

Public Spending and Volunteering: "The Big Society", Crowding Out, and Volunteering Capital

Koen P.R. Bartels*, Guido Cozzi†, Noemi Mantovan‡

March 19, 2011

Abstract

The current British Government's "Big Society" plan is based on the idea that granting more freedom to local communities and volunteers will compensate for a withdrawal of public agencies and spending. This idea is grounded on a widely held belief about the relationship between government and volunteering: a high degree of government intervention will cause a crowding out of voluntary activity. Up to now, however, the crowding out hypothesis has hardly been supported by any empirical evidence or solid theoretical foundations. We develop a simple theoretical model to predict how fiscal policy affects the individual decision to volunteer or not. The predictions of the model are tested through the econometric analysis of two survey data sets, and interpretative analysis of narratives of local volunteers and public officials. Contrary to conventional wisdom, our results suggest that volunteering, by the individuals in the actively working population, declines when government intervention is decreased.

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

JEL Classification: H31, H41, J22, I38, D64.

*Adam Smith Building, School of Social and Political Sciences, University of Glasgow, Glasgow, G12 8RT, UK. Email: k.bartels.1@research.gla.ac.uk

†Durham Business School, Room 118. Mill Hill Lane. Durham, DH1 3LB, UK. Email: guido.cozzi@durham.ac.uk

‡Durham Business School, Mill Hill Lane, Durham, DH1 3LB, UK. Email: noemi.mantovan@durham.ac.uk

1 Introduction

Recently, the British coalition government launched its plan to create a ‘Big Society’ in which public activities and spending are ”rolled back” and citizens themselves take more responsibility in running public services. Ever since, commentators have vilified the plan for the dominance of rhetorical power over practical feasibility. More fundamentally, the Big Society plan has reinvigorated the debate on the relationship between government and society, or, more specifically, between public spending and volunteering. It is asserted that voluntary activity should, can, and will emerge as a perfect substitute for the welfare state. This hypothesis is based on the widely held belief that government expenditure has a crowding out effect on volunteering: an increase (decrease) in public expenditure brings about a significant decrease (increase) in agents’ propensity to volunteer. Surprisingly enough, this belief is not backed up by solid theoretical foundations or empirical evidence. As the same goes for the opposite, crowding in effect, the goal of this paper is to establish how a change in public spending affects the decision of citizens to volunteer.

This paper provides a theoretical model and empirical evidence to support the existence of a crowding in effect of government expenditure on volunteering. We focus our analysis on the working part of the population, because this is probably the most pivotal group of citizens when trying to stimulate volunteering. Employed agents have to make a decision between allocating their time to working in the private market or to voluntary work, and are therefore not indifferent about whether the public good is produced through government or volunteering. Rather, their decision to volunteer is dependent on the level of government expenditure. Employed agents are more likely to volunteer when public spending is higher.

This conclusion is reached through econometric analysis of two survey datasets (European Values Survey and British Household Panel Survey) and narrative analysis of in-depth interviews conducted with local volunteers and public professionals (between October and December 2009 in Glasgow). Our findings suggest that the decision of employed agents to volunteer depends not only on government expenditure, but also on their personal abilities and existing volunteering capital. Lower public spending increases the probability of setbacks and frustrations for volunteers and decreases the availability of adequate support structures and professional skills. This lead us to conclude that less public spending reduces the likelihood of (successful) volunteering, but also that more public spending will not necessarily lead to a crowding in of voluntary activity. Rather, based on our model and findings we recommend that exploration of government as a facilitator or enabler of volunteering capital might be the best direction for developing the literature on volunteering as well as the Big Society plan.

The paper is organised as follows: Section 2 motivates the analysis and discusses the existing related literature. Section 3 presents and analyses the theoretical model. Section 4 carries out the econometric analysis of the testable predictions of our model. Section 5 discusses interviews we have undertaken on

this issue. Section 6 concludes.

2 The Big Society: Reinvigorating the Crowding Out Debate

During the 2010 British elections, the financial crisis, and its impact on public expenditure, drove the welfare state to the top of the political agenda. The debate did not evolve around economic policy 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 Labour sought to continue increasing public spending and taxation, the Conservatives proposed a radical turn to a small government and a “big society”. The latter vision came out on top, when the Conservatives formed a coalition government with the Liberal-Democrats and put their plan for the Big Society in place. The main idea of the Big Society is that “rolling back big government” will create a climate in which “communities” take up the responsibility to run public services (Cabinet Office, 2010). By withdrawing public spending and agencies, it is claimed, local citizens will feel more motivated to volunteer for improving their communities.

Since the launch of the Big Society in May 2010, it has received a fair amount of scepticism and resentment. The Big Society was proposed to bring about “a new era of people power” through policy measures such as providing volunteering training to local citizens, and 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). However, initial concerns about whether it would actually provide anything new and useful were confirmed 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). Furthermore, the Big Society has been condemned for being a symbolic device used to legitimize excessive cuts on public services and voluntary sector funding and consequently destroying the basic texture of voluntary programmes and activities (BBC, 2011b).

The crucial issue at stake here is whether less public spending will indeed lead more people into volunteering. It is openly questioned whether voluntary work would automatically emerge as a perfect substitute for government activity. In order for the Big Society to be successful, there should be a strong crowding out effect to counter the cuts in public spending: an increase (decrease) in public expenditure brings about a significant decrease (increase) in agents’ propensity to volunteer. While 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,

there is surprisingly little theoretical and empirical support for either position. Therefore, our focus in this paper is to find out if a change in public spending affects agents' level of volunteering, and, if so, in which direction.

2.1 Volunteering by Employed Individuals

In the literature there have been several important developments for analyzing the connection between government expenditure and voluntary work at a macro-economic level. Over the past years several empirical works have studied the determinants of voluntary work for the total population or for specific groups of people. For example, at a general level people can decide to start volunteering, or give money to charity, because of pure altruism or warm-glow altruism (Andreoni 1990), because they want personally to 'make a difference' (Duncan, 2004), because they are the most impatient to receive a certain good (Bilodeau and Slivinski, 1996), because giving can enhance their wellbeing (Meier and Stutzer, 2008), because of social pressure (Della Vigna et al., 2009), or because they are obliged by social norms (Olken and Singhal, 2009). The decision to participate in voluntary activities is also likely to be influenced by the socioeconomic or ethnic composition of the agents' neighbourhood or community (Alesina and La Ferrara, 2000; Atkinson & Kintrea, 2001; Goodlad and Meegan, 2005).

Although the Big Society in particular aims at enhancing volunteering in (deprived) neighbourhoods or communities, several authors have suggested that the decision of citizens to volunteer might depend more strongly on macro-economical factors rather than the characteristics of the area of residence (Hastings, 2003; Amin, 2005; Atkinson, Buck, & Kintrea, 2005; New Economics Foundation, 2010). An important stream of research has explored how a change in the size of the welfare state influences the decision to volunteer (e.g. Khanna & Sandler, 2000; Van Oorschot & Arts, 2005; Hackl et al., 2010). These studies have focused on the entire population or on the specific age groups of young people and retired people. However, perhaps the most crucial type of citizen, both for the Big Society as for the relationship between government expenditure and volunteering in general, is part of the population that has to allocate time between working in the market, volunteering and leisure. In this paper, therefore, we explore the impact of public spending on volunteering, but, for the first time to our knowledge, only concentrate on the employed part of the population.

At an aggregate population level, recent studies have investigated the possibility of crowding in or crowding out effects due to an increase of the welfare state. In particular Khanna and Sandler (2000) find an opposite effect (crowding in) in a study regarding money donations in the UK. Van Oorschot and Arts (2005) do not find evidence to support the hypothesis of crowding out when considering data from the third wave of the World Values Survey, and using the total government expenditure as measure of the welfare state. On the other side,

Hackl et al. (2010), when concentrating on the independent variable of social government spending in their analysis of data of OECD countries, taken from the European Values Survey and the World Values Survey, do find a crowding out effect on the four world waves (1981, 1990, 1995, 1999).

Age tends to be a very strong determinant of the decision to volunteer. First of all, firm evidence exists that agents tend to start volunteering later in life, mainly after their retirement (Mutchler et al., 2003). In fact, retired people are often so overrepresented in voluntary activities that old age is one of the key characteristics of ‘the usual suspects’ (e.g. Barnes et al., 2007). To be sure, the reasons for volunteering at an old age are likely to be varied and depend strongly on the health condition of the agent (Erlighagen and Hank, 2006). At the same time, in the past years the voluntary work of young citizens has been studied in research about the connection between volunteering and human capital. For example, the study by Day and Devlin (1998) finds a positive connection between the returning rate of income after having done voluntary work in Canada. Young citizens, about to enter the job market, can see volunteering as an optimal decision for enhancing their human capital and thereby having prospects of a higher income.

The innovation of our approach is to concentrate on the effect that the size of the government expenditure has on the active working population only. Below, we build a model in which active agents have to decide how to allocate their time between working and volunteering. Contrary to the work by Duncan (1999) and Freeman (1997) we concentrate on time donation only, because we conceptualize volunteering as a social activity in which citizens are actually engaged in the delivery of public services. For example, the ambition of the Big Society is to “give citizens, communities and local government the power and information they need to come together, solve the problems they face and build the Britain they want” (Cabinet Office, 2010, p. 1).

Time donation by employed agents is not a matter of a complete crowding out effect. In theoretical models about money or time donation with pure altruism, the crowding out effect emerges directly because volunteering is a substitute for government expenditure. What counts for agents is that a public good exists and they are indifferent about whether it is produced through government activity or their own voluntary work. In an impure altruism framework, agents receive utility from volunteering and are therefore not indifferent about the source of the public good. In this case, the crowding out effect can no longer be complete (Andreoni 2006). In our model, we consider how government expenditure and taxation influences the decision of employed agents about their time allocation. Agents receive utility from the total amount of volunteering in the society as a form of public good as well as the result of their personal volunteering (rather than solely the hours spent volunteering per se).

Whether an employed agent will be willing and able to donate time to volunteering will also depend on their abilities. Citizens with more skills and experience are more prone to volunteering as well as to being more effective in it. One of the main problems of voluntary work is getting other people than just ‘the usual suspects’ to participate (Barnes et al., 2007; Skidmore et al.,

2006; Taylor et al., 2011). Lacking the ‘right’ abilities to volunteer in the ‘right’ place at the ‘right’ time can provide an entry barrier to citizens who work and therefore only have a limited amount of time available.

This effect can be mediated by the size of volunteering capital; i.e. the volunteering that is inherited from previous generations. We assume that the voluntary activities of previous generations do not die away but that at least some parts of it remain intact. For example, volunteering capital can take the form of a school built, an organization founded, handbooks with practical knowledge and know-how, or continuing volunteering programs. We note that volunteering capital is different from social capital: whereas social capital refers to the presence of social relationships that offer access to particular goods (Coleman, 1988; Portes, 1998; Edwards and Foley, 1998), volunteering does not necessarily require the presence of any social relationships to engage in the production of the public good. For example, if the residents of a social housing scheme are expected to keep the hallway of their building clean, they might decide to spend a certain amount of time each week on cleaning without having any social relationships with their neighbours that affects this decision¹.

In conclusion, while the literature has identified many factors to affect the willingness of citizens to volunteer, the influence of government expenditure on employed agents has been insufficiently explored. However, this relationship is fundamental to the widely held belief in the crowding out effect. Therefore, below we build a model that conceptualizes this link and takes into consideration the mediating effects of abilities and voluntary capital.

3 The Economy

We assume successive generations t of agents, with each agent is indexed by $i \in [0, 1]$, and the total mass of individuals is normalized to 1. 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} , public good G_t and disutility of work H_{it} :

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

¹ Clearly social capital and volunteering capital can be mutually reinforcing. However, for the purposes of this model it is crucial to distinguish between both concepts rather than following this often prematurely made assumption.

where parameters satisfy $0 < \alpha < 1$, $0 < e < 1$, $0 < \delta < 1$, and $0 < \psi < 1$. Hence in this model we have both intragenerational altruism, expressed through volunteering, and intergenerational altruism, expressed through leaving bequest.

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

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

where $0 < \beta < 1$. 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

$$\frac{c_{it}^\alpha k_{ipt}^{1-\alpha}}{\alpha^\alpha (1-\alpha)^{1-\alpha}}, \text{ which implies:}$$

$$c_{it} = (1 - \alpha) W_{it} \quad k_{ipt} = \alpha W_{it}.$$

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

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

Analyzing employed agents only, we rule out the possibility that the motivation for volunteering is to invest in human capital in order to find a job (Day and Devlin, 1998). We assume that volunteering is motivated by warm glow altruism. Each person's volunteering impact depends on the hours spent volunteering, her productive abilities², and the aggregate volunteering capital \bar{k}_{vt-1} :

$$V_{it} = A_{it} h_{ivt}^\beta \bar{k}_{vt-1}^{1-\beta} \quad (3)$$

The volunteering capital evolves according to:

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

ρ represents the natural decay rate of the volunteering capital lost across generations. A certain degree of volunteering capital $\bar{\theta}$ is independent from

²In this section we assume that private sector abilities and volunteering abilities are perfectly correlated. In section 3.2, when considering non-active individuals, we will drop this assumption.

the volunteering as it is guaranteed from the market interactions. In fact, we think it realistic to assume that even if initial volunteering capital were zero, the market would still harbour a minimum possibility for voluntary activity to emerge. That is, 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 that is involved even 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:

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

3.1 Optimal time allocation

We want to study the optimal allocation of time between working and volunteering. The first order conditions are:

$$\frac{\partial u_{it}}{\partial h_{ip}} = e\beta W_p^{e-1} (1 - \tau) A_{it} k_{ipt-1}^{1-\beta} h_{ipt}^{\beta-1} - \psi(h_{ivt} + h_{ipt}) \quad (4)$$

$$\begin{aligned} &= e\beta \left((1 - \tau_t) A_{it} k_{ipt-1}^{1-\beta} \right)^e h_{ipt}^{e\beta-1} - \psi(h_{ivt} + h_{ipt}) \\ &= 0 \end{aligned} \quad (5)$$

and

$$\frac{\partial u_{it}}{\partial h_{ivt}} = e\beta V_{it}^{e-1} A_{it} \bar{k}_{vt-1}^{1-\beta} h_{ipt}^{\beta-1} - \psi(h_{ivt} + h_{ipt}) \quad (6)$$

$$\begin{aligned} &= e \left(A_{it} \bar{k}_{vt-1}^{1-\beta} \right)^e h_{ivt}^{e\beta-1} - \psi(h_{ivt} + h_{ipt}) \\ &= 0 \end{aligned} \quad (7)$$

from which we obtain:

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

and therefore

$$h_{ipt} = \left(\frac{(1-\tau)k_{ipt-1}^{1-\beta}}{\bar{k}_{vt-1}^\beta}\right)^{\frac{e}{1-e\beta}} h_{ivt} \quad (8)$$

Substituting (8) in (6) we can write:

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

The optimal amount of voluntary work:

$$h_{ivt}^* = \left(\frac{e}{\psi}\right)^{\frac{1}{2-e\beta}} \left(\frac{\left(A_{it}\bar{k}_{vt-1}^{1-\beta}\right)^{\frac{e}{1-e\beta}}}{\left(\left((1-\tau)A_{it}k_{ipt}^{1-\beta}\right)^{\frac{e}{1-e\beta}} + (A_{it}\bar{k}_{vt-1})^{\frac{e}{1-e\beta}}\right)^{\frac{1}{2-e\beta}}} \right) \quad (9)$$

$$= \left(\frac{e}{\psi}\right)^{\frac{1}{2-e\beta}} A_{it}^{\frac{e}{2-e\beta}} \left(\frac{\bar{k}_{vt-1}^{\frac{(1-\beta)e}{1-e\beta}}}{\left(\left((1-\tau)k_{ipt}^{1-\beta}\right)^{\frac{e}{1-e\beta}} + \bar{k}_{vt-1}^{\frac{(1-\beta)e}{1-e\beta}}\right)^{\frac{1}{2-e\beta}}} \right) \quad (10)$$

Substituting (9) in (8) we obtain the optimal market working hours:

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

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

However a shock on the economy that cuts both the privately owned capital and the volunteering capital in the same proportion will not be neutral. Imagine a shock that affect all the capital in a society, such as a stock market shock. The smaller the ratio of private capital to volunteering capital for an agent the more a crisis that cuts of capital in the society will affect her volunteering. In other words, the poorer is an agent the more her volunteering is going to be affected by an economic crisis.

Also the taxation influences the decisions 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_{vt}^* and a decrease (increase) in the optimal working hours for each agent $i \in [0, 1]$.*

Proof. Taking the first derivative of h_{vt}^* with respect to the taxation we obtain:

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

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

$$\begin{aligned} \frac{\partial h_{ipt}^*}{\partial \tau_t} = & \left(\frac{e}{\psi}\right)^{\frac{1}{2-e\beta}} A_{it}^{\frac{e}{2-e\beta}} \frac{e}{1-e\beta} \left(\frac{\left((1-\tau)k_{ipt}^{1-\beta}\right)^{\frac{e-1+e\beta}{1-e\beta}} k_{ipt}^{1-\beta}}{\left(\bar{k}_{vt-1}^{\frac{e}{1-e}} + (1-\tau_t)^{\frac{e}{1-e}}\right)^{\frac{1}{2-e}}} \right) \times \\ & \left(\frac{\left((1-\tau)k_{ipt-1}^{1-\beta}\right)^{\frac{e}{1-e\beta}}}{(2-e\beta) \left(\left((1-\tau)k_{ipt-1}^{1-\beta}\right)^{\frac{e}{1-e\beta}} + \bar{k}_{vt-1}^{\frac{(1-\beta)e}{1-e\beta}}\right)} - 1 \right) \end{aligned}$$

Which is negative since:

$$0 \leq \frac{\left((1-\tau)k_{ipt-1}^{1-\beta}\right)^{\frac{e}{1-e\beta}}}{(2-e\beta) \left(\left((1-\tau)k_{ipt-1}^{1-\beta}\right)^{\frac{e}{1-e\beta}} + \bar{k}_{vt-1}^{\frac{(1-\beta)e}{1-e\beta}}\right)} \leq 1 \quad (11)$$

■

Proposition 1 states that a contraction of the welfare state does not cause an increase in the voluntary labour supply, but on the contrary it provokes a decrease in it, at the same time an increase in the amount of hours worked in the market. A decrease in the tax rate τ reduces the disincentive on private work and therefore agents decide to spend more hours working in the market and less hours volunteering. An increase in the tax rate works in the opposite way.

However, Proposition 1 does not directly imply that an increase in taxation brings about an increase in the public good *tout court*. The disincentive effect of taxation on private labour supply could be so strong that could cause the government revenues to decrease. In this way the increase in public good caused by the increase in the volunteering could be compensated and even offset by the decrease in the worked hours. Proposition 2 provides the conditions that guarantees that an increase in taxation generates an increase in the public good provision.

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

Proof. *It is necessary to prove that if conditions in the Proposition 2 holds, then 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 we know that an increase in τ_t will cause an increase in h_{vt}^* . We need 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:*

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

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

In Figure 1 we illustrate a representative numerical example, showing how the equilibrium amount of average working hours, volunteering, public good production, and utility respond to changes in the tax rate:

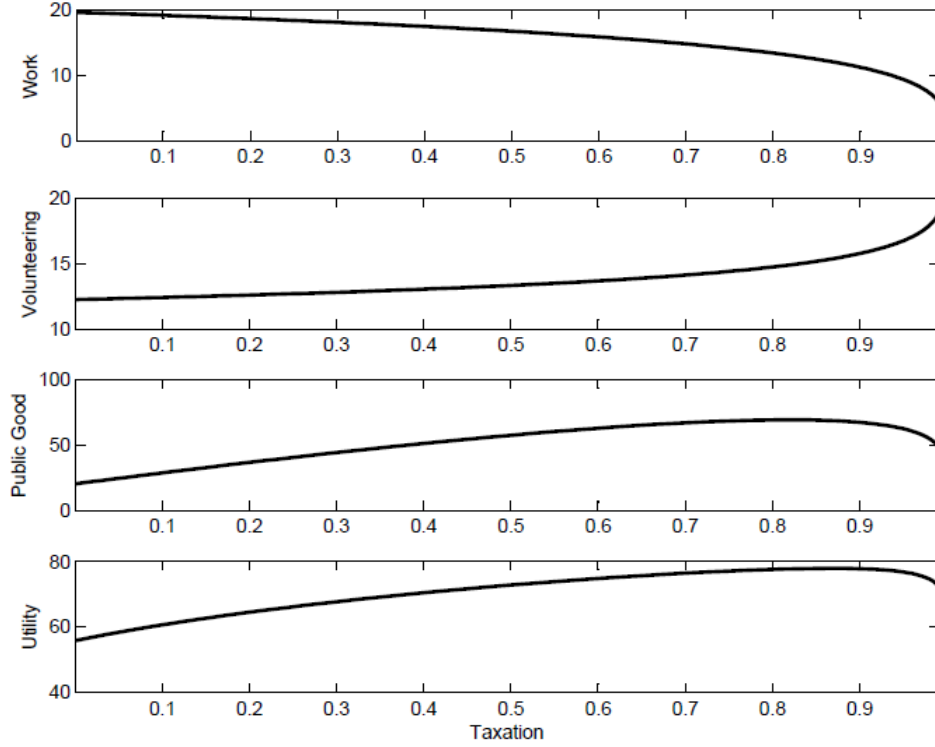


Figure 1

It is worthwhile remarking that this kind of diagram is extremely robust over a wide range of possible parameter values, and it has been provided here just to give the reader a visual illustration of the results we have already proved analytically.

3.2 Non-active Agents

So far, we have analysed the response to taxation of employed agents only. What would the response of agents who do not work be? Let us generalise this framework by assuming that there are two different types of abilities in the model: A_{itP} for the production of the good X_{it} and A_{itV} for the provision the volunteering.

Non-productive agent j can be viewed as characterised by a negative shock on the productive abilities, so that $A_{jPt} = 0$, while $A_{jtV} > 0$. Her indirect utility function then becomes:

$$u_{jt} = V_{jt}^e + \delta G_t^e - \frac{\psi H_{jt}^2}{2} \quad (12)$$

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

$$\frac{\partial u_{it}}{\partial h_{ivt}} = e\beta V_{it}^{e-1} A_{it} \bar{k}_{vt-1}^{1-\beta} h_{ipt}^{\beta-1} - \psi h_{ivt} \quad (13)$$

$$\begin{aligned} &= e \left(A_{it} \bar{k}_{vt-1}^{1-\beta} \right)^e h_{ivt}^{e\beta-2} - \psi \\ &= 0 \end{aligned} \quad (14)$$

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

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

Therefore, assuming that there is a strong proportion of non-employed agents that volunteer, our model is consistent with the empirical results by Van Oorschot and Arts (2005), who do not find evidence on the hypothesis of crowding out or crowding in.

4 Government Expenditure, Abilities, and Volunteering: Econometric Analysis

We used two different datasets to test the relationship between government expenditure, abilities and volunteering for employed individuals. The first dataset contains the intersection of the OECD countries and the countries included in the European Values Survey fourth wave (2008), for a total of 24,082 observation from 16 countries. The second dataset is the British Household Panel Survey (BHPS), which contains survey data about the UK from 1991 to 2007, for a total of 140,850 observations. In these datasets, we have analyzed the effect of the General Government Expenditure and personal education on the binary variable of doing unpaid work for any association concerned with, among others, environment, professional activities, youth work, sports/recreation, women activities, peace, health. In both datasets we have found a significant positive relationship between employed agents' decision to volunteer and both the total government expenditure and agents' abilities.

In order to study how the size of the welfare state influences the level of volunteering, we needed to analyze how expansions or contractions of the Governments Expenditure³ cause changes in the probability for each individual to volunteer.

In the first dataset, we have reparametrized the answer about the volunteering, so that 0 means that the respondent does not do any voluntary work and 1 means that the respondent does voluntary work. The General Government Expenditure is taken from the OECD dataset and for each country is calculated as the ratio between General Government Expenditure and GDP in 2008. Education is measured by the number of years of education, which we have used as a proxy for abilities. For each country, we consider only the decisions by employed agents. Since we are dealing with a binary dependent variable we report the results of our Logit estimations, but using Probit would not change our qualitative results. The connection between the government expenditure and volunteering among workers seems really robust, whether education is introduced or not.

Variable	Coefficient	Std. Error	z-Statistic	Prob.
Government Expenditure	1.513626	0.338960	4.465502	0.0000
Education	0.230795	0.016481	14.00331	0.0000

TABLE I: Europe

The results of the model about the dependence of the volunteering on the size of the welfare state and personal abilities are confirmed by the data about Europe. From TABLE 1 we can see that General Government Expenditure and Education are both strongly significant. The coefficient of Government Expenditure is positive and bigger than one (1.513626), which supports the crowding in hypothesis. The coefficient of the education is positive (.230795), which confirms that an increase in the abilities increases the probability of volunteering.

For the second dataset, the British Household Panel Survey from 1991 to 2007, we have repeated this analysis, with the difference that this time personal income was used as a substitute for abilities. The dependent variable is also slightly different from the one of the European Values Survey, as it responds

³Hackl *et al.* (2009) argue that in order to analyze crowding in or crowding out it is necessary to consider the Social Expenditure instead of the General Government Expenditure. To test the model, we nevertheless decided to focus on the latter, because Social Expenditure data does not cover the phenomenon of volunteering in its entirety. Volunteering data also includes the decisions to participate in activities that are not (directly) related to Social Expenditure. Data on Social Expenditure only take into account benefits such as pensions, disability pensions, family allowances etc., and do not cover services to citizens (for example education, environment, or minority group rights).

to the question about the respondent being active in one or more organizations such as political party, trade union, environmental group, parents association, tenant association, religious group, voluntary group, community group, sport club, in women institute, in women group or in other group. Also in this case we have excluded the non-employed agents, obtaining the following results:

Variable	Coefficient	Std. Error	z-Statistic	Prob.
Government Expenditure	1.642890	0.374590	4.385837	0.0000
Income	1.66E-05	7.10E-07	23.44610	0.0000

TABLE II: UK A

While it could have been the case that British citizens react in a different way from individuals living in Continental Europe, also from the BHPS dataset we found strong evidence to confirm that the probability of volunteering, for employed individuals, is positively related to Government Expenditure and abilities. In the UK case the Government Expenditure is significant, positive, and bigger than 1, showing a coefficient remarkably similar to that obtained from the analysis of the European dataset (1.642890). Also income, used as a proxy for abilities, is positive and significant. The fact that the coefficient is small depends on the magnitude of the income related to the dummy variable of doing voluntary work or not.

The BHPS also provides data to test the time allocation assumption, i.e. that an increase in the hours worked in the market implies a decrease of the hours spent volunteering. Therefore, in TABLE III we insert the data about the amount of hours worked per week in the regression.

Variable	Coefficient	Std. Error	z-Statistic	Prob.
Government Expenditure	1.564496	0.375054	4.171384	0.0000
Income	2.14E-05	8.15E-07	26.22122	0.0000
Hours Worked per Week	-0.009851	0.000769	-12.81859	0.0000

TABLE III: UK B

It appears that agents indeed have to allocate their time between volunteering and working in the market. TABLE III shows that the variable Hours Worked Per Week is significant and negative, and that, at least for the UK, the main assumption about time allocation is supported by the data.

In sum, we have proved that the data are consistent with the predictions of the theoretical model about the dependence of volunteering on the size of the welfare state and personal abilities. These findings support the view that government expenditure causes a crowding in effect on volunteering: a decrease in public spending decreases the probability that employed agents decide to volunteer.

5 Volunteering Capital and Personal Motivations: Narrative Analysis

While our econometric findings indicate that abilities also influence this volunteering decision, in our datasets there were no data available to support the influence of our theoretical notion of volunteering capital, nor to understand the relationship between these variables. However, the analysis of this section may help to cast more lights on these qualitative relationships, by explicating how in practice the presence of volunteering capital can affect the decision of employed agents to volunteer.

The narrative data consists of 19 interviews conducted between October and December 2009 in Glasgow (UK) part of a comparative project on community participation in deprived neighbourhoods in several European countries. The interviews were conducted with 7 active residents of the area Pollokshields Southside Central, 7 public professionals working for various agencies delivering public services in this area, and 5 public professionals working in support of Glasgow City Council in this and several other areas of the city. The respondents were asked about their practices, everyday ideas, choices and actions, with regards to community participation, which were transcribed and systematically analyzed by means of a set of rigorous methods and techniques to inductively develop an analytical understanding of what is going on in the empirical data (Charmaz, 2006).

The goal was to establish what these people were actually trying to communicate when they said or did something, and what communicative barriers prevented them from constructive collaboration. For this purpose, the interviews were approached as narratives: a range of ‘stories’ a person tells about real or imagined situations that wittingly or unwittingly enables this person to pinpoint what happened, make sense of these happenings, and express his/her evaluation of them. By reconstructing and confronting the narratives of different people, it becomes possible to see the assumptions, beliefs, and emotions that underlie their daily experiences and identify broader behavioral patterns and tensions. While the overall research was much broader than voluntary activity alone, the narratives analysis revealed two dominant narratives with regards to

citizens motivations to participate and the importance of voluntary capital.

The first narrative is ‘work in progress’, which signifies that volunteering is an ongoing, complex, and demanding process. The following quote of a public professional working in support of the Council is illustrative:

".. part of the process is ... taking the message ... to ... community councils, ... area committees, you've got tenants and residents associations, youth groups, you know 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..." (Respondent 3)

The respondent indicates that the daily support for voluntary work is very time, energy, and resource intensive, because there is no stopping rule to recruiting volunteers. It is about continuing to go out to meet new people, making contact, convincing them to come along, providing them with adequate training, and keeping them on board. In order to secure a continuity of services with such a high turnover of volunteers, there is a strong need for sufficient support structures and professional skills (see also Taylor et al., 2011, p. 9; Skidmore et al., 2006). Notice that the respondent only talks here about going out to people who are already part of a group that does voluntary work. The experience is that for new citizens to volunteer the process is even much more a ‘work in progress’.

The second narrative is ‘making a difference’, which denotes that citizens start to volunteer because they are committed to solving particular problems, but struggle with a lot of setbacks preventing actually making a difference to their community.

"... when I got involved with the Community Council ... a particular person would lead on a particular project and the rest would fall in line and support that. ... It worked really well and it was mutually beneficial ..., and then you see the effects in people's day-to-day lives. ... I don't look for feedback through, you know, strategic bodies who are going to make an assessment of something has been a success or not, I get my feedback through my neighbours in my community and when I see things happening. ... I mean, ... I had a big community event in the summer..., and I had been asked at this event if I would do a survey for the Community Council.... I said 'Of course, that's fine, I'll do it', even though I really didn't have time I emailed every single member in my Community Council ... and I said 'We're having this big event, it would be really lovely if you would ... come along and help me ... and have fun'. Not one ... Community Councillor came. ... That's when I knew that ...

it wasn't really functioning." (Respondent 7)

The respondent explains that her main motivation for volunteering is seeing problems being solved in her direct living environment. However, there are often a lot of setbacks that cause deep frustration. Starting to volunteer, and keeping on doing so, therefore requires a very strong commitment and well-developed skills. This implies that citizens with higher abilities will be more likely to volunteer, as having less skills and experience can either prevent a person from deciding to start volunteering or to give up more quickly. The decision to volunteer is therefore mediated by a person's abilities to 'make a difference'.

Taken together, these narratives clarify why the decision of an employed agent to volunteer depends on their abilities and voluntary capital: she is less likely to allocate time to volunteering when she lacks the abilities to get involved in voluntary work and effectively participate in it, and there is insufficient voluntary capital to counter the inevitable setbacks and frustrations. At a deeper level, these findings suggest that government expenditure is a crucial variable for volunteering: less public spending increases the probability of setbacks and frustration and decreases the availability of adequate support structures and professional skills. Thus, this narrative analysis has further confirmed the model and the results of the econometric analysis, as well as provided some deeper insight into the relationships between government expenditure, abilities, voluntary capital, and volunteering.

6 Final Remarks

We have found that, in contrast to common beliefs, government expenditure actually has a crowding in effect on the volunteering of employed agents: less public spending reduces the likelihood of (successful) volunteering. This finding should not be interpreted as (political) argument in favour of 'Big Government' and against 'Big Society'. The point is not that increasing public spending will automatically lead more citizens to volunteer. In fact, after a certain "tipping point" (see figure 1) further increasing the government expenditure will lead the overall public good to decrease. Therefore, based on our model and findings we want to suggest that government expenditure has to be sufficient to maintain volunteering capital and facilitate volunteering.

From this perspective, the government fulfils a different role in society than merely providing public agencies and spending to directly or indirectly deliver services. Rather, the government acts as facilitator, or enabler, that does not decide for, but with volunteers what the level of public spending should be and how this could maintain and improve volunteering capital. It is not simply a matter of a government that is present or withdraws; it requires a government that places itself next to voluntary workers and organizations to collaboratively make volunteering work. This would be a government that is not steering but

serving (Denhardt & Denhardt, 2000; King & Stivers, 1998). In effect, this requires, for example for the Big Society plan, that the government should not be “rolling back”, nor simply “rolling in”, but rather “rolling out the red carpet”.

Many factors were already known to affect levels of voluntary activity, but to our surprise the relationship between public spending and volunteering had great lacunae, which were filled by the widely held belief in the existence of a crowding out effect. With this paper we have sought to assess the validity of this popular assumption by developing a theoretical model about the influence of government expenditure on the decision of employed agents to allocate their time to voluntary work or not. Our model and findings provide strong foundations for the thesis that government expenditure leads to a crowding in effect of voluntary activity. In the realistic data for the UK and for Europe, higher public spending increases the probability that the working part of the population will decide to volunteer. What we can safely learn from our analysis is not that the government expenditure should be increased, but rather than stepping back, the government should position itself as a facilitator, or enabler, of volunteering capital.

Admitted, this is a somewhat speculative conclusion for which our model and findings do not provide any concrete indications of how to put it into practice. We provide only a preliminary analysis of the relationship between government expenditure and volunteering and a prospective view on the effects we might expect from the Big Society plan. While it might be objected that no valid conclusions can be drawn about the effects of the Big Society plan without analyzing data following its launch in time, we concur that our test of the main belief underlying this policy provides valuable insights into the likelihood of its success or failure as well as helpful recommendations about the direction in which it could be amended. Our findings lead us to believe that more specific recommendations could be formulated by further research in the ways government expenditure interacts with the personal abilities of agents and influences the volunteering capital. A main limitation of our model is that it does not allow for such interactions. However, in its current form it does firmly establish that government expenditure has a crowding in effect on the decision to volunteer by employed agents.

REFERENCES

- Alcock, P. (2010). Building the Big Society: A New Policy Environment for the Third Sector in England. *Voluntary Sector Review*, 1(3), pp. 379-389.
- Alesina, A. & La Ferrara, E. (2000). Participation in Heterogeneous Communities, *Quarterly Journal of Economics*, 115(3), pp. 847-904.
- Amin, A. (2005). Local community on Trial. *Economy and Society*, 34(4), pp. 612-633.
- Andreoni, J. (1990). Impure Altruism and Donations of Public Goods: a Theory of Warm Glow Theory. *Economic Journal*, 100, pp. 464-477.
- Andreoni, James, 2006. Philanthropy. In L.- A. Gerard-Varet, S.-C. Kolm & J.M. Ythier (Eds.), *Handbook of Giving, Reciprocity and Altruism* (pp. 1201-1269), Amsterdam: Elsevier/North-Holland.
- Atkinson, R., & Kintrea, K. (2001). Disentangling area effects: Evidence from Deprived and Non-Deprived Neighbourhoods. *Urban Studies*, 38(12), pp. 2277-2298.
- Atkinson, R., Buck, N., & Kintrea, K. (2005). Neighborhoods and poverty: Linking Place and Social Exclusion. In N. Buck, I. Gordon, A. Harding & I. Turok (Eds.), *Changing Cities. Rethinking Urban Competitiveness, Cohesion, and Governance* (pp. 154-171). London: MacMillan.
- Barnes, M., Newman, J., & Sullivan, H. (2007). *Power, Participation and Political Renewal. Case Studies in Public Participation*. Bristol: The Policy Press.
- BBC (2011a). 'Liverpool Withdraws From Government 'Big Society' Pilot'. Published 03-02-2011. Retrieved 07-02-2011, from <http://www.bbc.co.uk/news/uk-england-merseyside-12357450>
- BBC (2011b). 'Cuts 'Destroying Big Society' Concept, Says CSV Head'. Published 07-02-2011. Retrieved 07-02-2011, from <http://www.bbc.co.uk/news/uk-politics-12378974>
- Bilodeau, M. & Slivinski, A. (1996). Toilet Cleaning and Department Chair-inf: Volunteering a Public Service. *Journal of Public Economics*, 59, pp. 299-308.
- Cabinet Office (2010) *Building the Big Society*, London: Cabinet Office.
- Charmaz, K. (2006) *Constructing Grounded Theory. A Practical Guide through Qualitative Analysis*. London: Sage.

Coleman, J. S. (1988). Social Capital in the Creation of Human Capital. *The American Journal of Sociology*, 94(Supplement), S95-S120.

Day, K.M. & Devlin, A.R., (1998). The Payoff to Work without Pay: Volunteer Work as an Investment in Human Capital. *The Canadian Journal of Economics*. 31 (5), pp. 1179-1191

Della Vigna, S., List, J. A., & Malmendier, U., (2009), Testing for Altruism and Social Pressure in Charitable Giving. NBER Working Paper No. 15629.

Denhardt, J.V., & Denhardt, R.B. (2003). *The New Public Service: Serving, Not Steering*. Armonk: M.E. Sharpe.

Duncan, B. (1999). Modeling Charitable Contributions of Time and Money. *Journal of Public Economics*, 72, pp. 213-242.

Duncan, B. (2004). A Theory of Impact Philanthropy. *Journal of Public Economics*, 88, pp. 2159-2180.

Edwards, B., & Foley, M. W. (1998). Civil Society and Social Capital Beyond Putnam. *American Behavioral Scientist*, 42(1), 124-139.

Erlinghagen, M., & Hank, K. (2006), The Participation of Older Europeans in Volunteer Work. *Ageing & Society*, 26, pp. 567-584.

Freeman, R.B. (1997). Working for Nothing: The Supply of Volunteer Labor. *Journal of Labor Economics*, 15:S140-S166.

Goodlad, R., & Meegan, R. (2005). Governance, Social Cohesion and Neighborhood Participation. In N. Buck, I. Gordon, A. Harding & I. Turok (Eds.), *Changing Cities. Rethinking Urban Competitiveness, Cohesion, and Governance* (pp. 188-203). London: MacMillan.

Hackl, F., Pruckner, G. & Martin, H. (2010) *Volunteering and the State*. Public Choice, Department of Economics, Johannes Kepler University, Linz, 2.

Hastings, A. (2003). Strategic Multi-Level Neighborhood Regeneration: An Outward Looking Approach At Last? In R. Imrie & M. Raco (Eds.), *Urban Renaissance? New Labour, Community, and Urban policy* (pp. 85-100). Bristol: The Policy Press.

Khanna, J. & Sandler, T. (2000), Partners in Giving: The Crowding-In Effects of UK Governments Grants. *European Economic Review*, 44, pp. 1543-1556.

King, C.S., & Stivers, C. (Eds.). (1998). *Government Is Us: Public Administration in an Anti-Government Era*. Thousand Oaks: Sage.

Meier, S. & Stutzer, A. Is Volunteering Rewarding Itself?. *Economica*, 297, pp. 39-59.

Mutler, J., Burr, J. & F. G. Caro, (2003). From Paid to Volunteer: Leaving the Paid Workforce and Volunteering in Later Life. *Social Forces*, 81(4), pp. 1267-1293.

Olken, B. & Singhal, M. Informal Taxation, *American Economic Journal: Applied Economics*, forthcoming.

Oorschot, W. van & Arts, W. (2005), The Social Capital of European Welfare States: The Crowding Out Hypothesis Revisited. *The Journal of European Social Policy*, 15(1), pp. 5-26.

New Economics Foundation (2010). Ten Big Questions About the Big Society. And Ten Ways to Make the Best of It. Retrieved 10-12-2010, from <http://www.neweconomics.org/publications/ten-big-questions-about-the-big-society>

Portes, A. (1998). Social capital: Its Origins and Applications in Modern Sociology. *Annual Review of Sociology*, 22, pp. 1-24.

Skidmore, P., Bound, K., & Lownbrough, H. (2006). Community Participation: Who Benefits? Retrieved 24-01-2008, from <http://www.cs-network.ru/library/?content=doc&id=126>

Smith, M.J. (2010). From Big Government to Big Society: Changing the State-Society Balance. *Parliamentary Affairs*, 63 (4), pp. 818-833.

Taylor, B., Mathers, J., Atfield, T., Parry, J. (2011) What Are the Challenges to the Big Society in Maintaining Lay Involvement in Health Improvement, and How Can They Be Met? *Journal of Public Health*, 33 (1), pp. 5-10.