

Education Not for Money: An Economic Analysis on Education, Civic Engagement and Life Satisfaction

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Abstract

Many recent theoretical and empirical findings both in Economics and in Psychology show that, in addition to the effects on policy outcomes, political participation may affect individual utility and increase happiness and well-being. In this paper we devise a theoretical model where the individual utility grows through the civic engagement, which may be enjoyed only with a sufficient level of investment in civic capital accumulated through education. We show that investing in education may have important consequences for subjective well-being by enhancing civic capacities which are relevant to improve individual's civic engagement and social outcomes, even without any monetary effects. More specifically, we identify a form of non pecuniary benefits of education represented by the possibility of taking an active and successful part in social and civic life which significantly contribute to life satisfaction.

Keywords

Civic Engagement, Education, Life Satisfaction

1. Introduction

Civic engagement has been defined as “the expanse of activities, in which participation in social life with other citizens takes place involving the pursuit of common goals related to the betterment of the community” [1]. It may have strong positive impacts also on societies by raising democratic values because participation makes elites more responsive to citizens [2]-[6].

Nevertheless it has been shown that it may increase the subjective well-being as it implies the development of the combination of skills, values, and motivation, due to the fact that people work together to lessen crime, im-

prove schools, increase service to the needy, deepen social trust, etc. Individual benefits of civic engagement also include increased knowledge and trust, positive feelings about the self and the community [1] and increased social capital [3] [7] [8]. Participation in social and political affairs implies a civic involvement which builds personal connections that add to the usual ones associated with family, work and leisure-time. According to the Nobel prize [9] participation in making decisions is fundamental to human well-being and it has intrinsic value for the quality of life. Indeed, “being able to do something through political action for oneself or for others is one of the elementary freedoms that people have reason to value” [10].

[11] provides a detailed survey of the theoretical literature on procedural utility according to which the psychological benefits of political participation suggest that people who participate in political activities will be more satisfied with their lives due to the feelings of autonomy, competence and relatedness. The authors provide a survey of the empirical findings, including also the results of their own analysis at individual-level based on data from Latin America, which confirm the nexus between well-being and civic participation.

[12] argues that, both at a theoretical and empirical level, the effect of winning or losing on voters’ satisfaction with democracy is significant even when controlling for ex ante satisfaction before the election takes place. [13] [14], by analyzing the behaviour of Swiss citizens in cantons, offer evidence that people who have more opportunities for participation in democratic processes are more satisfied with their lives than those without such opportunities.

[15] considers another connection with happiness which comes through the possibility of helping others in the context of a meaningful life. According to two recent reports from OECD [16] [17] adults with higher levels of educational attainment are generally more likely than those with lower levels of attainment to exhibit greater satisfaction with life and stronger civic engagement (*i.e.* vote, volunteer, express political interest and show interpersonal trust).

In his famous work on social capital [18], by analyzing the behaviour of American citizens about changes in civic participation, discusses how despite the rapid increases in higher education opportunities that might have fostered civic engagement they were dropping out of political and organized community life. Consequently, the author calls for individuals to enhance the education of young people about civic virtues, reconnecting with their neighbors, and increasing participation in politics. Only a higher level of civic education will raise the most virtuous civic activities (participation in public life, trustworthiness, and reciprocity) which help citizens to flourish and play an active role in their democratic communities. In order to answer to this challenge of fostering civic capacities, the incorporation of service learning and of curricular contents with civic education into collegiate course design has gained stronger and stronger acceptance.¹

According to a recent OECD survey (available at <http://www.oecdbetterlifeindex.org/>) the higher levels of education may contribute to life satisfaction beyond their effect on income.² Life satisfaction denotes how people evaluate their life as a whole rather than their current feelings. For empirical purpose it is measured by asking to people to rate their general satisfaction with life on a scale from 0 to 10. For example, tertiary education may help individuals to develop skills, social status and to access networks which could lead to greater satisfaction with life. Education can enhance social outcomes by helping individuals make informed and competent decisions by providing information, improving cognitive skills and strengthening socio-emotional capabilities, such as conscientiousness, self-efficacy and social skills. It can help individuals to increase their engagement in civil society. Educational institutions such as schools can also offer an ideal environment for children to develop participatory attitudes and norms conducive to social cohesion. For instance, open classroom climate, practical involvement in civic matters and school ethos that promote active citizenship can foster civic participation.

In this work we address these issues from a theoretical point of view. In the next section we introduce our research question in more detail. In Section 3, we depict a basic theoretical model on investment in civic education and well-being. In this section we show our main results and introduce also an alternative version of the model to take into account the effect of social norms, which can enforce the effect of civic education and produce higher sense of community. Section 4 contains the conclusions.

¹Among those initiatives see for instance, The American Democracy Project, launched in the year 2003 by the American Association of State Colleges and Universities, to sponsor an annual national conference focused on higher education’s role in preparing the next generation of informed and engaged citizens. Similarly, a coalition of nearly 1200 college deans, called the Campus Compact, promoted the creation of a community partnership to cooperate and provide resources to train faculties to integrate civic and community-based learning into the curricula.

²For a literature review about education and life satisfaction, see for instance [19]-[24].

2. Our Research Question

In our work we devise a theoretical analysis arguing that income is not a sufficient condition for access to some non-materialistic goods and that something similar occurs in the provision of civic capacities enhancing people to accumulate enough knowledge, skills and conscientiousness necessary to participate in civic engagement and to benefit from it and also to reach better social outcomes.

Our argument is sketched in an intertemporal theoretical model in which individuals alongside with traditional goods, have also what we call civic capital as an argument in their utility function. Current civic engagement yields superior contribution to happiness vis-à-vis the enjoyment of traditional goods, but such enjoyment crucially depends on civic capital which can be accumulated through education. The investment in education has also some opportunity costs since it requires to renounce working hours which can provide additional income for current consumption of traditional goods. We document that, under reasonable parametric conditions, individuals with higher time impatience do not accumulate enough civic capital and cannot benefit from civic participation. On the contrary, individuals with low time impatience accumulate sufficient civic capital which enables them to consume stronger participation in civic and social life and to benefit from it.

Since the main objective of our analysis is to explore the effects of education on civic engagement, we consider in our theoretical model the limiting case in which returns to school are zero, *i.e.* the human capital has no impact on future income. This allows us to show that, even under this less favorable scenario, there is an incentive to delay satisfaction of traditional consumption goods by investing in education. In this sense we substantially share the [25] point of view that “an important justification for the large expenditures on education within many democratic nations is its social, and not just economic, impact, the benefits an educated electorate brings to civil society”. In the rest of the paper we will use the term Education to specifically denote the civic education and to distinguish it from the human capital, as the latter is associated “to any stock of knowledge or characteristics the worker has (either innate or acquired) that contributes to his or her productivity” [26], while the former does not necessarily contribute to individual’s productivity (for instance, this is the case of learning civic education at school, ethics in Economics at the University, or for other cultural activities as going to the theater, cinema, etc.)³

We present two alternative versions of the model. In the first one individuals have time invariant heterogeneous preferences while in the second one their preferences crucially depend on the utility arising from their conformity to social norms. With these two alternative benchmarks we try to discriminate on the well-known controversy between [27] and behavioural economists on the interpretation of other-regarding-behavior in lab experiments. As is well known the two authors argue that other-regarding-behaviour in lab experiments does not necessarily imply other regarding preferences since such behaviour can be the outcome of evolutionary social norms.

Our findings add original elements to the literature on returns from human capital accumulation. They show that the benefits of education are not just pecuniary such as those traditionally measured by the return to schooling and by the skill wage differential literature. More specifically, we identify a form of non pecuniary benefits of education represented by the possibility of enjoying civic participation. Our research offers useful insights to empirically test how positively and significantly this contributes to life satisfaction and if we can not reject the hypothesis that such enjoyment can be “trained” with education.

3. The Model

3.1. Basic Set-Up

We consider a model in which individuals have a utility function $U(\cdot)$ depending on a generic consumption good X_c and on the activity X_s which measures the individual’s participation to social and civic life. We assume that this second argument affects utility proportionally to the civic sense of the individuals, that is, individuals enjoy their own civic engagement and social outcome in proportion to their accumulated stock of civic capital, that we denote by V .

The individual’s utility function has the traditional properties, being convex and exhibiting marginal decreasing returns so that it can be represented by a Cobb-Douglas utility function, containing the arguments described

³Nevertheless, it is possible to show that the introduction of an additional variable measuring human capital and the positive returns to schooling, as in the traditional models of investments’ decision in human capital accumulation and the related income effects (see [26] for a review) while unnecessarily increasing model complexity, does not change significantly the main findings of our model.

above. We also assume that engagement in a stock of civic activities has a stronger impact on utility than the consumption good, that is, $\beta > \alpha > 0$. Individuals are subject to standard time and budget constraints. Their budget constraint includes non labour income M_0 and labour income wL , with the latter being the product of wage w and worked hours L .

The second constraint implies that time can be dedicated to X_s , to work L and to investments in civic capital represented by the level of civic education E . In addition to it, our law of motion implies that the practice of X_s is also assumed to contribute positively to the civic capital accumulation.

Finally, we assume that civic engagement, having a positive effect on life satisfaction, can be performed only if the value of the civic capital is above a certain threshold, that is, $VX_s \geq 1$, that we call civic capacities' activation constraint. In other words, enjoyable civic participation depends on an adequate stock of civic capital accumulated through education. In fact, civic education helps to develop social preferences [28] and makes people more able to participate to civic life, for instance to deliberate over specific issues and to make recommendations, to hold public meetings, to write letters, to lobby and to organize teams and to cooperate in an active way to obtain a common social outcome.

An individual faces the following problem:

$$\max_{\{X_c, X_s\}} U(V; X_c, X_s, E) = \int_0^{\infty} e^{-\rho t} [\alpha \ln X_c(t) + \beta \ln [V(t) X_s(t)]] dt \quad (1)$$

subjected to the law of motion of civic capital

$$\begin{cases} \dot{V}(t) = -\delta V(t) + \varepsilon X_s(t) + \gamma E(t) \\ V(0) = V_0 > 0 \end{cases} \quad (2)$$

under the following three constraints:

a civic capacities' activation constraint

$$VX_s \geq 1, \quad (3)$$

a budget constraint

$$M_0 + wL = p_c X_c, \quad (4)$$

a time constraint

$$1 = L + E + X_s, \quad (5)$$

where ε , ρ and δ are positive parameters, p_c is the cost of consumption good and in the time constraint (5) the total amount of available daily hours is conveniently normalized to one.

For simplicity we also assume that there is not any time devoted to leisure, as this does not substantially affect our result being not a variable of choice in our framework. Notice also that for $L=1$ we have that any initial quantity of civic capital is rapidly consumed, so that a society which devotes all the time to work cannot accumulate civic capital and benefit from it through the enjoyment of civic participation. Therefore, in any period, an individual may allocate a unit of his time choosing whether to work, to be engaged in civic activities or to invest in education.

Clearly, from (5), we have $0 \leq X_s \leq 1$ and $0 \leq E \leq 1$. The civic capacities' activation constraint implies that only an individual who received enough civic education can benefit from active participation in civic and social life. This has a positive impact on his life satisfaction and the utility from being civically engaged is added to the utility associated to the consumption of the traditional good. Hence we assume that when this constraint is not satisfied the individual utility depends only on the consumption of X_c and $X_s = 0$.

3.2. Main Results

To analyze the model described in previous section, we assume that (3) is satisfied. Evaluating L from (5) and substituting it in relation (4) we consider the following constraint:

$$M_0 + w(1 - E - X_s) = p_c X_c. \quad (6)$$

Hence, we find X_c depending on X_s and E

$$X_c = \frac{M_0 + w(1 - E - X_s)}{P_c}. \quad (7)$$

If we substitute X_c from (7) into (1), our maximization problem can be seen as an optimal control problem depending on two control variables, X_s and E .

Searching for the open-loop information structure with respect to (1), we write down the current-value Hamiltonian function $H(\cdot)$ (omitting the specification of time whenever possible to simplify the notation)

$$H(X_s, E, V, \lambda) = \alpha \ln \left(\frac{M_0 + w(1 - E - X_s)}{P_c} \right) + \beta \ln V + \beta \ln X_s + \lambda(-\delta V + \varepsilon X_s + \gamma E), \quad (8)$$

where λ is the current-value costate variable associated to the dynamic constraint (2). Pontryagin's maximum principle yields the following necessary condition

- FOCs

$$\frac{\partial H}{\partial X_s} = -\frac{\alpha w}{M_0 + w(1 - E - X_s)} + \frac{\beta}{X_s} + \varepsilon \lambda = 0 \quad (9)$$

$$\frac{\partial H_i}{\partial E} = -\frac{\alpha w}{M_0 + w(1 - E - X_s)} + \gamma \lambda = 0 \quad (10)$$

- Costate equation:

$$\dot{\lambda}(t) = \rho \lambda(t) - \frac{\partial H_i}{\partial V} \Rightarrow \dot{\lambda}(t) = (\rho + \delta) \lambda(t) - \frac{\beta}{V}. \quad (11)$$

- Transversality condition:

$$\lim_{t \rightarrow \infty} e^{-\rho t} \lambda(t) V(t) = 0. \quad (12)$$

Evaluating λ from (10) we get

$$\lambda = \frac{\alpha w}{\gamma(M_0 + w(1 - E - X_s))} \quad (13)$$

and subtracting (10) from (9) we obtain

$$\lambda = \frac{\beta}{\gamma - \varepsilon} \frac{1}{X_s} \quad (14)$$

Proposition 1. Let parameters γ , ρ and δ be such that

$$\frac{2}{3} \gamma < \varepsilon < \gamma \quad \text{and} \quad \rho > \gamma - \varepsilon - \delta, \quad (15)$$

then there exist steady state equilibrium values V^* , E^* and X_s^* , where the latter positively depends on the investment in education.

Proof. In order to get the steady state we require $\dot{V} = 0$ and $\dot{\lambda} = 0$. Hence, from (2) and from (11) we evaluate V and λ

$$V = \frac{\varepsilon X_s + \gamma E}{\delta} \quad (16)$$

$$\lambda = \frac{\beta}{\rho + \delta} \frac{1}{V} = \frac{\beta \delta}{\rho + \delta} \frac{1}{(\varepsilon X_s + \gamma E)} \quad (17)$$

We equate (13)-(14) and (17)-(14) in order to obtain steady state values for X_s and E denoted by X_s^* and E^*

$$X_s^* = \frac{\beta \gamma (\rho + \delta)}{(\gamma - \varepsilon) [\alpha (\rho + \delta) + \beta (\rho + \delta) + \beta \delta]} \left(\frac{M_0}{w} + 1 \right) \quad (18)$$

$$E^* = \frac{\beta[\delta(\gamma - \varepsilon) - \varepsilon(\rho + \delta)]}{(\gamma - \varepsilon)[\alpha(\rho + \delta) + \beta(\rho + \delta) + \beta\delta]} \left(\frac{M_0}{w} + 1 \right) \quad (19)$$

and the following relationship between X_s^* and E^*

$$X_s^* = \frac{\gamma(\rho + \delta)}{\delta(\gamma - \varepsilon) - \varepsilon(\rho + \delta)} E^*. \quad (20)$$

Notice that for

$$\sqrt{\frac{\rho + \delta}{\gamma - \varepsilon}} \leq \frac{\beta\gamma(\rho + \delta)}{(\gamma - \varepsilon)[\alpha(\rho + \delta) + \beta(\rho + \delta) + \beta\delta]} \left(\frac{M_0}{w} + 1 \right) \leq 1$$

the steady state value of X_s^* found in (18) is feasible since it satisfies

$$\sqrt{\frac{\rho + \delta}{\gamma - \varepsilon}} \leq X_s^* \leq 1,$$

in fact, evaluating E^* from (20) and substituting in (16) we obtain

$$V^* = \frac{\gamma - \varepsilon}{\rho + \delta} X_s^*. \quad (21)$$

The steady state V^* has to satisfy the constraint (3), hence we get the result.⁴ \square

Notice that from condition (20) it is clear that the pursuit of civic engagement is positively correlated with education because the denominator is positive. It crucially depends on $\gamma - \varepsilon > 0$ which in turn implies that the contribution of education to civic capital is important and more relevant than the self-reinforcing mechanism produced by the pursuit of civic activities on the civic capital itself. This fact is reasonable since education is essential for the accumulation of civic capacities needed to consume an adequate level of civic engagement beneficial on life satisfaction, *i.e.* to have a more aware participation with a better social outcome to social and civic life. To provide further intuition on this point consider that, if we approximate to zero the self-reinforcing mechanism ε , the relationship between the civic capital V^* and education is unequivocally positive.

According to Equations ((18) and (19)), the investment in education is higher as more patient the individuals are (so ρ has low values) and as higher is the weight attached to the engagement in civic education β , and higher is the excess of the effect of the education with respect to the immediate participation to civic life, but without having accumulated enough civic capacities, awareness and feelings to benefit from that, in civic life, through an adequate formation realized by studying and learning (also in a practical way).

In addition, by differentiating X_s^* with respect to β , we find higher values of X_s^* as civic activities have a stronger impact on individual's utility⁵:

$$\frac{\partial X_s^*}{\partial \beta} = \frac{\alpha\gamma(\rho + \delta)(\gamma - \varepsilon)}{(\gamma - \varepsilon)^2 [\alpha(\rho + \delta) + \beta(\rho + \delta) + \beta\delta]^2} \left(\frac{M_0}{w} + 1 \right) > 0 \quad (22)$$

The main result of our theoretical framework is in Proposition 1. It states that there exist a threshold in individual time preferences such that more impatient individuals do not invest enough in education to overcome the civic capital threshold that enables to enjoy civic activities. This implies that there might be a group of more impatient individuals, with fewer education years and lower stock of civic capital, who are not civically engaged

⁴Notice that we solved the traditional problem of maximizing a typical Cobb-Douglas function, so it easy to show that the solution is a maximum in steady state. Additional details about model solution are omitted for reasons of space and available upon request.

⁵Notice that if we look at α and β as measures of subjective evaluations of the two components of the total utility, our model also accounts for the issue of utility misprediction [14] [29]. If we assume that there is a true β^* of the population, people with β, β^* underestimate the utility concerning aspects of consumption satisfying intrinsic needs (time spent with family and friends or on hobbies), which implies that individuals make distorted decisions when they choose between different options (in our analysis investing in education or immediate consumption of X_c) and obtain a lower utility level than they otherwise would. In particular, in the most extreme case of misprediction, with the estimated $\beta = 0$, people solve a different problem and maximize a traditional utility function depending only on the consumption of X_c . Even though the model is flexible enough to allow for misprediction, this is not the story we outline in this paper.

and a second group of less impatient individuals, with more education years, higher civic capital stock, who can enjoy the utility by performing civic activities. Due to the different contributions of the consumption good and the civic capital/civic activities to the utility function, the second group ends up being happier than the first.

Therefore, when individuals have utility functions and constraints as in our dynamic model, if they are so impatient to give no value to the future, the optimal choice for them would be to use their time to work and consume at the present the traditional good X_c , since for high values of the time discounting ρ the alternative of investing in education in order to perform better civic engagement and improve the future consumption of them in the future is not attractive compared with that to consume more traditional goods at the present.

On the other hand, there may be parametric conditions under which more patient individuals giving nonzero value to future periods utility, decide to forgo to current consumption in order to invest in education and enjoy in the second period the utility arising from performing civic engagement with better social outcomes.

3.3. The Reinforcement Effect of Social Norms

In order to reason on the issue of social norms versus social preferences (see among others [30], we can take into account the effect of social norms, by slightly changing one element in our model. Social norms can enforce the effect of civic education considering a higher sense of community. It leads to greater perceived availability of resources and it increases in social support, promotes self-efficacy and enhances overall well-being.

[31] took the idea of social skills a step further, empirically measuring the effects of a strong sense of community on subjective well-being. To do so, they administered three surveys to adults via phone interviews, which measured sense of community, subjective well-being, and subjective community evaluation. The results of all three surveys indicated a significant, positive relationship between sense of community and subjective well-being, specifically demonstrating a strong correlation between sense of community and happiness [31]. Therefore we may assume that the enjoyment of civic engagement depends crucially on the local social norm. In this version of the model the social norm is a necessary but not sufficient condition for the enjoyment of the civic life (since also nonzero civic capital is required), while in the base version with nonzero civic capital was a necessary and sufficient condition.

In this case a subject solves:

$$\max_{\{X_c, X_s\}} U(V; X_c, X_s) = \int_0^{\infty} e^{-\rho t} \left\{ \alpha \ln X_c(t) + \beta \ln [V(t) X_s(t)]^S \right\} dt \quad (23)$$

subjected to the law of motion of civic capital (2) and S is a variable that stands for social norms, under the same budget and time constraints (4)-(5) as before.

It is clear that if there are no social norms $S = 0$, an individual performs no other—regarding—activities *i.e.* $X_s^* = 0$ and in this case we get the relation (6). On the contrary the consumption of X_s increases for high values of S , which implies that stronger social norm in a society may increase civic participation and people well-being, making these societies more democratic and happier. In fact, in our modified version of the model, we can see this reinforcement effect of S through the parameter $\beta' = \beta S$ to get the result of higher values of investments in education.

4. Conclusions

In this paper we construct a model which addresses two issues. First of all, the civic engagement can be consumed and enjoyed only if individuals have accumulated enough civic capital via investment in education. In any period individuals choose to allocate their time between work, engagement in civic activities (available only if enough civic capital has been accumulated) and investment in education. The model shows that only the more patient individuals accumulate more education, perform and benefit from civic engagement. More specifically, we identify a form of non pecuniary benefits of education represented by the possibility of taking active and successful part in social and civic life which significantly contribute to life satisfaction.

Secondly, our findings show that the benefits from education are not just monetary such as those traditionally measured by the return to schooling and by the skill wage differential literature.

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