (1990), 3 (1999), and 4 (2008). For Wave 1, 6,070 valid observations from 11 countries were studied; for Wave 2, 10,568 valid observations from 22 countries; for Wave 3, 4,026 valid observations from 11 countries; and for Wave 4, 6,492 valid observations from 19 countries. Data were collected by several data collectors for different countries. Face-to-face interviews with standardized questionnaires were conducted in the official language of each country, with the exception of 25% of interviews in Iceland in Wave 3 made by telephone (EVS 2011).

For Wave 3 and 4 data about general government expenditure were extracted from the OECD statistics and divided, for each country and each year, by the GDP. For Wave 1 and 2, it was not possible to obtain data about the general government expenditure, but general government final consumption was used as proxy. General government final consumption, measured as percentage of the GDP, was extracted from the World Bank dataset, and includes all government current expenditures for purchases of goods and services, but excludes the government capital formation. In the next subsection variables, analysis, and results are presented for both datasets [2].

Volunteering and Government in UK

This subsection examines the effect of general government expenditure on the binary variable probability of volunteering, measured as being active in organizations [3]. The goal is to examine how expansions or contractions of UK and country-specific (England, Scotland, Wales, and Northern Ireland) general governments' expenditure as a fraction of GDP are correlated with changes in the probability of each individual to volunteer. The empirical analysis controls for several other regressors: number of children, sex, level of education, marital status, income, liking the neighborhood, religion, and country. Using the personal and country-specific variables along with the government spending helps to make sure that the relationship between government expenditure and volunteering is robust. The description and coding of each variable is shown in Table 1.

[Table 1 here]

A summary of the dependent variable and of each regressor is presented in Table 2.

[Table 2 here]

The econometric analysis is developed on different levels to offer a comprehensive study. The first step is to perform an ordinary least square (OLS) regression for the entire dataset. Two sets of regressions are undertaken (of which the most relevant specification is reported): the first one (labeled OLS – Tot) uses UK government expenditure, while the second one (labeled OLS – Cou) uses, for each observation, the government expenditure of the countries

in which the respondent lives. The second analysis also controls for the countries, to make sure that the country government expenditure does not pick up some country-specific effects on volunteering. Table 3 presents the results:

[Table 3 here]

Strikingly, government expenditure, no matter if UK-wide or country-specific, always has a positive and significant effect on volunteering. Also some personal characteristics appear to systematically matter for the individual decision to volunteer: education, belonging to any religious denomination, liking the neighborhood, having children, being married, being male, and having an interest in politics, all have positive effects. Having a higher income reduces the probability of volunteering, which suggests the possibility of a substitution effect between working and volunteering.

Since the dataset is a panel and volunteering is measured as a binary variable, an OLS regression alone would not be sufficient. In the panel data analysis with fixed effects, all the variables which had no within variation, such as sex and religion, had to be dropped. The results of the analysis for the UK general government expenditure (variable Exp) are presented in Table 4.

[Table 4 here]

To check the robustness of the results, a battery of estimators was used, including: panel data OLS with fixed effect (xtreg fe), panel data OLS with random effects (xtreg re), panel data OLS with autoregressive errors of order 1 and fixed effects (xtregar fe), panel data

OLS with autoregressive errors of order 1 and random effects (xtregar re), logit analysis (logit), probit analysis (probit), panel data logit pooled regression (xtlogit pooled), panel data logit with fixed effects (xtlogit fe), panel data logit pooled regression (xtlogit pooled), panel data logit with fixed effects (xtlogit re), and panel data probit with fixed effects (xtlogit re). According to the Hausman test, the fixed effect estimators perform better than those with random effects.

In each regression the government expenditure appears to positively influence the probability of individual's volunteering, with the coefficient parameter significant at the 5% level, with the only exception of the linear probability OLS estimator with autoregressive errors or order 1 and with the (likely inconsistent, as suggested by the Hausman test) random effects estimator. Personal characteristics (having children, higher education, being married, liking the neighborhood, and being interested in politics) all tend to encourage volunteering, while having a higher income tends to discourage volunteering, although these characteristics are not always significant.

The same investigation is repeated by disaggregating the government expenditure of the four member-countries (Expcou), as shown in Table 5.

[Table 5 here]

The results are similar to the aggregate UK analysis: the country-specific government expenditure coefficients are positive and significant, except for the panel data OLS with autoregressive errors or order 1 and with the random effects. This shows that the government expenditure effect is robust for the division in countries and does not depend on external UK circumstances. Also the effects of personal characteristics are along the lines of the pattern observed in Table 4, thereby confirming the robustness of the previous results.

Volunteering and Government in Europe

Could the positive effect of government expenditure on volunteering be a British anomaly? To answer this questions a second study is carried out on the countries that fall in the intersection between the EVS study and the OECD [4]. A full description of the country variables is not reported due to lack of space, and the focus will be on the most relevant estimates.

Along with the general government expenditure variable (exp) and the general government final consumption variable (govcon), several variables are included in the regressions. Table 6 shows each variable, its definition and its coding.

[Table 6 here]

The first two waves show some differences compared to the third and fourth. Income is only available categorically (incomecat), according to the respondent's position in the national deciles income ladder, no data is available about education (education), nor ideas about people sticking to their affairs (people). Also, for the first wave, no data are available about political interest (vote).

Table 7 summarizes the dependent variable and each independent variable.

[Table 7 here]

The four waves are analyzed separately; in fact, the EVS is not a panel dataset, as individuals are not followed in time; and it is more correctly interpreted as cross sectional

rather than longitudinal dataset, because not every country is represented in all of the four datasets. Therefore, the dataset is considered as four separate cross sectional studies, one for each wave. The advantage of conducting four different studies is that it provides information about the robustness of the results. Unfortunately the cross-section analysis prevents the use of country dummies, as these would absorb all the differences in government spending across countries. However, this can be partially recovered by controlling for a number of personal characteristics, which are likely to be influenced by the country in which individuals live.

The first set of regressions analyses the first wave of the EVS, which contains data for the years 1981 and 1982. Four types of analysis are developed: (1) a basic OLS regression; and, given that the dependent variable is binary, (2) a Probit; (3) Logit; and (4) robust Probit analyses are appropriate. Table 8 contains the results.

[Table 8 here]

The analysis is repeated for the second wave of the EVS, which contains data for the years 1990 and 1991. In this case it is possible to introduce a variable for interest in politics. Results for the second wave are shown in table 9.

[Table 9 here]

The striking result is that the coefficient of the general government final consumption variable (Govcon) is positive and significant in all regressions. Also having children is positive and significant, as well as being male. As with the British data, income mostly affects volunteering in a negative way. Contrary to the BHPS, however, being married seems

to have a negative effect on the individual choice to volunteer, while religion does not seem to have a clear effect.

For the third and fourth wave, data about general government expenditure, education, precise purchase power parity (PPP) income, and ideas about whether people should stick to their own affairs are available, allowing for a more comprehensive investigation. Table 9 shows the results for the third wave.

[Table 9 here]

The positive and significant effect of government expenditure is still present. Having children, higher education, being interested in politics, and believing that people should not stick to their own affairs also have positive and significant effects. Religion and marital status once more do not seem to influence volunteering in a clear and significant way. The same results are obtained for wave 4, as can be seen in Table 10.

[Table 10 here]

In sum, the data are consistent with the predictions of the theoretical model about the dependence of volunteering on the size of the welfare state, personal abilities, and employment. These findings support the view that, based on the available data for Europe and for the United Kingdom, government expenditure has a positive effect on volunteering: a decrease in public spending decreases the probability that employed agents decide to volunteer.

Narrative Analysis

The econometric findings support the analytical model's prediction that less public spending does not lead employed individuals to volunteer more. A narrative analysis can be useful to cast more light on the qualitative relationships between volunteering, public spending, abilities, and volunteering infrastructure. As part of a wider, independently conducted study, 19 qualitative interviews were held between October and December 2009 in Glasgow (UK) with 7 active residents of the area Pollokshields Southside Central and 12 public professionals working for Glasgow City Council and various agencies delivering public services in this area.

The goal of the research was to reveal the communicative patterns and tensions that prevented productive collaboration. The interviews were approached as narratives: stories people tell about their personal experiences which wittingly or unwittingly enable them to pinpoint what happened, make sense of these happenings, and express their normative evaluation (Hummel 1991; Wagenaar 2011, 208-222). These stories are structured according to narrative elements such as plotlines, characters, frames, and metaphors (Rein and Schön 1994; Stone 2002). By analyzing how different actors structured their narratives, the analysis teased out "the work narratives do" (Forester 1993) in harboring underlying beliefs, feelings, and experiences, as well as broader behavioral patterns and tensions. The narratives of the respondents were analyzed through a grounded theory process: by systematically coding the transcribed interviews and writing memos in which codes and stories were interpreted and compared to each other, it was possible to formulate a meta-narrative of the entire case (Charmaz 2006; Wagenaar 2011, 251-272).

This meta-narrative of Glasgow tells the story of public spending and volunteering levels traditionally above UK average, while levels of poverty and deprivation are unmatched

by any other major British city. This unproductive pattern is rooted in Glasgow's development into a "dual city" (Keating 1988): far-reaching governmental intervention and centralism led to successful regeneration programs in inner-city areas, but simultaneously fuelled deep-seated community activism and distrust in economically, socially, and politically marginalized peripheral estates. Citizens tend to be active in volunteering and dislike being told what to do, while Glasgow City Council tends to support volunteering and like being in control of what happens. In this context, the research identified two opposing narratives which divided the respondents more or less in half: one group (respondents 1-4,9,10,12,16-18) told stories in which public spending is seen as vital support for volunteering, while the stories of the other group (respondents 5-8,11,13-15,19) portrays it as a source of hampering and patronizing interference from local authorities.

The first narrative, "work in progress", characterizes volunteering as an ongoing, complex, and demanding process in constant need of professional support. It was communicated by public professionals responsible for this. Their experiences varied according to their specializations, remit, and organizations: e.g., a local police officer told stories about the complex and changeable composition and needs of the neighborhood in terms of safety, while a City Council official talked about imprecise and ambiguous policies and regular revisions of rules and structures. John, an educated public professional in his forties working for the local authorities to encourage volunteering, had most experience with this:

> ...part of the process is ... taking the message ... to ... community councils, ... area committees, ... tenants and residents associations, youth groups... Basically if you identify where they are, and who they are, then making contact with them, going along and making a presentation... And you might go to ten of those, you know, and

> for every ten you might get one ... who is willing to come along, and they might just come along to a meeting, decide it's not for them and then disappear again. But that's again what I say **about the nature of it** and it's about **continuing to go out and spread the word** and networking with partners to make sure that ... they're spreading the word... So, but **it's just an ongoing piece of work ... that doesn't stop**... So very much **work in progress**...

John tells about the great effort involved with his daily work of supporting volunteering. His story turns from description to prescription with a "normative leap" (Rein and Schön 1994, 26): first describing his work as fairly ordered and manageable ("identify where they are, and who they are, then making contact with them, going along and making a presentation"), John ends by prescribing that "it's just an ongoing piece of work ... that doesn't stop" that asks for "continuing to go out and spread the word". The normative leap that the "work in progress" is "the nature of it" legitimizes the view that volunteering is *inherently* an endless process of recruiting and sustaining volunteers in *continuous* need of public spending to guarantee a volunteering infrastructure. There is a permanent need for skilled professionals who go out to meet new people, convince them to come along, provide them with adequate training, and keep them on board.

The second narrative, "making a difference", holds that citizens are motivated to volunteer and solve community problems, but are prevented by local authority interference in actually making a difference. It was expressed by citizens and a few disillusioned public professionals. In different ways, they had been taking an adversarial stance to the local authorities: e.g., one pensioner told stories about his community centre being cut off from funding while a young mother talked about not being taking seriously in meetings. Jenny, a

low-educated, employed, middle-aged woman active in a number of voluntary organizations, takes perhaps the fiercest stance of all:

> …**if it's local people run you've got what local people are looking for**. If you as a funder want to come in and actually do more, **you … can't come in with this approach ... 'We'll set up our own structures',** which [the Council] has been doing... I live in one of the worst areas for health ... and our health initiatives have been paid back to the bone. Our local health projects that drew a lot, smoking cessation groups, you know, weight loss things, you know, confidence boosting to get you out of depression therapies, you know, alternative therapies for residents... **The only way to really fix Glasgow is by using the communities**. And to get some kind of health employer coming in and saying 'We should be doing that'..., Glasgow folk turn away and say 'On your way'. ... People will come into a health club ... locally... **That's where a big Glasgow strategy should be feeding into...** They should be saying 'What is it that you're doing that got the results and how can we help you get more results?'.

Jenny strongly resents City Council interference with voluntary activities. Her narrative follows a storyline of "stymied progress": "In the beginning ... things got better, thanks to a certain someone [or something]. But now somebody or something is interfering with our hero, so things are going to get terrible again" (Stone 2002, 139, 142). At first, Jenny found herself living "in one of the worst areas for health" (setting) and got involved in "local health projects that drew a lot" of participants and made a difference. However, "our health initiatives" (the hero) were "paid back to the bone" while City Council and a "health employer" (anti-heroes) tried to take over and "set up [their] own structures" (climax). This

story legitimizes her view that volunteers have the right abilities for making a difference and "the *only way* to really fix Glasgow" is by supporting them to do so without any government interference.

At first glance, there seems to be an impasse between these opposing narratives: the belief that volunteering benefits from more public spending underlying John's story is in fundamental conflict with Jenny's underlying belief that it benefits from less public spending. However, working out a pragmatic compromise is possible despite deep-seated differences (Forester 1999). John and Jenny should recognize that volunteering is an ongoing, messy, and frustrating type of work, that their stories are partial constructions of the complex nature of volunteering, and that they both offer valuable and complementary views. Volunteering could be less of a "work in progress" for John if he would recognize and accommodate the abilities of citizens more, while Jenny could be more effective in "making a difference" when recognizing the value of public professionals' volunteering infrastructure. This, admittedly brief and preliminary, illustration of the complex micro level activities of voluntary practice suggests that public spending can make volunteering more successful when local authorities and volunteers nurture a collaborative relationship to work out practical agreements on how abilities and volunteering infrastructure can reinforce each other.

Thus, the narrative analysis suggests that public spending will stimulate volunteering if employed individuals consider it worth their time. They are less likely to volunteer if they perceive their abilities for "making a difference" as low and the volunteering infrastructure as inadequate for dealing with the "work in progress". Public spending in itself does not seem sufficient to increase volunteering: also productive collaborative relationships between local authorities and volunteers are needed. Less public spending, then, increases the probability that collaborative relationships are offset, abilities and volunteering infrastructure are

insufficiently supported, and employed individuals will consider voluntary work as not worth allocating their time to.

Rethinking the Government-Volunteering Relationship

The goal of this paper was to examine the theoretical and practical consistency of the perhaps too optimistic expectations of the Big Society plan about volunteering after withdrawing public spending. Many factors were already known to affect levels of voluntary activity, but surprisingly enough the relationship between public spending and volunteering had great lacunae, which were filled by a widely held belief in the existence of a crowding out effect. The analysis here shows that more government expenditure actually increases the probability of volunteering for employed agents. This finding should not be interpreted as (political) argument in favor of "Big Government" and against "Big Society". Rather, the analysis suggests that government expenditure has to be tailored to sustaining local abilities and volunteering infrastructure so that employed individuals will consider voluntary work as worth allocating their time to.

Although the British context greatly differs from the American one, this conclusion resembles the recommendations for volunteering policy that Nessbit and Brudney (2010) reach in their analysis of the Edward M. Kennedy Serve America Act, and supplements these in two ways. First, public spending is necessary for dealing with the inherent challenges of voluntary work and keeping the level of volunteering from going down. Second, public spending should be used to accommodate and improve individual abilities and volunteering infrastructure. This is not to refute the argument that the relationship of governments with voluntary organizations and volunteering is inherently problematic and contentious, nor that voluntary organizations can generate negative consequences (Brecher and Wise 2008;

Reingold and Lenkowsky 2010). Indeed, the analysis confirmed that public spending and volunteering are wedged between bold political ideals and unruly practice. At the same time, the analysis showed that unilaterally "rolling back" (or "rolling in") government is not the way to deal with the inherent difficulties of volunteering. Rather, the only sustainable approach to volunteering seems to be localized partnership working that makes volunteers feel that their voluntary work is worth their time.

The analysis suggests that volunteering is not simply a function of the presence or withdrawing of government; it requires government that places itself next to voluntary workers and organizations to work out pragmatic ways for making a difference. Government expenditure should not merely form a regulatory instrument for oversight and control of voluntary organizations (cf. LeRoux 2009). This leads to the following recommendations: (1) public spending needs to be used to prevent volunteering levels from dropping; (2) employed individuals have to be encouraged to do voluntary work by making it worth their time; and (3) for public spending to increase volunteering, governments and voluntary organizations should cultivate local abilities and volunteering infrastructure based on collaborative relationships. These recommendations, drawn from the macro and micro level analysis conducted here, complement recent middle level analyses of the relationship between government and voluntary organizations, which assert that financial support of nonprofits, training and education of their professionals, and building a solid volunteering infrastructure are vital to successful volunteering (Smith 2008; Shea 2011).

Admittedly, the analysis here provides a preliminary basis to speculate about the relationship between government expenditure and volunteering and the prospective effects of the Big Society plan. But this test of the main belief underlying this policy may provide some valuable insights into the likelihood of its success or failure, as well as helpful recommendations about the direction in which it could be amended. Future research could

refine the conclusions and recommendations reached here by further analyzing the ways government expenditure interacts with abilities and volunteering infrastructure; the influence of specific fiscal elements on relative segments of volunteering; and the role of money donation. In any case, future research and policy should advance a thorough understanding of the relationship between public spending and volunteering.

Footnotes

[1] Years 1996, 1998, 2000, 2002, 2004, and 2006 are excluded as these do not contain information on the variable used.

[2] All the Stata codes used in the estimations are available from the authors upon request.

[3] Organizations for the BHPS are listed in table 2, while organizations for the EVS are listed in table 6.

[4] Countries are listed in table 6.

Appendix

A. The Economy and the Utility Function

Society is populated by successive generations t of agents, with each agent indexed by $i \in [0,1]$, and the total mass of individuals normalized to 1. The population does not change over time and there is only one active individual per family. Agents live for one period and they are characterized by a certain degree of inner abilities $A_{it} > 0$ and capital inherited from the parent $k_{ipt-1} > 0$. Each individual allocates her working hours, H_{it}, between voluntary work h_{ivt} and market work h_{ipt}.

The utility function depends on private end-of-life consumption c_{it} and bequest k_{ipt}, volunteering V_{it}[2], public good G_t, and disutility of work H_{it}:

$$u_{it} = \left[\frac{c_{it}^{\alpha} k_{ipt}^{1-\alpha}}{\alpha^{\alpha}(1-\alpha)^{1-\alpha}} \right]^{e} + V_{it}^{e} + \delta G_{t}^{e} - \frac{\psi H_{it}^{2}}{2} \tag{1}$$

where parameters satisfy 0<α<1, 0 <e< 1 , 0<δ<1, and 0<ψ<1. Hence, this model features both intragenerational altruism, expressed through by the volunteering motive, and intergenerational altruism, expressed by the bequest motive.

B. The Constraints

Labor supplied in the market, private capital, and productive abilities serve to produce the aggregate good in the economy:

$$X_{it} = A_{it} h_{ipt}^{\beta} k_{ipt-1}^{1-\beta}$$

where 0<β<1. The after-tax end of life wealth is given by:

$$W_{it} = (1-\tau_t) X_{it} = (1-\tau_t) A_{it} h_{ipt}^{\beta} k_{ipt-1}^{1-\beta}$$

At the end of their life agents allocate their after-tax-wealth between consumption and bequest maximizing subutility $\frac{c_{it}^{1-\alpha} k_{ipt}^{1-\alpha}}{\alpha^{\alpha}(1-\alpha)^{1-\alpha}}$, which implies:

$$c_{it} = (1-\alpha) W_{it} \qquad \text{and} \qquad k_{it} = \alpha(W_{it}).$$

Since $c_{it} + k_{it} = W_{it}$, the indirect utility function can be rewritten as

$$u_{it} = W_{it}^{e} + \delta G_{t}^{e} - \frac{\psi H_{it}^{2}}{2}$$

(2)

Each person's volunteering impact depends on the hours spent volunteering, her productive abilities, and the aggregate volunteering capital k_{ivt}:

$$V_{it} = A_{it} h_{ivt}^{\beta} \bar{k}_{vt-1}^{1-\beta}$$

The volunteering capital evolves according to:

$$\bar{k}_{vt} = (1 - \rho)\bar{k}_{vt-1} + \int h_{vjt} A_{jt} dj + \bar{\theta}$$

(3)

In which ρ represents the natural decay rate of the volunteering capital lost across generations. A certain degree of volunteering capital θ is independent from volunteering as it is guaranteed from market interactions. That is, even if initial volunteering capital were zero, the market would still harbor a minimum possibility for voluntary activity to emerge. Even in the extreme case in which any history of volunteering or social relationships was absent, agents could make volunteering arise from the very basic social contact involved in market activities.

The public good can be provided either using government revenues or volunteering:

$$G_t = \tau_t \int A_{jt} h_{jpt}^{\beta} k_{jpt-1}^{1-\beta} dj + \bar{k}_{vt-1}^{1-\beta} \int A_{jt} h_{jvt}^{\beta} dj$$

Assuming that the abilities are stationary, in steady state each agent's capital would converge to:

$$k_{ip} = \left[\alpha(1-\tau)A_i\right]^{\frac{1}{\beta}} h_{ip}$$

C. Optimal Time Allocation

To find the optimal allocation of time between working and volunteering, the first order conditions and some simple passages are followed: the first order conditions of the maximization of (1) are:

$$\begin{aligned}\frac{\partial u_{it}}{\partial h_{ip}} &= e\beta W_p^{e-1}(1-\tau_t)A_{it}k_{ipt-1}^{\beta-1}h_{ipt}^{\beta-1} - \psi(h_{ivt}+h_{ipt}) \\ &= e\beta\left[(1-\tau_t)A_{it}k_{ipt-1}^{\beta-1}\right]^e h_{ipt}^{e\beta-1} - \psi(h_{ivt}+h_{ipt}) \\ &= 0\end{aligned} \tag{4}$$

and

$$\begin{aligned}\frac{\partial u_{it}}{\partial h_{iv}} &= e\beta V_{it}^{e-1}A_{it}\bar{k}_{ivt-1}^{\beta-1}h_{ivt}^{\beta-1} - \psi(h_{ivt}+h_{ipt}) \\ &= e\beta\left[A_{it}\bar{k}_{ivt-1}^{\beta-1}\right]^e h_{ivt}^{e\beta-1} - \psi(h_{ivt}+h_{ipt}) \\ &= 0\end{aligned} \tag{5}$$

from which is obtained:

$$\left(\frac{h_{ipt}}{h_{ivt}}\right)^{e\beta-1} = \left[\frac{\bar{k}_{vt-1}^{\beta}}{(1-\tau_t)k_{ipt-1}^{1-\beta}}\right]^e$$

and therefore

$$h_{ipt} = \left[\frac{\bar{k}_{vt-1}^{\beta}}{(1-\tau_t)k_{ipt-1}^{1-\beta}}\right]^{\frac{e}{e\beta-1}} h_{ivt}$$

6

Substituting (6) into (5) yields:

$$e\beta\left[A_{it}\bar{k}_{ivt-1}^{1-\beta}\right]^{e}h_{ivt}^{e\beta-1}-\psi\left\{h_{ivt}+\left[\frac{\bar{k}_{vt-1}^{\beta}}{(1-\tau_t)k_{ipt-1}^{1-\beta}}\right]^{\frac{e}{e\beta-1}}h_{ivt}\right\}=0$$

$$h_{ivt}^{e\beta-2}-\frac{\psi}{e\beta\left(A_{it}\bar{k}_{ivt-1}^{1-\beta}\right)^{e}}\left\{1+\left[\frac{(1-\tau_t)k_{ipt-1}^{1-\beta}}{\bar{k}_{vt-1}^{\beta}}\right]^{\frac{e}{e\beta-1}}\right\}=0$$

$$h_{ivt}^{*}=\left(\frac{e\beta}{\psi}\right)^{\frac{1}{2-e\beta}}\frac{\left(A_{it}\bar{k}_{vt-1}^{1-\beta}\right)^{\frac{e}{1-e\beta}}}{\left\{\left[A_{it}(1-\tau_t)k_{ipt-1}^{1-\beta}\right]^{\frac{e}{1-e\beta}}+\left(A_{it}\bar{k}_{vt-1}\right)^{\frac{e}{1-e\beta}}\right\}^{\frac{1}{2-e\beta}}}$$

$$=\left(\frac{e\beta}{\psi}\right)^{\frac{1}{2-e\beta}}A_{it}^{\frac{e}{2-e\beta}}\frac{\bar{k}_{vt-1}^{\frac{(1-\beta)e}{1-e\beta}}}{\left\{\left[(1-\tau_t)k_{ipt-1}^{1-\beta}\right]^{\frac{e}{1-e\beta}}+\bar{k}_{vt-1}^{\frac{(1-\beta)e}{1-e\beta}}\right\}^{\frac{1}{2-e\beta}}}$$

which imply that the equilibrium market working hours are:

$$h_{ipt}^{*}=\left(\frac{e\beta}{\psi}\right)^{\frac{1}{2-e\beta}}\frac{\left[A_{it}(1-\tau)k_{ipt-1}^{1-\beta}\right]^{\frac{e}{1-e\beta}}}{\left\{\left[A_{it}(1-\tau)k_{ipt-1}^{1-\beta}\right]^{\frac{e}{1-e\beta}}+\left(A_{it}\bar{k}_{vt-1}\right)^{\frac{e}{1-e\beta}}\right\}^{\frac{1}{2-e\beta}}}$$

$$=\left(\frac{e\beta}{\psi}\right)^{\frac{1}{2-e\beta}}A_{it}^{\frac{e}{2-e\beta}}\frac{\left[(1-\tau)k_{ipt-1}^{1-\beta}\right]^{\frac{e}{1-e\beta}}}{\left\{\left[(1-\tau)k_{ipt-1}^{1-\beta}\right]^{\frac{e}{1-e\beta}}+\bar{k}_{vt-1}^{\frac{(1-\beta)e}{1-e\beta}}\right\}^{\frac{1}{2-e\beta}}}$$

Higher inner ability A_{it} makes agent j more willing to both work in the market and volunteer. A change in abilities always changes each agent's optimal time allocation to the same proportion no matter the personal ratio of private capital to volunteering capital.

Also taxation influences the decision of timing allocation between volunteering and working in the market. In particular:

Proposition 1. An increase (decrease) in τ_t brings about an increase (decrease) in the optimal volunteering hours h^*_{ivt} and a decrease (increase) in the optimal working hours h^*_{ipt} for each agent i∈[0,1].

B. Proof of Proposition 1: The first derivative of h^*_{ivt} with respect to the tax rate is:

$$\frac{\partial h^*_{ivt}}{\partial \tau_t} = \left(\frac{e\beta}{\psi}\right)^{\frac{1}{2-e\beta}} A_{it}^{\frac{e}{2-e\beta}} \frac{e\left(A_{it}\bar{k}_{vt-1}^{1-\beta}\right)^{\frac{e}{1-e\beta}}\left[(1-\tau_t)k_{ipt-1}^{1-\beta}\right]^{\frac{e-1*e\beta}{1-e\beta}} k_{ipt-1}^{1-\beta}}{(2-e\beta)(1-e\beta)\left\{\left[(1-\tau_t)k_{ipt-1}^{1-\beta}\right]^{\frac{e}{1-e\beta}} + \bar{k}_{vt-1}^{\frac{(1-\beta)e}{1-e\beta}}\right\}^{\frac{3-e\beta}{2-e\beta}}} \geq 0$$

The first derivative of h^*_{ipt} with respect to τ_t is:

$$\frac{\partial h^*_{ipt}}{\partial \tau_t} = \left(\frac{e\beta}{\psi}\right)^{\frac{1}{2-e\beta}} A_{it}^{\frac{e}{2-e\beta}} \frac{e}{1-e\beta}\left\{\frac{\left[(1-\tau_t)k_{ipt-1}^{1-\beta}\right]^{\frac{e-1+e\beta}{1-e\beta}} k_{ipt-1}^{1-\beta}}{\left[\bar{k}_{vt-1}{}^{\frac{e}{1-e}} + (1-\tau_t)^{\frac{e}{1-e}}\right]^{\frac{1}{2-e}}}\right\}\times$$

$$\left\{\frac{\left[(1-\tau)k_{ipt}^{1-\beta}\right]^{\frac{e}{1-e\beta}}}{(2-e\beta)\left[\left(A_{it}(1-\tau_t)k_{ipt-1}^{1-\beta}\right)^{\frac{e}{1-e\beta}} + \left(A_{it}\bar{k}_{vt-1}\right)^{\frac{(1-\beta)e}{1-e\beta}}\right]} - 1\right\}$$

which is negative since:

$$0 \leq \left\{ \frac{\left[(1-\tau)k_{ipt}^{1-\beta}\right]^{\frac{e}{1-e\beta}}}{(2-e\beta)\left[\left(A_{it}(1-\tau)k_{ipt}^{1-\beta}\right)^{\frac{e}{1-e\beta}} + \left(A_{it}\bar{k}_{vi-1}\right)^{\frac{(1-\beta)e}{1-e\beta}}\right]} \right\} < 1$$

QED.

Proposition 2. If $\frac{\tau_t}{1-\tau_t} \leq \frac{1-e\beta}{e}$ a decrease (increase) in taxation causes a net decrease (increase) in public good provision in both the government and voluntary component.

C. Proof of Proposition 2: It is necessary to prove that if conditions in the Proposition 2 hold, than the public good G_t increases in both factors $\tau_t \int A_{jt} h_{jpt}^{\beta} k_{jpt-1}^{1-\beta} dj$ and $\bar{k}_{vt-1}^{1-\beta} \int A_{jt} h_{jvt}^{\beta} dj$ as τ_t increases. From Proposition 1 is known that an increase in τ_t will cause an increase in h_{ivt}^{*}. It is necessary to find the condition under which an increase in τ_t brings an increase in the optimal amount of government revenues. The elasticity of the optimal work supply to the taxation is:

$$\eta_{,h_p\tau_t} = \frac{\tau_t}{(1-\tau_t)} \frac{e}{(1-e\beta)} \left\{ \frac{\left[(1-\tau_t)k_{ipt-1}^{1-\beta}\right]^{\frac{e}{1-e\beta}}}{(2-e\beta)\left[\left(A_{it}(1-\tau_t)k_{ipt-1}^{1-\beta}\right)^{\frac{e}{1-e\beta}} + \left(A_{it}\bar{k}_{vt-1}\right)^{\frac{(1-\beta)e}{1-e\beta}}\right]} - 1 \right\}$$

If $\frac{\tau_t}{1-\tau_t} \leq \frac{1-e\beta}{e}$ the elasticity is $0 < \eta_{,h_p\tau_t} < 1$. Therefore, as long as $\frac{\tau_t}{1-\tau_t} \leq \frac{1-e\beta}{e}$ the work supply is inelastic. An increase (decrease) in τ_t translates into a net increase of the public good supply also in the government part of the public good. QED.

D. Non-active Agents

Let us generalize this framework by assuming that there are two different types of abilities in the model: A_{ipt} for the production of the good X_{it} and A_{ivt} for the provision of volunteering.

In this case:

Proposition 3 If agents have zero productive ability and positive volunteering ability, i.e. $A_{ipt} = 0$, while $A_{ivt} > 0$, then their decision about volunteering does not depend on taxes.

Proof of Proposition 3: Non-productive agent j can be viewed as characterised by a negative shock on the productive abilities, so that $A_{ipt} = 0$, while $A_{ivt} > 0$. In this case, her indirect utility function then becomes:

$$u_{it} = V_{it}^{e} + \delta G_t^{e} - \frac{\psi H_{it}^{2}}{2}$$

The optimal private work is $h_{ipt}^{*} = 0$. The FOC relative to the hours spent volunteering are:

$$\begin{aligned}
&\frac{\partial u_{it}}{\partial h_{iv}} = e\beta V_{it}^{e-1} A_{it} \bar{k}_{vt-1}^{\beta-1} h_{ivt}^{\beta-1} - \psi h_{ivt} \\
&= e\beta \left[A_{it} \bar{k}_{vt-1}^{\beta-1} \right]^{e} h_{ivt}^{e\beta-1} - \psi h_{ivt} \\
&= 0
\end{aligned}$$

In this case the optimal amount of hours spent volunteering does not depend on tax rates:

$$h^{*}_{ivt} = \left[\frac{e\beta}{\psi} \left(A_{it} \bar{k}_{vt-1}^{1-\beta} \right)^{e} \right]^{\frac{1}{2-e\beta}}$$

QED.

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Figures and tables

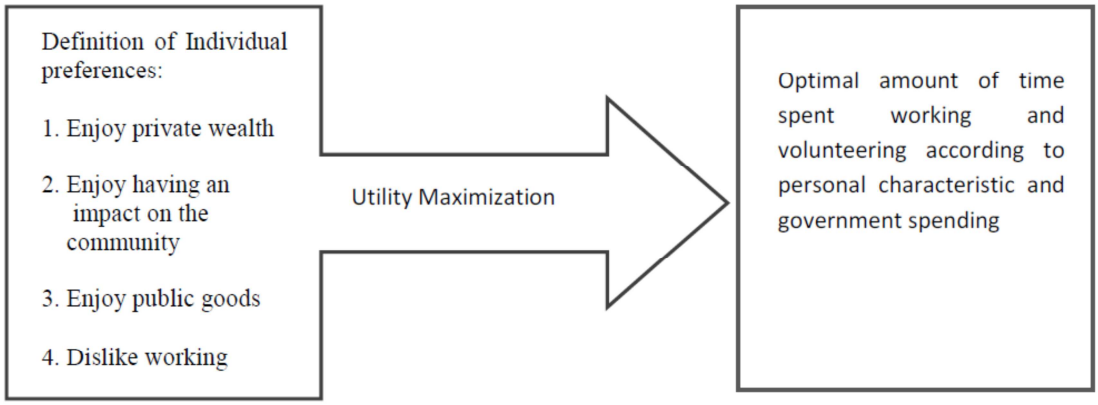

Figure 1. Graphical Representation of the Model

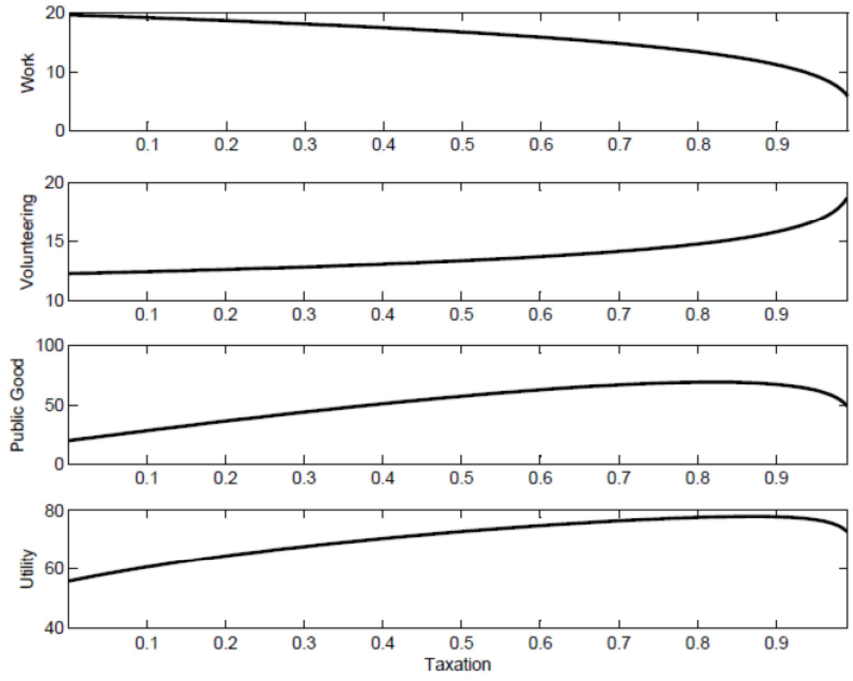

Figure 2. Numerical Simulations

Variables BHPS

Variable	Definition	Code
Vol	Being active in organizations	1= Yes 0= No
Exp	Ratio between general government expenditure and GDP	Numerical
Nchild	Number of children	Numerical
Sex	Sex of the respondent	1= Male 2= Female
Edu	Highest achieved education	0= Commercial Qualification CSE Grade 2-5,Scot G Apprenticeship 1= Higher Degree 2= First Degree 3= Teaching Qualification Other Higher Qualification Nursing Qualification 4= GCE A Level Qualification 5= GCE O Level or Equi
Sex	Sex of the respondent	1= Male 2= Female
Married	Being married	1= Yes 0= No
Income	Annual labour Income	Numerical
Neigh	Like present neighbourhood	1= Yes 0= No
Religion	Religious denomination of the respondent	1= No Religion 2= Church of England /Anglican 3= Roman Catholic 4= Presbyterian /Church of Scotland 5= Methodist 6= Baptist 7= Congregation/URC 8= Other Christian 9= Christian 10= Muslim/Islam 11= Hindu 12= Jewish 13= Sikh 14= Other
Country	Country	1= England 2= Scotland 3= Wales 4= Northern Ireland
Vote	Level of interest in politics	1= Very interested 2= Fairly interested 3= Not very interested 4= Not at all interested
Expcou	Ratio country general specific government expenditure and GDP	Numerical

Table 1: Variables BHPS

Variables Summary British Household Panel Survey (BHPS)

Variable	Definition	Mean	Std. Dev.
Vol	Being active in organizations	.485	.500
Exp	Ratio between general government expenditure and GDP	.425	.020
Nchild	Number of children	.673	.976
Sex	Sex of the respondent	1.485	.500
Edu	Highest achieved education	3.139	1.442
Married	Being married	.582	.493
Income	Annual labour Income	16168.64	14911.34
Neigh	Like present neighbourhood	.981	.258
Religion	Religious denomination of the respondent	3.584	3.347
Country	Country	1.683	1.019
Vote	Level of interest in politics	2.755	.904
Expcou	Ratio country general specific government expenditure and GDP	.308	.037

Table 2. Variables Summary BHPS

Asterisks indicate coefficient significant at 5%. The numbers in parenthesis are the standard errors of the estimates.
Organizations include: political party, trade union, environmental group, parents association, tenants group, religious group, voluntary group, other community group, social group, sports club, women institute, women group, other organisation**.**

BHPS OLS for Total Expenditure and Country Specific Expenditure

Var	OLS -Tot	OLS- Coun	Var	OLS –Tot	OLS- Coun
Exp	.638* (.135)	-	**Religion6**	.125* (.052)	.140* (.052)
Expcou	-	.346* (.136)	**Religion7**	.311* (.053)	.312* (.053)
Country2	-	-.018 (.013)	**Religion8**	.124* (.011)	.149* (.013)
Country3	-	-.048* (.012)	**Religion9**	.147* (.013)	.145* (.013)
Country4	-	-.077* (.019)	**Religion10**	.100* (.035)	.099* (.035)
Nchild	022* (.003)	.022* (.003)	**Religion11**	.028 (.067)	.024 (.068)
Edu1	.177* (.021)	.180* (.021)	**Religion12**	.207* (.057)	.205* (.058)
Edu2	.144* (.014)	.145* (.014)	**Religion13**	.090 (.071)	.082* (.072)
Edu3	.079* (.012)	.078* (.012)	**Religion14**	.142* (.023)	.144* (.024)
Edu4	.052* (.014)	.052* (.014)	**Sex**	-.055* (.007)	-.056* (.007)
Edu5	.045* (.013)	.0458* (.013)	**Married**	.019* (.007)	.019* (.007)
Religion2	.067* (.009)	.062* (.009)	**Income**	-3e-07* (1e-07)	-3e-07* (1e-07)
Religion3	.080* (.011)	.091* (.012)	**Neigh**	.020* (.010)	.020* (.010)
Religion4	-	-	**Vote**	-.043* (.003)	-.043* (.003)
Religion5	.177* (.023)	.177* (.023)	**Const**	.238* (.062)	.421* (.044)

Table 3. OLS BHPS

Asterisks indicate coefficient significant at 5%. The numbers in parenthesis are the standard errors of the estimates.

British Household Panel Survey (BHPS) – Volunteering (General Government Expenditure)

Var	Xtreg (Fe)	Xtreg (Re)	Xtregar (Fe)	Xtregar (Re)	Logit	Probit	Xtlogit Pooled	Xtlogit (Fe)	Xtlogit (Re)	Xtprobit (Fe)
Exp	.416* (.146)	.627* (.132)	.875* (.134)	.137 (.150)	4.09* (.582)	2.54* (.367)	2.596* (.542)	2.543* (.853)	3.928* (.778)	2.297* (.457)
Nchild	.032* (.005)	.022* (.003)	.009 (.007)	.014* (.003)	.075* (.014)	.047* (.009)	.090* (.013)	.195* .023	.136* (.017)	.080* (.010)
Edu1	-.015 (.053)	.186* (.020)	.214* (.073)	.220* (.021)	.866* (.094)	.539* (.057)	.773* (.085)	-.062 .275	1.177* (.120)	.692* (.070)
Edu2	-.022 (.041)	.148* (.014)	.201* (.056)	.171* (.015)	.681* (.063)	.424* (.039)	.610* (.057)	-.094 (.200)	.923* (.083)	.543* (.048)
Edu3	-.003 (.030)	.087* (.012)	.107* (.041)	.113* (.013)	.488* (.055)	.304* (.034)	.361* (.050)	-.003 (.146)	.548* (.071)	.322* (.042)
Edu4	.006 (.033)	.058* (.013)	.091 (.047)	.068* (.014)	.293* (.061)	.182* (.038)	.244* (.055)	.057 (.164)	.370* (.079)	.217* (.046)
Edu5	.040 (.032)	.048* (.012)	.098* (.045)	.054* (.013)	.217* (.057)	.135* (.035)	.200* (.052)	.244 (.162)	.305* (.075)	.180* (.044)
Married	-.027* (.011)	.035* (.006)	-.003 (.014)	.047* (.007)	.201* (.029)	.126* (.018)	.145* (.026)	-.161* (.054)	.215* (.036)	.127* (.021)
Income	-6e-07* (2.e-07)	-6e-08 (1e-07)	-3e-07 (2.e-07)	1e-07 (1e-07)	2e-06* (1e-06)	1e-06* (5e-07)	-2.e-07 6.e-07	-5e-06* (1e-06)	-4e-07 (9e-07)	-2e-07 (5e-07)
Neigh	.002 (.011)	.021* (.009)	.012 (.013)	.021* (.009)	.172* (.046)	.107* (.028)	-2e-07* (6e-07)	.014 (.067)	.132* (.057)	.077* (.033)
Vote	-.016* (.005)	-.049* (.003)	-.011 * (.005)	-.042* (.003)	-.238* (.015)	-.148* (.009)	-.200* (.013)	-.097* (.027)	-.301* (.019)	-.177* (.011)
Const	.364* (.071)	.219* (.059)	.027* (.012)	.391* (.067)	-1.87* (.264)	-1.16* (.164)	-1.17* (.244)	-	-1.760* (.355)	-1.03* (.208)

Table 4. Regressions BHPS –General Government Expenditure

Asterisks indicate coefficient significant at 5%. The numbers in parenthesis are the standard errors of the estimates.

British Household Panel Survey (BHPS) – Volunteering (Country Government Expenditure)

Var	Xtreg (fe)	Xtreg (re)	Xtregar (fe)	Xtregar (re)	Logit	probit	Xtlogit pooled	Xtlogit (fe)	Xtlogit(re)	Xtprobi t (fe)
Expcou	.487*	.351*	1.216*	.070	1.698*	1.060*	1.448*	3.002*	2.181*	1.276*
	(.144)	(.134)	(.192)	(.150)	(.575)	(.358)	(.549)	(.873)	(.811)	(.476)
Country2	-.039	-.022	-.136	-.007	-.119*	-.074*	-.092	-.217	-.145	-.085
	(.068)	(.013)	(.064)	(.014)	(.055)	(.034)	(.053)	(.241)	(.078)	(.046)
Country3	.128*	-.029*	.061	-.021	-.152*	-.095*	-.121*	.663	-.191	-.113*
	(.058)	(.011)	(.060)	(.012)	(.046)	(.029)	(.044)	(.290)	(.066)	(.039)
Country4	.936*	-.016	.762	.011	-.139*	-.087*	-.066	12.22*	-.104*	-.062
	(.016)	(.016)	(.654)	(.018)	(.070)	(.044)	(.067)	(546.77)	(.100)	(.059)
Nchild	.032*	.022*	.009	(.014)*	.075*	.046*	.090*	.195*	.135*	.079*
	(.005)	(.003)	(.007)	(.003)	(.014)	(.009)	(.013)	(.023)	(.017)	(.010)
Edu1	-.015	.184*	.239*	.220*	.860*	.535*	.765*	-.074	1.166*	.687*
	(.053)	(.020)	(.072)	(.021)	(.094)	(.058)	(.085)	(.276)	(.121)	(.071)
Edu2	-.027	.147*	.230*	.172*	.677*	.422*	.605*	-.130	.917*	.539*
	(.041)	(.014)	(.054)	(.015)	(.063)	(.040)	(.058)	(.201)	(.083)	(.049)
Edu3	-.008	.086*	.133*	.114*	.487*	.303*	.358*	-.037	.544*	.320*
	(.030)	(.012)	(.039)	(.013)	(.055)	(.034)	(.051)	(.147)	(.071)	(.042)
Edu4	.000	.057*	.112*	.068*	.292*	.181*	.239*	.023	.363*	.213*
	(.033)	(.013)	(.045)	(.014)	(.061)	(.038)	(.056)	(.165)	(.079)	(.046)
Edu5	.038	.048*	.129*	.055*	.219*	.136*	.200*	.231	.305*	.180*
	(.032)	(.012)	(.043)	(.013)	(.057)	(.035)	(.052)	(.162)	(.075)	(.044)
Married	-.028*	.034*	-.003	.046*	.201*	.125*	.140*	-.170*	.208*	.123*
	(.011)	(.006)	(.014)	(.007)	(.029)	(.018)	(.026)	(.055)	(.036)	(.021)
Income	-7e-07*	-1e-07	-3.e-07	1e-07	1e-06	.1e-06	-4e-07	-5e-06*	-8e-07	-4e-07
	(2e-07)	(1e-07)	(2.e-07)	(1e-07)	(1e-06)	(5e-07)	(6e-07)	(1e-06)	9e-07	(5e-07)
Neigh	.002	.020*	.015	.021*	1e-06*	.103*	.084*	.013	.124*	.072*
	(.012)	(.009)	(.013)	(.009)	(1e-06)	(.028)	(.039)	(.068)	(.057)	(.033)
Vote	-.016*	-.049*	-.011	-.042*	-.241*	-.150*	-.203*	-.097*	-.307*	-.180*
	(.005)	(.003)	(.005)	(.003)	(.015)	(.009)	(.013)	(.027)	(.019)	(.011)
Const	.307*	.394*	-.084*	.433*	-.561*	-.348*	-.440*	3.002*	-.655*	-.382*
	(.054)	(.042)	(.022)	(.046)	(.182)	(.113)	(.172)	(.873)	(.255)	(.150)

Table 5. Regressions BHPS - Country Government Expenditure

Asterisks indicate coefficient significant at 5%. The numbers in parenthesis are the standard errors of the estimates.

Variables EVS

Variable	Definition	Code
Vol	Doing unpaid work for organizations:	1= Yes 2= No
Exp	Ratio government expenditure and GDP	Numerical
Govcon	General government final consumption as % of GDP	Numerical
Sex	Sex of the respondent	1= Male 2= Female
Edu	Highest achieved education	1= Incomplete elementary education 2= Completed (compulsory) elementary 3= education Incomplete secondary school: 4= technical/vocational type Complete secondary school: 5= technical/vocational type/secondary Incomplete secondary: university- 6= preparatory type/secondary, Complete secondary: university-preparatory 7= type/full secondary Some university without degree/higher 8= education - lower-level tertiary University with degree/higher education - upper-level tertiary
Married	Being married	1= Yes 2= No
Income	Monthly household income (x1000)	Numerical
Incomecat	Monthly household income categories	1= Lower step 2= Second step 3= Third step 4= Fourth step 5= Fifth step 6= Sixth step 7= Seventh step 8= Eight step 9= Ninth step 10= Tenth step
Vote	Level of interested in politics	1= Very interested 2= Somewhat interested 3= Not very interested 4= Not at all interested
Religion	Religious denomination of the respondent	1= Buddhist 2= Free church/non denominational church 3= Hindu 4= Jew 5= Muslim 6= Orthodox 7= Other 8= Protestant 9= Roman catholic
Religion1	Belonging to any religious denomination	1= Yes 0= No
People	People should stick to their own affairs	1= Agree strongly 2= Agree 3= Not agree nor disagree 4= Disagree 5= Disagree strongly

Table 6. Variables EVS

Countries are: Austria, Belgium, Canada, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Poland, Portugal, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey, Great Britain, and USA Organizations include: welfare organizations, religious organisation, cultural activities, trade unions, political parties/groups, local community action, third world development/human rights, environment, ecology, animal rights, environment, animal rights, professional associations, youth work, sports/recreation, women groups, peace movement, voluntary health organisations, consumer groups, other groups.

Variables Summary EVS

Variable	Definition	Mean	Std. Dev.
Vol	Doing unpaid work for organizations:	.331	.470
Exp	Ratio government expenditure and GDP	.486	.106
Govcon	General government final consumption as % of GDP	19.502	4.885
Nchild	Number of children	1.424	1.314
Sex	Sex of the respondent	1.455	.498
Edu	Highest achieved education	5.144	1.918
Married	Being married	.642	.480
Income	Monthly household income (x1000)	1.843	1.402
Incomecat	Monthly household income categories	5.849	2.392
Vote	Level of interested in politics	2.534	.923
Religion	Religious denomination of the respondent	61.178	6.730
Religion1	Belonging to any religious denomination	.711	.453
People	People should stick to their own affairs	2.741	1.183

Table 7. Variables Summary EVS

Asterisks indicate coefficient significant at 5%. The numbers in parenthesis are the standard errors of the estimates.

EVS Wave 1- 1981

Variable	OLS	Probit	Logit	Probit Robust
Govcon	.006* (.001)	.025* (.005)	.027* (.003)	.002* (.002)
Nchild	.027* (.004)	.045* (.011)	.124* (.020)	.076* (.012)
Sex	-.002 (.012)	-.089 (.026)	-.011 (.057)	-.007 (.035)
Married	-.026 (.015)	-.037 (.034)	-.117 (.069)	-.073 (.042)
Incomecat2	-.136* (.068)	.072 (.091)	-.572 (.308)	-.355 (.188)
Incomecat 3	.181* (.059)	.030* (.083)	-.794* (.266)	-.485* (.163)
Incomecat4	-.165* (.055)	.084* (.081)	-.719* (.249)	-.443* (.152)
Incomecat5	-.127* (.054)	.088* (.081)	-.530* (.242)	-.330* (.148)
Incomecat6	-.132* (.054)	.165* (.082)	-.552* (.238)	-.340* (.146)
Incomecat7	-.132* (.053)	.179* (.084)	-.554* (.237)	-.341* (.145)
Incomecat8	-.120* (.053)	.105* (.086)	-.497* (.236)	-.307* (.145)
Incomecat9	-.103 (.054)	.215 (.089)	-.411 (.241)	-.257 (.147)
Incomecat10	-.057 (.055)	.126 (.086)	-.210 (.244)	-.132 (.150)
Religion1	.054 (.154)	.038 (.425)	.203 (.724)	.117 (.448)
Religion2	-.038 (.208)	-.671 (.570)	-.186 (.953)	-.126 (.584)
Religion3	-.232 (.199)	-.013 (.474)	-1.235 (-1.043)	-.717 (.620)
Religion4	-.297 (.208)	-1.074 (.509)	-1.800 (-1.264)	-1.003 (.709)
Religion5	-	-	-	-
Religion6	.058 (.153)	-.278 (.465)	0.235 (.720)	.137 (.446)
Religion7	.008 (.147)	.156 (.430)	0.020 (.696)	.004 (.431)

Religion8	-.131 (.147)	-.240 (.422)	-0.619 (.696)	-.384 (.431)
Const	.405 (.157)	-.343 (.422)	-0.420 (.734)	-.249 (.453)

Asterisks indicate coefficient significant at 5%. The numbers in parenthesis are the standard errors of the estimates.

Table 8. EVS Wave 1 Regressions

EVS Wave 2 -1990

Variable	OLS	Probit	Logit	Probit Robust
Govcon	.008* (.002)	0.025* (.005)	.040* (.009)	.025* (.005)
Nchild	.016* (.004)	0.045* (.011)	.074* (.017)	.045* (.011)
Sex	-.0317* (.0092)	-0.089* (.026)	-.145* (.043)	-.089* (.026)
Married	-.013 (.012)	-0.037 (.034)	-.059 (.056)	-.037 (.034)
Income2	.023 (.031)	0.072 (.091)	.113 (.152)	.072 (.091)
Income3	.009 (.028)	0.030 (.083)	.050 (.139)	.030 (.083)
Income4	.028 (.0277)	0.084 (.081)	.141 (.135)	.084 (.081)
Income5	.028 (.028)	0.088 (.081)	.144 (.134)	.088 (.080)
Income6	.056* (.028)	0.165* (.082)	.268* (.136)	.165* (.081)
Income7	.062* (.029)	0.179* (.084)	.292* (.140)	.179* (.084)
Income8	.0356 (.0295)	0.105 (.086)	.174 (.143)	.105 (.085)
Income9	.075* (.031)	0.215* (.089)	.349* (.147)	.215* (.089)
Income10	.044 (.030)	0.126 (.086)	.209 (.142)	.126 (.085)
Religion1	.019 (.156)	0.038 (.425)	.067 (.690)	.038 (.434)
Religion2	-.239 (.201)	-0.671 (.570)	-1.158 (.960)	-.671 (.595)
Religion3	.002	-0.013	-.021	-.013

	(.173)	(.474)	(.768)	(.482)
Religion4	-.321	-1.075	-1.862*	-1.075*
	(.173)	(.509)	(.872)	(.521)
Religion5	-.105	-0.278	-.460	-.278
	(.169)	(.465)	(.757)	(.475)
Religion6	.062	0.156	.259	.156
	(.157)	(.431)	(.699)	(.439)
Religion7	-.085	-0.241	-.385	-.241
	(.155)	(.422)	(.686)	(.431)
Religion8	-.122	-0.343	-.553	-.343
	(.154)	(.422)	(.685)	(.431)
Vote	-.091*	-0.260*	-.432*	-.260*
	(.005)	(.015)	(.024)	(.015)
Const	.505*	.006*	.024*	.006
	(.1599)	(.439)	(.714)	(.445)

Table 9. EVS Wave 2 Regressions

Asterisks indicate coefficient significant at 5%. The numbers in parenthesis are the standard errors of the estimates.

EVS Wave 3 - 1999

Variable	OLS	Probit	Logit	Probit Robust
Exp	.424*	1.280*	2.078*	1.280
	(.157)	(.455)	(.750)	(.448)
Nchild	.033*	.095*	.157*	.095
	(.007)	(.020)	(.033)	(.020)
Sex	-.055*	-.154*	-.256*	-.154
	(.015)	(.043)	(.071)	(.043)
Education2	.118*	.454*	.812*	.454
	(.056)	(.193)	(.356)	(.194)
Education3	.160*	.586*	1.032*	.586
	(.056)	(.192)	(.356)	(.194)
Education4	.205*	.713*	1.244*	.713
	(.057)	(.194)	(.358)	(.196)
Education5	.161*	.591*	1.035*	.591
	(.057)	(.196)	(.361)	(.196)
Education6	.235*	.798*	1.382*	.798
	(.057)	(.194)	(.358)	(.195)
Education7	.239*	.802*	1.389*	.802
	(.058)	(.197)	(.362)	(.197)
Education8	.281*	.910*	1.561*	.910
	(.058)	(.196)	(.3607)	(.197)
Married	.009	.029	.046	.028
	(.018)	(.053)	(.087)	(.053)
Income	.006	.016	.024	.016
	(.007)	(.021)	(.034)	(.021)
Religion1	.154	.462	.704	.462
	(.237)	(.731)	(1.201)	(.653)
Religion2	-.243			
	(.399)	-	-	-

Religion3	.145 (.273)	.459 (.821)	.697 (1.349)	.460 (.761)
Religion4	-.125 (.245)	-.450 (.773)	-.870 (1.298)	-.450 (.702)
Religion5	-.054 (.253)	-.11 4 (.782)	-.338 (1.310)	-.114 (.729)
Religion6	.233 (.236)	.687 (.729)	1.067 (1.199)	.687 (.652)
Religion7	.061 (.231)	.218 (.717)	.312 (1.178)	.218* (.638)
Religion8	.057 (.231)	.211 (.716)	.296 (1.177)	.211* (.637)
Vote	-.058* (.009)	-.166* (.025)	-0.276* (0.041)	-.166* (.025)
People	(.022)* .006	.061* (.018)	.101* .0298	.061* (.018)
Const	-.017* (.251)	-1.652* (.778)	-2.701* (1.289)	-1.652* (.706)

Table 10. EVS Wave 3 Regressions

Asterisks indicate coefficient significant at 5%. The numbers in parenthesis are the standard errors of the estimates.

EVS Wave 4 -2008

Variable	OLS	Probit	Logit	Probit Robust
Exp	.309* (.089)	.864* (.252)	1.418* (.417)	.864* (.256)
Nchild	.019* (.005)	.053* (.015)	.088* (.024)	.053* (.014)
Sex	-.053* (.012)	-.152* (.034)	-.246* (.055)	-.152* (.033)
Education2	-.002 (.074)	-.016 (.226)	-.050 (.390)	-.016 (.228)
Education3	.036 (.072)	.116 (.219)	.203 (.377)	.116 (.221)
Education4	.042 (.072)	.141 (.220)	.228 (.379)	.141 (.222)
Education5	.069 (.071)	.216 (.218)	.369 (.375)	.216 (.220)
Education6	.087 (.071)	.265 (.217)	.449 (.374)	.265 (.219)
Education7	.148* (.072)	.433* (.218)	.720 (.375)	.433* (.220)
Education8	.132 (.073)	.385 (.221)	.638 (.379)	.385 (.222)
Married	.029* (.014)	.080* (.039)	.141* (.064)	.080* (.039)
Income	.014* (.004)	.039* (.011)	.062* (.019)	.039 (.011)
Religion1	.255* (.126)	.707* (.353)	1.125 (.585)	.707 (.367)

Religion2	.189 (.171)	.505 (.472)	.827 (.780)	.505 (.499)
Religion3	.149 (.175)	.395 (.489)	.620 (.800)	.395 (.496)
Religion4	-.177 (.125)	-.525 (.354)	-.934 (.592)	-.525 (.371)
Religion5	-.195 (.121)	-.593 (.338)	-1.022 (.560)	-.593 (.354)
Religion6	.070 (.123)	.203 (.344)	.325 (.569)	.203 (.359)
Religion7	-.018 (.119)	-.037 (.333)	-.073 (.551)	-.037 (.349)
Religion8	-.024 (.119)	-.052 (.332)	-.093 (.550)	-.052 (.348)
Vote	-.063 (.007)	-.181* (.019)	-.302* (.032)	-.181* (.019)
People	-1.652* (.778)	.048* (.014)	.082* (.024)	.048* (.014)
Const	.274 (.146)	-.625 (.416)	-1.02 (.696)	-.625 (.430)

Table 11. EVS Wave 4 Regressions

Asterisks indicate coefficient significant at 5%. The numbers in parenthesis are the standard errors of the estimates.