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“Leaving No Child Behind:” Preferences for Social Inclusion and Altruism

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Abstract:

Social inclusion is a priority item of international policy agendas. However, little is known about households' preferences for policies aiming at social inclusion. We implement a household survey in both northern and southern Italy to investigate preferences for financing rehabilitation programs for juvenile offenders, a particularly vulnerable group exposed to social exclusion. We find that although societies can be equally socially inclusive, families' propensity towards “leaving no child behind” varies depending on the presence of children in the family, and household income. We also show that differences in preferences do not depend only on socio-demographic characteristics but also on the subjective concern about crime risk, the immigration rate as well as on altruistic motives. Our results guide the implementation of policies promoting social inclusion across regions.

Keywords: social inclusion, altruism, children, rehabilitation policies, juvenile crime, willingness to pay

JEL classification: D61, D63, D64

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1 Introduction

In every country, there are groups excluded from participating fully in society, marginalized, and prevented to live in dignity. Social inclusion – the process of integrating vulnerable groups by guaranteeing basic economic opportunities and human rights – is a priority concern of international policy agendas (European Council 2000; United Nations 2015; World Bank 2013). The United Nations (2015) urges for “leaving no one behind” and ensuring that all individuals can live in dignity and take an active part in society. However, despite its importance, the investigation of what factors affect preferences for policies aiming at social inclusion has not received adequate attention.

In this study, we focus on juvenile delinquents, a vulnerable group particularly exposed to social exclusion. In the context of juvenile crime, social inclusion consists in policies aiming at including juvenile offenders in society by helping them to complete their studies and find a job; so that they are less likely to recidivate and could enjoy the same opportunities of being a constructive component of society as their age peers. We investigate preferences for financing rehabilitation programs for juvenile delinquents, and the factors affecting these preferences using representative samples of Italian households.

An effective policy for reducing the influence of circumstances outside an individual control, such as education or community and peer effects, increases equality of opportunity. A rehabilitation policy for crime prevention that reduces the impact of such circumstances should improve the distribution of opportunities across the young population (Berenji, Chou, and D'Orsogna 2014). Thus, it is crucial for policymakers to adopt policy actions and incentives aimed at equalizing opportunities across the population so that individuals are fully responsible for their achievements as an outcome of their sole efforts. Knowledge about preferences for social inclusion informs about a society's propensity to eradicate disparities and other forms of marginalization that may arise, for example, as a consequence of anti-social behaviour.

Individuals' willingness to invest in policies aiming at social inclusion and, in the context of the present research, to finance rehabilitation programs for juvenile offenders may vary substantially within the same state across family types, such as families with and without children, and across regions or states. With this objective in mind, we implement a stated preference survey in both northern Italy, the region of Veneto, and in southern Italy, in Sicily. The comparison between these two regions can be very instructive in explaining differences in preferences for policies aiming at social inclusion and their underlying motives. These regions are characterized

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by markedly different cultural norms and social capital endowments (Bigoni et al. 2016; Guiso, Sapienza, and Zingales 2004; Putnam, Leonardi, and Nanetti 1993). Veneto is a wealthy region representing the northern Italian culture, while Sicily the southern culture. In recent decades, Sicily has experienced a significantly lower rate of growth in incomes and job opportunities¹ and has a long history of criminal organizations. The lack of opportunities available to young Sicilians is a factor that can increase the risk of social exclusion forcing young people to join the “informal” criminal labour market. The investigation of potential differences in the factors affecting preferences for social inclusion between regions can help policymakers take informed decisions about social policies.

We develop a theoretical model in which individual preferences for social inclusion policies are motivated by altruistic motives. Altruism is a sufficient but not a necessary condition for social inclusion because, for example, a self-interested individual may be socially inclusive simply because an investment in a rehabilitation program may reduce the chances to be exposed to the risk of being a victim. In our set-up, adults are concerned with the utility of their own children, defined as parental altruism, and the utility of children of other families, defined as non-parental altruism. In general, a family in poverty may be socially inclusive, in the sense of being willing to support poverty mitigation programs, because directly interested. A wealthier family may be socially inclusive to avoid the self-interested risk of falling into poverty or may be in favour of inclusive policies for altruistic reasons. Similarly, a family with a child who has had some troubles with the law may be directly interested in rehabilitation policies. On the other hand, families without children could support rehabilitation initiatives as well, but indirectly. In these cases, non-parental altruistic motives may play a relatively more important role.

In the present study, we maintain a traditional representation of altruistic preferences. We deem that caring about others is more closely related to the view by Tomasello et al. (2005) in support of a “collective intention” to share a common goal. In our context, collective intentionality is better suited to explain why parents and non-parents may or may not engage in a common voluntary action in favour of the future of their children.

We enrich our empirical analysis by analysing how factors such as socio-economic characteristics (education and income), ideological inclinations (religion and political orientation), concern about crime risk, and contextual variables, such as immigration and crime rates affect preferences for policies aiming at the social inclusion of juvenile offenders in the two regions of interest.

However, because of potential omitted variable bias an important caveat is that our results should be interpreted as correlations and not given a causal interpretation. Our empirical evidence shows that although two societies can be equally socially inclusive, still there could be significant differences in the factors affecting preferences for social inclusion. We show that differences in preferences do not depend only on socio-demographic characteristics but also on the subjective concern about crime risk, the immigration rate in the province of residence as well as on parental and non-parental altruism.

The paper proceeds as follows. Section 2 presents the theoretical framework. Section 3 describes the survey design and the data. Section 4 presents the empirical strategy, and Section 5 presents the results. Section 6 provides some final remarks.

2 Theoretical Framework

We describe preferences for policies aiming at the social inclusion of juvenile offenders first using a theoretical model in which household choices are conditioned by the wellbeing of children, and then, measuring the willingness to pay for juvenile rehabilitation programs.

2.1 A Model of Social Inclusion with Altruism

Socially inclusive behaviour towards juvenile offenders can be explained by underlying motives such as altruism towards household members and friends, and even towards strangers. We assume that adults display some degree of altruism towards children. Altruism is defined in a narrow “parental” sense, when the adult act of giving is to children of the same family, and in a large “non-parental” sense, when it is to children of other families.² Our view shares Khalil (2004) contention that altruism is a form of charity motivated by the concern over the welfare of others. As it is realistic that “charity begins at home”, because individuals’ primary responsibility should be for the needs of their own family and friends, altruism should not be confused with parental care and parent-child transfers of money (Khalil 2004). In our context, the term parental altruism does not refer to direct transfers of adults to their own children, but to transfers towards an institution.

Households comprise adults a with or without children c . Adults of household i care, to different extents, about the utility of their children u_i^c , when present, and of household j ’s children u_j^c . Formally, when children

are present, preferences of adults U_i^a are described by the following utility function

$$U_{i|c>0}^a = u_i^a \left(q_i^a, P_i^a, c_i^*; u_i^c, u_j^c, z_i, E_i(d^a) \right), \text{ with } \frac{\partial U_{i|c>0}^a}{\partial u_i^c} > 0 \text{ and } \frac{\partial U_{i|c>0}^a}{\partial u_j^c} > 0, \quad [1]$$

where q_i^a is a vector of goods consumed by the adult, u_i^c measures parental altruism (PA), and u_j^c non-parental altruism (NPA).³ Parents are also committed to maximizing the investment in the quality of their children c_i^* that, as a result, may reduce the chances that children will have trouble with the law. Parents who are highly committed to invest in the quality of their children may be less willing to support rehabilitation programs for their child. The utility of parents also depends on a vector of household characteristics z_i and the expected harm $E_i(d^a) = \pi_i^a d^a$ from an offense that may occur with subjective probability π_i^a . The subjective probability of being the victim of a crime π_i^a depends on the effectiveness of the rehabilitation program. Interestingly, the objective probability of being a victim is usually small, as can be seen from crime statistics presented in Appendix A, but the perceived risk may be very high.

In our case study, the adults' utility function $U_{i|c>0}^a$ also depends on the participation P_i^a in a referendum to finance rehabilitation programs for juvenile offenders. When participating in the referendum, adults can express a positive or a negative vote. Though adults will never use the rehabilitation service for themselves, they may still be willing to vote "yes" mainly to offer juvenile offenders the option of being reintegrated into the society (McConnell 1997). Thus, in our context the participation in the referendum reveals adults' preferences for policies aiming at the social inclusion of juvenile offenders.

Adults' optimal decision about the participation in the referendum is

$$\begin{aligned} \tilde{P}_{i|c>0}^a &= P_{i|c>0}^a \left(p_i, m_i, u_i^c, u_j^c, z_i, E_i(d^a) \right) = 1, \text{ if } V_{i|c>0}^a(P_i^a = 1) \geq V_{i|c>0}^a(P_i^a = 0), \\ \tilde{P}_{i|c>0}^a &= P_{i|c>0}^a \left(p_i, m_i, u_i^c, u_j^c, z_i, E_i(d^a) \right) = 0, \text{ otherwise,} \end{aligned} \quad [2]$$

where p_i is a vector of market prices of goods consumed by the household, m_i is the exogenous household income, $V_{i|c>0}^a(\tilde{P}_i^a = 1)$ and $V_{i|c>0}^a(\tilde{P}_i^a = 0)$ are the indirect utility functions evaluated at the equilibrium point when adults vote "yes" or "no" to the referendum, respectively. Among other exogenous variables, such as market prices, income and household socio-economic characteristics, the optimal participation choice of adults depends on their parental u_i^c and non-parental altruism u_j^c .

For households without children, the adult utility function falls to

$$U_{i|c=0}^a = u_i^a \left(q_i^a, P_i^a; u_j^c, z_i, E_i(d^a) \right). \quad [3]$$

Compared with eq. 1 the parental altruism term u_i^c is by force excluded and the adult utility is not affected by child quality c_i^* because there are no children. In this case, the optimal participation choice in the referendum is not a function of parental altruism $\tilde{P}_{i|c=0}^a = P_{i|c=0}^a \left(p_i, m_i, u_j^c, z_i, E_i(d^a) \right)$.

We are also interested in aggregating individual preferences for social inclusion into collective preferences for the society as a whole. We do so resorting to two revealed (stated) preference arguments.

Postulate 1. Collective Preferences for Social Inclusion Policies. *Collective preferences for policies aiming at the social inclusion of juvenile offenders are revealed by the participation rate in favour of a juvenile rehabilitation program where participation implies a "yes" vote in support of the program.*

Interestingly, this postulate is similar to Chamlin and Cochran's (1997) definition of social altruism being the willingness of communities to assign, distinct from the beneficence of the state, scarce resources to aid and comfort their members and use contributions to local charitable institutions to operationalize social altruism. In line with this view, it is natural to maintain that families belonging to the same community, be they with or without children, young or old, or rich and poor, may share the collective intention to serve a common goal such as social inclusion.

The next postulate clarifies how we implement comparisons between levels of social inclusion across societies.

Postulate 2. Comparison of Inclusive Societies. *If in a referendum two societies show comparable participation rates in support of a juvenile rehabilitation program, then we conclude that they have similar preferences for policies aiming at the social inclusion of juvenile offenders.*

In our experimental setup, participants in the referendum are also asked to reveal their willingness to pay for rehabilitation programs for juvenile offenders as described in the next section.

2.2 Willingness to Pay for Juvenile Rehabilitation Programs

Traditionally, individual willingness to pay reveals preferences for a good consumed directly by the person interviewed. In our study, willingness to pay measures the economic trade-off for a public policy that is neither going to be directly nor indirectly used by the respondents but eventually by their children or children of the same society the respondents belong to. A method for eliciting willingness to pay is the contingent valuation (Alberini, Longo, and Veronesi 2007).⁴ In general, a contingent valuation asks respondents to state what they would be willing to pay to obtain a good or service for which there is not a market given a hypothetical, but credible, transaction scenario. The contingent approach mimics behaviour in regular markets, where people usually purchase, or decline to purchase, a good at a given price. It also closely resembles people's experience with political markets and propositions on referenda. When markets do not reveal the use value of a good, we must resort to stated preferences.

Formally, adults' willingness to pay WTP_i is defined as the amount that must be taken away from the household's income m_i while keeping adults' indirect utility level V_i^{a1} constant at the comparison situation V_i^{a0} without the rehabilitation program. For households with children, $WTP_{i|c>0}$ solves the following equation

$$V_{i|c>0}^{a1} \left(p_i, m_i - WTP_{i|c>0}, u_i^c, u_j^c, z_i, E_i(d^a) \right) = V_{i|c>0}^{a0} \left(p_i, m_i, u_i^c, u_j^c, z_i, E_i(d^a) \right), \quad [4]$$

and for households without children $WTP_{i|c=0}$ is given by

$$V_{i|c=0}^{a1} \left(p_i, m_i - WTP_{i|c=0}, u_i^c, z_i, E_i(d^a) \right) = V_{i|c=0}^{a0} \left(p_i, m_i, u_i^c, z_i, E_i(d^a) \right). \quad [5]$$

Because there are no appropriate proxy markets for juvenile rehabilitation programs from which to infer individual preferences, we elicit individuals' preferences using a single-bounded dichotomous choice model for contingent valuation (Alberini, Longo, and Veronesi 2007). People are asked whether they would vote in favour or against the proposed public program in a referendum if implementation costs € X to the household in the form of extra income taxes.⁵ The dichotomous choice approach has been shown to be incentive-compatible so that truth-telling is in the respondent's best interest (Harrison 2007; Hoehn and Randall 1987). In addition, to mimic the behaviour of people in regular marketplaces or voting situations, the dichotomous choice approach is also credited with reducing the cognitive burden placed on the respondent.

As illustrated in eq. 1, parents are willing to offer monetary support for rehabilitation programs because both are concerned about their children and, to a lesser extent, about the children of other households. Instead, adults without children are willing to pay mainly for a non-parental altruistic motive. In an empirical setting, it is then possible to observe that on average the willingness to pay of a household with children, $WTP_{i|c>0}$, may differ significantly from the willingness to pay of a childless household, $WTP_{i|c=0}$. Given the adult preference structures in eqs 1 and 3, we can construct the following ordering that isolates the relative importance of parental and non-parental altruistic motives and allows us to implement the intra-society comparison between the altruistic behaviour of households with children and childless households.

Hypothesis 1. Social Inclusion and Altruism: Intra-Society Comparison. Consider the following comparison between the mean willingness to pay (WTP) of households with and without children living in the same regional society.

Case 1. If $WTP_{c>0} > WTP_{c=0}$, then households with children are more altruistic than childless households. If $WTP_{c>0} < WTP_{c=0}$, then households with children are less altruistic than childless households.

Case 2. If $WTP_{c>0} = WTP_{c=0}$, then non-parental altruism in childless households ($NPA_{c=0}$) is equal to the sum of parental and non-parental altruism in households with children ($PA_{c>0} + NPA_{c>0}$). This implies that non-parental altruism in childless households is larger than both parental and non-parental altruism in households with children.

To interpret these cases, let us refer to eq. 1 recalling that PA stands for parental altruism and NPA for non-parental altruism. Then, Case 1 corresponds to $PA_{c>0} + NPA_{c>0} > (\text{or } <) NPA_{c=0}$, while Case 2 corresponds to $PA_{c>0} + NPA_{c>0} = NPA_{c=0}$. We operationalize these cases by estimating households' WTP, as described in Section 4.2, and evaluating the direction of these inequalities.

The analogous hypothesis that allows us to frame the comparison of the WTP of families belonging to different societies is as follows.

Hypothesis 2. Social Inclusion and Altruism: Inter-Society Comparison. Consider first the comparison between two societies that have similar preferences for social inclusion policies, as defined in Postulates 1 and 2. Then, society A is more altruistic than society B if both the mean $WTP(A)_{c=0} \geq WTP(B)_{c=0}$ and $WTP(A)_{c>0} \geq WTP(B)_{c>0}$, thus implying, in a Pareto sense, that $WTP(A) \geq WTP(B)$ for all household types. On the other hand, if two

societies have different preferences for social inclusion policies, then society A is more altruistic than society B if the conditional means $\Pr(P(A) = 1) WTP(A)_{c=0} \geq \Pr(P(B) = 1) WTP(B)_{c=0}$ and $\Pr(P(A) = 1) WTP(A)_{c>0} \geq \Pr(P(B) = 1) WTP(B)_{c>0}$ where the willingness to pay is conditional on the participation rate (P).

We test these hypotheses by estimating the reduced form equations of participation decision and WTP as described in Section 4. The reduced equation for participation is specified as a function of factors that may affect adults' preferences for policies aiming at the social inclusion of juvenile offenders. We control among other variables for socio-economic characteristics, such as education, marital status and household income, which can be correlated with the production of child quality. We also have information on the respondent's concern about crime risk as a subjective fear of injury in a criminal event, and on crime rates at the provincial level as a proxy for the objective probability to be harmed by an offensive behaviour.

3 Survey Design and Data Description

3.1 Survey Design

Our data source is an original survey designed by the authors.⁶ This survey was conducted in two Italian regions, Veneto and Sicily, in Fall 2009 using computer-assisted telephone interviews (CATI).⁷ The sample comprises 1,027 observations, 513 observations from the Veneto region and 514 observations from the Sicily region. The data are a representative sample of households from the population of households with land-based or cellular telephone service. Population size was estimated using the Multipurpose Survey on Households: Aspects of Daily Life administered by the Italian National Institute of Statistics (ISTAT). For a 95% confidence level, the maximum sampling error is $\pm 1.55\%$. The random sample was proportionally stratified with respect to the two Italian regions (Veneto and Sicily), the size of the municipality in each region, age, and gender. The sampling covered all sampling cells. The telephone numbers chosen for the interview were randomly drawn from national telephone directories. After three attempted contacts (occurring in different times and days of the week) non-respondents were replaced by a randomly chosen substitute from the telephone list. Individuals between 18 and 65 years old were interviewed. The survey was prepared following the guidelines by the NOAA Blue Ribbon Panel (Arrow et al. 1993). In each region we carried out a pre-test of about 5% of the planned sample size.

The survey collected information on plausible factors that may affect respondents' preferences for juvenile offender rehabilitation programs, and hence social inclusion. A first set of questions gathers information on respondents' socio-economic characteristics, such as age, gender, education, working status, household disposable income, political and religious orientations. Another set of questions collects information on respondents' subjective perception of safety and crime. Specifically, this set contains questions about the perceived level of safety in the neighbourhood where the respondent lives, what crimes concern the respondent most, such as property crime, violent crime, murder or juvenile crime, whether the respondent adopts crime safety measures at home, and whether the respondent or a family member had experienced a crime in the past.

The last section of the survey includes questions assessing respondents' willingness to pay for juvenile rehabilitation programs. Although we cannot exclude a bias due to experimental demand, this section is properly designed to frame the contingent market scenario of interest as realistic and to make the questions incentive compatible. Dichotomous choice contingent valuation questions have been shown to be incentive compatible so that truth-telling should be an optimal strategy (Alberini, Longo, and Veronesi 2007). To increase incentive compatibility (Carson and Groves 2007), we emphasize (a) the importance of juvenile rehabilitation programs, and (b) that individual responses could affect the final decision of the government in financing such programs. In particular, the survey contains the following four subjects:

- i. A contingent market setup that describes the phenomenon of juvenile crime and explains the hypothetical rehabilitation program that will be assessed by the contingent valuation questions. We emphasize that the intervention is hypothetical but realistic. This part includes official statistical figures on juvenile crime rates by crime type and region.⁸ The hypothetical rehabilitation program for juvenile offenders consists in a government program aimed at reincluding the juvenile offenders into society by helping them to complete school or to find a job.
- ii. A contingent attitude question that forces respondents to think about whether they might be interested in juvenile rehabilitation programs. Respondents are asked their level of interest about a rehabilitation program on a Likert scale from 0 to 10.
- iii. A contingent valuation question that elicits respondents' preferences for financing social inclusion policies and their willingness to pay for the juvenile rehabilitation program previously described. Respondents are

first asked the following referendum dichotomous choice question: “Would you and your family vote “yes” or “no” to a hypothetical referendum to finance educational programs for juvenile offenders by increasing local income tax? The program aims to rehabilitate juvenile offenders into society by helping them to complete their studies or to find a job, thereby reducing the risk that they commit a crime in the future.” Then, respondents declaring that they would vote “yes” are asked a close-ended contingent valuation question, i. e. whether they and/or the members of their family would be willing to pay a bid amount €X as annual local income tax for the rehabilitation program. This two-part model for eliciting preferences identifies respondents with zero willingness to pay. The amounts chosen for the bid are (€ 50, € 70, € 100, € 180, € 250, € 350, € 500). The amounts are determined on the basis of two pre-tests for each region using the bid design approach by Cooper (1993) and are randomly assigned to respondents.

- iv. A debriefing question that asks why they were not willing to pay for the rehabilitation program.

3.2 Data Description

Table 1 provides definitions and descriptive statistics of the key variables used in the empirical analysis for respondents living in Veneto and in Sicily regions. The last column reports the p -values of the tests for equality of means (or proportions in the case of binary variables) for the reported variables in Veneto and Sicily.

Table 1: Descriptive statistics.

(Sample size) Variable	Definition	Veneto (513)		Sicily (514)		Difference	
		Mean	St. dev.	Mean	St. dev.	p -value	
Participation	= 1 if respondent votes “yes”	0.398	0.022	0.383	0.021	0.636	
<i>Socio-economic characteristics</i>							
Age	Age in years	42.943	13.449	41.846	13.493	0.192	
Female	= 1 if female	0.495	0.500	0.510	0.500	0.640	
Married	= 1 if married	0.653	0.476	0.644	0.479	0.761	
Family size	Family size	3.125	1.139	3.167	1.264	0.571	
Kids	= 1 if there are children aged 0–17	0.337	0.473	0.325	0.469	0.675	
Elderly	= 1 if there are adults aged > 63	0.220	0.415	0.144	0.351	0.001	***
No high school	= 1 if no high school diploma	0.474	0.500	0.358	0.480	0.000	***
High school	= 1 if with a high school diploma	0.388	0.488	0.446	0.498	0.061	
University	= 1 if with a bachelor degree	0.138	0.346	0.196	0.398	0.013	**

Em- ployed	= 1 if em- ployed	0.538	0.499	0.446	0.498	0.003	***
1 st income quintile	= 1 if 1st income quintile	0.175	0.381	0.228	0.420	0.037	**
2 nd income quintile	= 1 if 2nd income quintile	0.135	0.342	0.268	0.444	0.000	***
3 rd income quintile	= 1 if 3rd income quintile	0.207	0.405	0.195	0.396	0.629	
4 th income quintile	= 1 if 4th income quintile	0.232	0.423	0.163	0.370	0.006	***
5 th income quintile	= 1 if 5th income quintile	0.251	0.434	0.146	0.353	0.000	***
<i>Ideological inclinations</i>							
Left- wing	= 1 if left- oriented	0.246	0.431	0.228	0.420	0.498	
Centre	= 1 if centre- oriented	0.092	0.289	0.068	0.252	0.164	
Right- wing	= 1 if right- oriented	0.347	0.476	0.290	0.454	0.050	**
Not political	= 1 if no political interest	0.316	0.465	0.414	0.493	0.001	***
Reli- gious	= 1 if practic- ing a religion	0.661	0.474	0.665	0.472	0.877	
<i>Concern about crime risk</i>							
Victim of crime	= 1 if the victim of a crime	0.164	0.370	0.144	0.351	0.380	
Safe neigh- bour- hood	= 1 if neigh- bour- hood is safe	0.392	0.489	0.430	0.496	0.214	
Quite safe neigh- bour- hood	= 1 if neigh- bour- hood is quite safe	0.524	0.500	0.430	0.496	0.002	**
Unsafe neigh- bour- hood	= 1 if neigh- bour- hood is unsafe	0.084	0.277	0.140	0.347	0.004	***
No home security	= 1 if no home security means	0.296	0.457	0.395	0.489	0.001	***

Burglary concern	= 1 if concerned about burglary	0.248	0.432	0.154	0.361	0.000	***
Rape concern	= 1 if concerned about rape	0.302	0.460	0.340	0.474	0.188	
Homicide concern	= 1 if concerned about homicide	0.195	0.397	0.237	0.426	0.099	*
Juvenile crime concern	= 1 if concerned about juvenile crime	0.193	0.395	0.235	0.425	0.097	*
Other crime concern	= 1 if concerned about other crime	0.019	0.138	0.004	0.062	0.020	**
No concerned	= 1 if no concerned about crime	0.043	0.203	0.029	0.168	0.239	
<i>Macro variables at the provincial level</i>							
Property crime rate	Property crime rate	2,735.29	31.464	2,195.05	35.712	0.000	***
Violent crime rate	Violent crime rate	160.45	1.561	234.02	3.007	0.000	***
Other crime rate	Other crime rate	1,682.82	15.424	1,576.60	5.808	0.000	***
Immigration rate	Immigration rate	9.801	1.559	2.500	0.941	0.000	***

Notes: The last column reports the p -values of t-tests of equality of means or proportions. The macro variables are aggregated at the provincial level. Crime rates measure the number of crimes per 100,000 inhabitants by type of criminal offense reported to the police. The immigration rate is given by the ratio between the number of immigrants and the population in a given period of time multiplied by 1,000. **** = significant at the 1, 5, and 10 % level, respectively.

Respondents of the two regions are similar in terms of age (about 42), marital status, about 65 % of respondents are married, and average family size. The gender distribution is comparable across the two regions by sampling design. In Veneto there are significantly higher proportions of working individuals and households with an elderly person at home, compared to Sicily. The two samples differ in terms of years of education and household income distribution. Sicilian respondents are significantly more educated than Veneto respondents. About 20 % of Sicilian respondents have a university degree, compared to about 14 % of Veneto respondents. We ask about families' disposable income, grouped into income quintiles.⁹ Households of Veneto are significantly wealthier. The average monthly disposable income of households is 1,832 euro in Veneto and 1,550 euro in Sicily. The headcount of poor households is 32 % in Veneto versus 50 % in Sicily.

Because preferences of individuals over youth justice policies, such as incarceration or probation programs, may be related to ideological inclinations, we directly ask respondents their political orientation and religion. The political orientation of our sample reflects the election results in 2008, the year before the survey was carried out. In the Veneto sample, about 25 % declare left-wing orientation, about 35 % right-wing orientation, and

about 9 % a centre orientation. In the Sicily sample, about 23 % declare left-wing orientation, 29 % right-wing orientation, and about 7 % a centre orientation. In addition, about 32 % of Veneto respondents and about 41 % of Sicily respondents have no interest in political matters. Regarding the religion, in both regions respondents are mostly catholic (90 % in Veneto and 92 % in Sicily) and about 66 % of them declare to practice a religion.

Veneto and Sicily respondents have similar subjective perceptions of crime. Respondents of the two regions are more concerned about rape than burglary, murder, juvenile crime, and other crimes. About 4 % of Veneto respondents are not worried about crime, while this figure decreases to 3 % in Sicily. Veneto respondents and their relatives have more experience as victims of crime than Sicilians, about 16 % versus 14 %, although not statistically different. In addition, Veneto respondents reside more in safe or quite safe neighbourhoods than Sicilians, about 92 % versus 75 %. Even though Veneto respondents feel that they live in safer areas, they are more likely to fit home security equipment than Sicilians.

In addition, we account for community factors that might affect respondents' preferences for social inclusion policies such as the ratio of violent, property, and other crimes as well as for the immigration rate at the provincial level, which has been found to affect crime perception (Nunziata 2015; Montolio and Planells-Strus 2015).¹⁰ For instance, we might expect that the propensity to invest in social reintegration programs for juvenile offenders is substantial in those regions where social and economic problems are significant. For these reasons, unlike in many existing studies (Atkinson, Healey, and Mourato 2005; Cohen et al. 2004; Ludwig and Cook 2001; Soeiro and Teixeira 2013), we control among other variables for crime and immigration rates aggregated at the provincial level. From 2001 to 2009 the immigration rate increased substantially both in Veneto and in Sicily, although foreigners remained a small percentage of the Italian population. In 2009, foreigners accounted for 7 % of the whole Italian population. Over the period of interest, the proportion of foreign residents is significantly higher in Veneto than in Sicily, about 10 % versus 2.5 %. A detailed discussion of Italian crime rates is presented in Appendix A.

4 Estimation Strategy

We now describe the empirical models adopted for studying the factors affecting preferences for financing policies aiming at the social inclusion of juvenile offenders, and the willingness to pay for juvenile rehabilitation programs.

4.1 Participation to Juvenile Rehabilitation Programs

In order to evaluate the collective preferences for social inclusion policies and to compare different societies in terms of their propensity to be inclusive, as described in Postulates 1 and 2, we need to model the participation decision to support the policy. We estimate a probit model in which participation P in a referendum to finance juvenile rehabilitation programs is the dependent variable. We define an indicator variable $P_{irp} = 1$ if individual i from region r ($r = \text{Veneto, Sicily}$) living in province p votes "yes" to a referendum that would increase local income taxes to finance juvenile offender rehabilitation programs, and $P_{irp} = 0$ otherwise. The choice problem is described by the following latent variable specification

$$P_{irp}^* = \beta_r Z_{irp} + \gamma_r M_{rp} + \varepsilon_{irp}, \quad [6]$$

where P_{irp}^* is the net benefit an individual receives from the implementation of the rehabilitation program. Individuals will vote "yes" to the referendum if the expected net benefits of doing so are positive.

The probability that the individual votes "yes" to the referendum is

$$\text{prob} [P_{irp} = 1] = \text{prob} [\beta_r Z_{irp} + \gamma_r M_{rp} + \varepsilon_{irp} > 0] = \Phi [\beta_r Z_{irp} + \gamma_r M_{rp}], \quad [7]$$

where $\Phi []$ is the standard normal *cdf*. The model specification of eq. 7 follows the theoretical framework presented in Section 2.1. The vector Z_{irp} refers to a set of household socio-economic characteristics modelling the vector z_i of the adult utility function. The set of socio-economic variables comprises age, gender, marital status, education, family structure, working status, presence of children aged 0–17, household income, political, and religious orientations. It also includes variables describing the respondents' concern about crime risk, which can be considered as proxies of the subjective probability of being harmed by criminal behaviour. These variables are the perceived level of safety in the neighbourhood where the respondent lives, whether she is worried about crime and what type of crimes concern the respondent most, whether the respondent has adopted security measures at home, and any experience as a victim.¹¹

The vector M_{rp} refers to a set of variables aggregated at the provincial level that may affect the respondent's propensity for social inclusion. The vector includes the immigration rate and the proportions of property and violent crimes out of the total number of crimes. These variables serve as a proxy measure of the objective probability of being a victim of a crime. We also add an independent and identically normally distributed error term ε_{irp} for the two regions clustered at the provincial level.

We test for differences in the determinants of preferences for social inclusion policies between Sicily and Veneto by pooling the two sub-samples and estimating an amendment of eq. 6 in which we add the interaction terms between a dichotomous variable d_{ir} equal to one if individual i lives in Veneto and the vectors of covariates Z_{irp} , and M_{rp} . The estimated equation has the following functional form

$$P_{irp}^* = [\beta_S + d_{ir}(\beta_V - \beta_S)]Z_{irp} + [\gamma_S + d_{ir}(\gamma_V - \gamma_S)]M_{rp} + \varepsilon_{irp}, \quad [8]$$

where subscript V stands for Veneto and subscript S stands for Sicily, and the expressions in square brackets measure the difference in the coefficients of the vectors of covariates when the respondent is from Veneto as compared to Sicily.

We also estimate eq. 6 by replacing the vector M_{rp} with provincial fixed effects to account for unobserved heterogeneity at the provincial level. However, because of potential omitted variable bias, we recognize that our results should be interpreted as correlations and not given a causal interpretation. The test for Hypotheses 1 and 2 requires the estimation of the willingness to pay in support to the program as explained below.

4.2 Willingness to Pay for Juvenile Rehabilitation Programs

The amount that individuals are willing to pay for juvenile rehabilitation programs is estimated by applying the spike model (Kjörström 1997). The spike approach is particularly useful when a large proportion of the sample decides not to buy the good offered in the contingent market. In such cases, standard parametric models based on the normal, logistic or Weibull distribution are likely to predict a biased willingness to pay because they assume that all individuals have a positive WTP (Kjörström 1997).

The spike model consists of two stages. In the first stage, we model the probability that the respondent would be willing to participate in the program by voting "yes" to a referendum as described in the previous section. In the second stage, we estimate how much respondents are willingness to pay. In the second stage, the researcher does not observe WTP directly. At best, one can infer that the respondent's WTP amount is greater or less than the bid value, and can form broad intervals around the respondent's WTP. Formally, let WTP^* be the latent WTP, and let WTP_{irp} be individual i 's response to the suggested bid value B_{irp}

$$WTP_{irp} = \begin{cases} 1 & \text{if } WTP_{irp}^* > B_{irp}, \\ 0 & \text{if } WTP_{irp}^* \leq B_{irp}, \end{cases} \quad [9]$$

where $WTP_{irp} = 1$ means that the individual's response to the stated amount B_{irp} is a "yes" and $WTP_{irp} = 0$ means that the response is a "no." Considering the two stages, the possible combinations of answers are (yes, yes), (yes, no), (no, no). Because we observe discrete outcomes, we model the probabilities of "yes" and "no" responses with the following log-likelihood function

$$\ln L = \sum_{irp}^K \{P_{irp} WTP_{irp} \ln [1 - G(B_{irp})] + P_{irp} (1 - WTP_{irp}) \ln [G(B_{irp}) - G(0)] + (1 - P_{irp}) \ln [1 - G(0)]\}, \quad [10]$$

where K is the sample size. P_{irp} is equal to one if individual i from region r living in province p votes "yes" to the referendum to finance juvenile offender rehabilitation programs, zero otherwise, as described in the previous section. $G(B_{irp})$ is the probability that individual i 's WTP is not greater than the bid value B_{irp} .

We follow this two-stage framework because it allows us to account for nonparticipation in the contingent valuation of juvenile rehabilitation programs and, therefore, to avoid potential biases in the estimation of the willingness to pay.

5 Empirical Results

We now present some empirical evidence regarding Postulates 1 and 2 on the estimation of collective preferences for social inclusion, and Hypotheses 1 and 2 on the altruistic motive underlying the choice of both families with and without children to support the shared goal of reintegrating juvenile offenders.

5.1 Preferences for Social Inclusion Policies of Juvenile Offenders (Postulates 1 and 2)

In both regions, we find that about 40 % of the respondents would vote “yes” to a hypothetical referendum promoting the increase of local income taxes to finance rehabilitation programs for juvenile offenders (Table 1). The remaining 60 % of respondents would vote “no” to the referendum. Among the reasons for not paying, about 36 % of the pooled sample do not want to pay additional taxes as if the program was not considered worth paying extra for (Brouwer and Martín-Ortega 2012). About 28 % cannot afford to pay additional taxes, 12 % are not willing to pay for juvenile rehabilitation programs, and 23 % of the respondents are not willing to pay for other reasons. The reasons for not participating are in general comparable between Veneto and Sicily. Considering that both regions have a similar propensity to participate in the rehabilitation program and are also similar in terms of their explicit refusal of the program (12 %), then in line with Postulates 1 and 2, we conclude that Veneto and Sicily are comparable in the propensity towards the social inclusion of juvenile offenders. The two regions may differ substantially, though, in terms of the factors affecting the propensity for social inclusion.

Table 2 shows the marginal effects of a set of probit models on the determinants of social inclusion for an average respondent living in Veneto and in Sicily.¹² The dependent variable is a dichotomous variable equal to one if the respondent votes “yes” to the referendum for financing juvenile rehabilitation programs and to zero otherwise. We specify three models per region, differing in the set of variables used as controls. Models (1) and (3) refer to the Veneto sample, and models (4) and (6) refer to the Sicily sample. In models (1) and (4), we control for socio-economic characteristics and ideological inclinations of the respondent. In models (2) and (5), we add variables related to the respondent’s concern about crime risk, which proxy the subjective probability of being victim of a crime, and variables that control for crime and immigration rates aggregated at the provincial level as indicators of the objective probability of being damaged by an offense.

Table 2: Determinants of preferences for social inclusion policies – marginal effects.

(Sample size)	Dependent variable: 1 = respondent votes “yes” to finance juvenile offender rehabilitation programs						Differ- ence (2) vs (4)
	Veneto (513)			Sicily (514)			
	(1)	(2)	(3)	(4)	(5)	(6)	
<i>Socio-economic characteristics</i>							
Age	-0.001 (0.002)	-0.000 (0.002)	-0.000 (0.002)	-0.004 (0.003)	-0.005 (0.003)	-0.005 (0.004)	n.s.
Female	-0.061 (0.042)	-0.084** (0.041)	-0.084** (0.041)	-0.016 (0.030)	-0.020 (0.026)	-0.022 (0.027)	n.s.
Married	0.023 (0.040)	0.007 (0.042)	0.005 (0.042)	0.161** (0.078)	0.165* (0.085)	0.165* (0.086)	n.s.
Family size	-0.041** (0.018)	-0.036** (0.017)	-0.035** (0.017)	0.060*** (0.016)	0.064*** (0.016)	0.064*** (0.015)	***
Kids	0.203*** (0.054)	0.216*** (0.052)	0.215*** (0.052)	-0.094 (0.072)	-0.085 (0.075)	-0.088 (0.073)	***
Elderly	0.031 (0.036)	0.038 (0.034)	0.041 (0.033)	0.105** (0.045)	0.123** (0.048)	0.126*** (0.048)	n.s.
No high school	-0.072 (0.059)	-0.074 (0.076)	-0.071 (0.076)	-0.133* (0.076)	-0.114 (0.077)	-0.112 (0.081)	n.s.
High school	0.020 (0.037)	0.032 (0.043)	0.032 (0.044)	-0.178* (0.094)	-0.181** (0.087)	-0.184** (0.087)	n.s.
Employed	-0.029 (0.052)	-0.023 (0.054)	-0.018 (0.053)	0.029 (0.047)	0.036 (0.048)	0.038 (0.048)	n.s.
1 st income quintile	-0.042 (0.060)	-0.054 (0.070)	-0.053 (0.071)	0.153*** (0.052)	0.139*** (0.051)	0.125** (0.056)	*
2 nd income quintile	-0.152** (0.077)	-0.154* (0.086)	-0.152* (0.087)	0.160** (0.063)	0.147** (0.057)	0.139** (0.060)	**
3 rd income quintile	-0.064 (0.039)	-0.061 (0.041)	-0.064 (0.041)	0.200*** (0.043)	0.157*** (0.047)	0.135*** (0.051)	**
4 th income quintile	-0.082 (0.064)	-0.071 (0.070)	-0.073 (0.071)	0.187*** (0.057)	0.175*** (0.058)	0.156** (0.063)	*
<i>Ideological inclinations</i>							
Left-wing	0.129 (0.089)	0.157* (0.093)	0.158* (0.092)	0.075 (0.080)	0.082 (0.073)	0.077 (0.074)	n.s.
Centre	0.061 (0.085)	0.089 (0.084)	0.086 (0.086)	-0.009 (0.069)	-0.007 (0.070)	-0.009 (0.073)	n.s.
Not political	0.005	0.019	0.018	-0.105*	-0.105*	-0.109*	n.s.

	(0.056)	(0.063)	(0.063)	(0.056)	(0.062)	(0.063)	
Religious	0.023	0.026	0.027	0.103***	0.091*	0.094*	n.s.
	(0.060)	(0.065)	(0.065)	(0.038)	(0.047)	(0.049)	
<i>Concern about crime risk</i>							
Victim of crime		-0.012	-0.018		0.017	0.014	n.s.
		(0.053)	(0.053)		(0.050)	(0.048)	
Safe neighbourhood		0.075	0.082		0.029	0.025	n.s.
		(0.074)	(0.078)		(0.083)	(0.083)	
Quite safe neighborhood		0.105***	0.104***		0.064	0.059	n.s.
		(0.033)	(0.035)		(0.099)	(0.098)	
No home security		0.001	-0.000		-0.033	-0.033	n.s.
		(0.030)	(0.030)		(0.053)	(0.055)	
Burglary concern		0.268**	0.266**		0.161	0.147	n.s.
		(0.106)	(0.107)		(0.232)	(0.233)	
Rape concern		0.308***	0.310***		0.213	0.206	n.s.
		(0.102)	(0.102)		(0.163)	(0.164)	
Homicide concern		0.284**	0.285**		0.281**	0.273**	n.s.
		(0.129)	(0.130)		(0.136)	(0.136)	
Juvenile concern		0.221*	0.221*		0.269	0.262	n.s.
		(0.124)	(0.124)		(0.173)	(0.172)	
Other crime concern		0.099	0.110		0.445	0.459	n.s.
		(0.190)	(0.191)		(0.291)	(0.282)	
<i>Macro variables at the provincial level</i>							
Property crime rate		-0.000			-0.000		n.s.
		(0.000)			(0.000)		
Violent crime rate		-0.009			0.001**		*
		(0.006)			(0.001)		
Other crime rate		0.001			-0.000		n.s.
		(0.001)			(0.000)		
Immigration rate		0.114			0.058***		n.s.
		(0.082)			(0.007)		
Province fixed effects	No	No	Yes	No	No	Yes	
Log likelihood	-329.411	-322.526	-321.762	-316.194	-309.019	-308.387	

Notes: Robust standard errors clustered at the provincial level are in parenthesis. The “Difference” column shows the significance level of the difference between determinants for Veneto and Sicily respondents obtained by pooling the two samples. **** = significant at the 1%, 5%, and 10% level, respectively; n.s. = not significant.

However, these specifications do not account for unobserved heterogeneity at the provincial level. Our dependent variable is likely to be affected by omitted variables such as the quality of local institutions, the rate of juvenile unemployment, the influence of the church or by social capital, in particular by the level of trust on how the government spends public funding. We address these concerns by estimating eq. 6 with provincial fixed effects (models (3) and (6)). Results are robust to different model specifications. It should be kept in mind that our results should still be interpreted as correlations and not as causal effects. In addition, given the relatively small number of cluster units (16 provinces) the p -values could be biased downwards. For robustness purposes, Table 4 in Appendix B reports p -values of models (2), (3), (5), and (6) using the score wild cluster bootstrap procedure for nonlinear models (Kline and Santos 2012). We first present the results for Veneto, and then for Sicily.

Veneto. Socio-economic characteristics are in general not significant factors affecting preferences for policies aiming at the social inclusion of juvenile offenders, with the exception of gender and family structure (Table 2). Female respondents are significantly less likely to vote “yes” in a referendum to finance juvenile rehabilitation programs. Family size is significantly and negatively associated with the probability to support juvenile rehabilitation programs. However, the effect is insignificant when we estimate wild cluster standard errors (Table 4). Further, respondents with children are about 22 percentage points more likely to vote “yes” than those without children. A remarkable result, holding for all model specifications, is that in Veneto preferences for social inclusion policies are not significantly associated with household income. Also political orientations and religiosity do not affect preferences for social inclusion policies.

Variables capturing the subjective perception of crime are generally significant. Respondents who live in quite a safe area are significantly more likely to vote “yes” to the referendum than those living in an unsafe area. In addition, the respondent’s concern about crime significantly increases the probability of voting “yes” to the referendum for juvenile rehabilitation programs. For instance, the propensity for social inclusion is 31 percentage points higher if respondents are more concerned about rape than any other crime. However, having been the victim of a crime and/or having relatives that experienced a criminal assault in the past does not

significantly affect the propensity for social inclusion. The variables related to the immigration rate and crime rates are not significant factors affecting the propensity for social inclusion.

Sicily. Comparison of model (2) with model (4) of Table 2 highlights remarkable regional dissimilarities in the qualitative importance of the factors driving the propensity for the social inclusion of juvenile offenders. Unlike the results for Veneto respondents, the socio-economic characteristics of Sicilian respondents are in general significant determinants. Respondents living in large families, and respondents living in families with elderly people are more likely to vote “yes” to the proposed referendum. The presence of children is not a significant factor, while the effect of family income on the demand for juvenile rehabilitation programs is large and significant.

Furthermore, as in Veneto, the ideological inclinations are not significant determinants except for religiosity and no political interest (models (4) and (6)). The probability of voting in favour of the referendum is 9 percentage points higher if respondents are practicing members of a Church than if they are not, and about 11 percentage points lower if respondents do not have any political interest. Unlike the results for Veneto, variables capturing the respondent’s concern about crime risk are generally not significant drivers of preferences for social inclusion policies. An increase in the rate of foreign residents significantly increases the probability of voting “yes”. In particular, a 10 per cent increase in the immigration rate would increase the probability of voting “yes” in the referendum by about 6 percentage points.

Comparing the Determinants of the Participation Choice in Veneto and Sicily. To test whether there are significant differences in the determinants of preferences for social inclusion policies, we pool the two samples of Veneto and Sicily and estimate eq. 8 including interaction terms between the dichotomous variable Veneto and each independent variable of the model. The last column of Table 2 shows the significance level of the difference between determinants for Veneto respondents as compared to Sicily respondents by comparing columns (2) and (5). Similar results are found when comparing columns (3) and (6). The significance levels are obtained by applying Ai and Norton (2003) and Greene (2010) procedure for treating interaction terms within nonlinear models.

The estimated results show the presence of relevant differences in the determinants of preferences for social inclusion policies between the two regions. Socio-economic factors in general affect the propensity for social inclusion of Sicilians but not of respondents from Veneto. Whereas, having children positively affects the propensity for social inclusion in Veneto but not in Sicily. The effects of ideological inclinations as well as of the concern about crime risk are not statistically different between the two regions. On the other hand, both samples are strongly affected by the objective probability of being harmed by a crime. However, when the macro variables are taken individually, only Sicilian respondents are affected by violent crime rates and immigration rates. Respondents living in areas with higher crime rates have a higher propensity to socially include juvenile offenders. In addition, a higher immigration rate significantly increases the propensity for social inclusion in Sicily but not in Veneto. In general, the difference between Veneto and Sicily of both subjective concerns about crime risk and objective measures of crime rates is not statistically significant, thus lending support to an altruistic rather than a self-interested underlying motive.

5.2 Social Inclusion and Altruism (Hypothesis 1 and 2): Willingness to pay for Juvenile Rehabilitation Programs

We test Hypothesis 1 and Hypothesis 2 described in Section 2.2 to investigate the relative importance of altruism as a determinant of preferences for social inclusion policies. Table 3 shows mean willingness to pay estimates for Veneto and Sicily. Intra-society comparisons (Hypothesis 1) show that in Veneto households with children ($WTP_{c>0} = € 82$) have a significantly higher mean WTP than childless households ($WTP_{c=0} = € 47$). In contrast, in Sicily mean WTP of households with children (€ 84) is not statistically different than mean WTP of households without children (€ 73). Based on Hypothesis 1, these results imply that in Veneto altruism may play a more important role in explaining preferences for social inclusion policies in households with children than in households without children (Case 1 of Hypothesis 1). In Sicily, non-parental altruism appears to be a significant underlying motive affecting preferences for policies aiming at the social inclusion of juvenile offenders in households without children, and it is larger than both parental and non-parental altruism in households with children (Case 2 of Hypothesis 1).

Table 3: Willingness to pay estimates (euros) for Juvenile rehabilitation programs.

<i>Veneto</i>	Total	Households with children ($WTP_{c>0}$)	without children ($WTP_{c=0}$)	Test statistic $\frac{WTP_{c>0} \neq WTP_{c=0}}$	Wald test

Mean	59.096		82.398		47.501		yes	6.198
S.E.	6.045		12.419		6.499			
[95 % c.i.]	[47.248	70.945]	[58.058	106.739]	[34.763	60.239]		
Sample size	513		173		340			
<i>Sicily</i>								
Mean	76.458		83.954		72.618		no	0.390
S.E.	8.344		15.219		9.903			
[95 % c.i.]	[60.105	92.811]	[54.126	113.782]	[53.208	92.028]		
Sample size	514		167		347			
Test statistic: WTP	yes		no		yes			
Veneto \neq Sicily?								
Wald test	2.839		0.006		4.496			

¹ **Notes:** Willingness to pay (WTP) estimates for households with and without children in Veneto and in Sicily. c.i.: confidence interval.

Inter-society comparisons (Hypothesis 2) reveal that Sicilians are significantly willing to pay more than Veneto respondents for juvenile rehabilitation programs, € 76 versus € 59, respectively. Furthermore, the mean WTP of households with children is not statistically different between the two regions (€ 82 in Veneto and € 84 in Sicily), while households without children in Veneto have a significantly lower mean WTP than Sicilian households without children (€ 47 and € 73 respectively). Based on Hypothesis 2 and because the two regions have comparable preferences for social inclusion policies, these results imply that Sicilian households may be more altruistic towards juvenile offenders than Veneto households. On the basis of this evidence, we maintain that the goal of social inclusion is more equally shared across households with and without children in Sicily rather than Veneto.

6 Discussion and Conclusions

Social inclusion is a multidimensional phenomenon that involves social, psychological, political, and economic aspects of individuals' life (Atkinson et al. 2002; Chakravarty and D'Ambrosio 2006). In a period of economic crisis and scarce public resources that may put the sustainability of juvenile justice systems at risk, it is important for policymakers to know the value of investments for social inclusion, such as rehabilitation programs for juvenile offenders, and the factors affecting their preferences. This information would allow policymakers to allocate public resources across generations efficiently. However, little is known about the factors affecting households' preferences for policies aiming at the social inclusion of juvenile offenders.

Our study explores household preferences for a policy aiming at the social inclusion of juvenile offenders by using data from a stated preference survey on juvenile rehabilitation in Italy and investigates whether families without children are as prone to leave a child behind as families with children. We develop a theoretical model that allows us to explore potential underlying motives such as parental and non-parental altruism that could explain differences in preferences for social inclusion policies, and in particular, juvenile rehabilitation programs. Our research design takes advantage of the contrasting socio-cultural and economic backgrounds of two regions in the North and South of Italy, under the same criminal justice system, to gauge whether there are differences in the factors affecting preferences for social inclusion as they can be deduced from our case study about juvenile rehabilitation programs.

We find that both Veneto and Sicily are equally socially inclusive, though there are significant differences in the factors affecting preferences for rehabilitation programs for juvenile offenders between the two regions. We show that in Sicily socio-economic characteristics and the rate of foreign residents are significant determinants of the demand of juvenile rehabilitation programs, while in Veneto the subjective concern about crime risk is an important factor positively affecting the propensity for financing the rehabilitation programs for juvenile offenders. The income distribution of the Veneto population is not a significant factor, as opposed to Sicily where income plays a significant role. In general, the difference between Veneto and Sicily of both subjective concerns about crime risk and objective measures of crime rates is not statistically significant, thus lending support to an altruistic rather than a self-interested underlying motive.

Interestingly, our study shows that the mean WTP of respondents living in Sicily is higher than the mean WTP of respondents living in Veneto. On average, Sicilian households are willing to pay about 30 % more than Veneto respondents (€ 76 versus € 59) for juvenile rehabilitation programs. Considering that in Sicily, among other factors, the non-parental motive appears significantly more important than in Veneto, and that the WTP is not significantly different between households with and without children, we conclude that in Sicily the socially inclusive goal of not leaving children behind is more equally shared across households with and without children than in Veneto.

Another relevant contribution to the existing literature is the estimation of the internal rate of social returns stemming from the investment in rehabilitation programs for juvenile offenders by relating benefits and costs in the two regions of interest. Public awareness of the size of these social returns should help policymakers take informed decisions about juvenile justice policies. Based on the household's WTP estimates presented in Table 4 and the total number of households in Veneto and Sicily in 2009, the annual benefits that society derives from juvenile rehabilitation programs are about 116 million Euros in Veneto and 148 million Euros in Sicily. Comparing these estimated benefits with the total costs of the juvenile justice system, which is mainly based on rehabilitation programs, of 16 million Euros in Veneto and of 107 million Euros in Sicily (Ciappi et al. 2015), where the size of the juvenile offender population is about four times as in Veneto, we obtain a benefit/cost ratio of 7.25 in Veneto and 1.4 in Sicily. These figures show that investments in rehabilitation programs are highly attractive. This difference shows that interregional differences, presumably also across European States, can be substantial. This evidence, if gathered for all European member states, should in principle guide the socially efficient allocation of resources promoting social inclusion programs in the member states. Public resources fostering a more inclusive society are often not allocated from public funds collected through the fiscal system, especially during a recession. The revealed willingness to pay may be captured, at least in part, through the solidarity channel by fostering innovative social institutions, such as community foundations, designed to pool donations into coordinated and effective programs for social inclusion.

It is important to highlight that the findings of the paper should be interpreted as associations and not as causal relationships. We cannot exclude that other factors other than altruism drive the difference in WTP between the two regions and between families with and without children. However, given the lack of research on the determinants of preferences for social inclusion, the correlations we find should be considered as a first step for further research, and in the future a more refined approach using experimental data should be implemented.

Notes

¹In 2009, the total unemployment rate in Sicily was 13.9 % and the youth unemployment rate was 38.5 %, while in Veneto the corresponding figures were 4.8 % and 14.40 %, respectively. The high youth unemployment rate in Sicily is exacerbated by a higher school dropout rate compared to Veneto. In 2009, Veneto registered a high school dropout rate of 4.9 %, while in Sicily the high school dropout rate was among the highest in all Italian regions, 11.4 % (ISTAT, <http://www.istat.it/it/archivio/16777>).

²See for example, Araña and León (2002), Becker (1974, 1981), Dickie and Gerking (2007), Jones-Lee (1991, 1992), and Pollak (1988) for studies on parental and non-parental altruism.

³In our set-up, we assume that the closer is the relationship with the respondent, the higher the contribution to adult utility, $\frac{\partial U_i^a}{\partial u_i^c} > \frac{\partial U_j^a}{\partial u_j^c}$ (Bernheim and Stark 1988). We also exclude the possibility that the parameters may be equal to zero because it is reasonable to assume that adults have some degree of altruism towards children.

⁴Other methods are available to elicit the willingness to pay such as the hedonic pricing method and the life satisfaction approach (see for example, Manning, Fleming, and Ambrey 2015).

⁵To refine information about WTP, it is also possible to ask a dichotomous choice follow-up question, approach called "double-bounded" (Hanemann, Loomis, and Kanninen 1991). Over the last decade researchers have examined the potential of double-bounded models for undesirable response effects (Bateman et al. 2002; Mitchell and Carson 1989). To avoid these effects, we focus on the "single-bounded" format (Gerking, Dickie, and Veronesi 2014; Adamowicz et al. 2014).

⁶This paper has been supported by the grant "Joint Research Projects 2005" from Comunità San Benedetto of the Istituto Don Calabria developed in collaboration with the Italian Ministry of Justice, Department of Juvenile Justice.

⁷Telephone interviews were conducted by Coesis Research, an Italian service research agency specialized in qualitative and quantitative research (<http://www.coesisresearch.it>).

⁸Respondents living in Veneto were informed that in their region the total number of crimes involving juvenile offenders was 2,400, of which 66 % were property crimes, 18 % violent crimes, 6 % drug-related crimes, and 10 % other crimes. Respondents living in Sicily were informed that in their region the total number of crimes involving juvenile offenders was 4,400, of which 40 % were property crimes, 24 % violent crimes, 24 % drug-related crimes, and 12 % other crimes. These figures refer to the year 2006 and were provided by ISTAT in ISTAT "Giustizia e sicurezza" (<http://dati.istat.it>).

⁹We choose the fifth (wealthiest) income quintile and university degree as the reference categories for income and education, respectively.

¹⁰Crime rates measure the number of crimes per 100,000 inhabitants by type of criminal offense reported to the police. The immigration rate is given by the ratio between the number of immigrants and the population in a given period of time multiplied by 1,000. Source: ISTAT, “Noi Italia – Stranieri – Popolazione residente straniera” (<http://noi-italia.istat.it/>) and ISTAT “Giustizia e sicurezza” (<http://dati.istat.it>).

¹¹For the sake of brevity, the tables list the variable capturing victim experience among the variables related to concerns about crime risk.

¹²Coefficient estimates are available from the authors upon request.

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Appendix A. Crime Rates in Veneto and Sicily Compared to Italy

This section presents statistics at the regional and national levels on crime rates in Italy, Veneto and Sicily.¹³ Figure 1 shows the number of crimes per 100,000 inhabitants by type of criminal offense reported to the police. The statistics refer to crimes involving either adults or juvenile offenders. Both are presented because in Italy about 80 % of adult offenders were formerly young offenders and because adult crime affects the risk perception that young people may be either affected by, or involved in, anti-social activities.

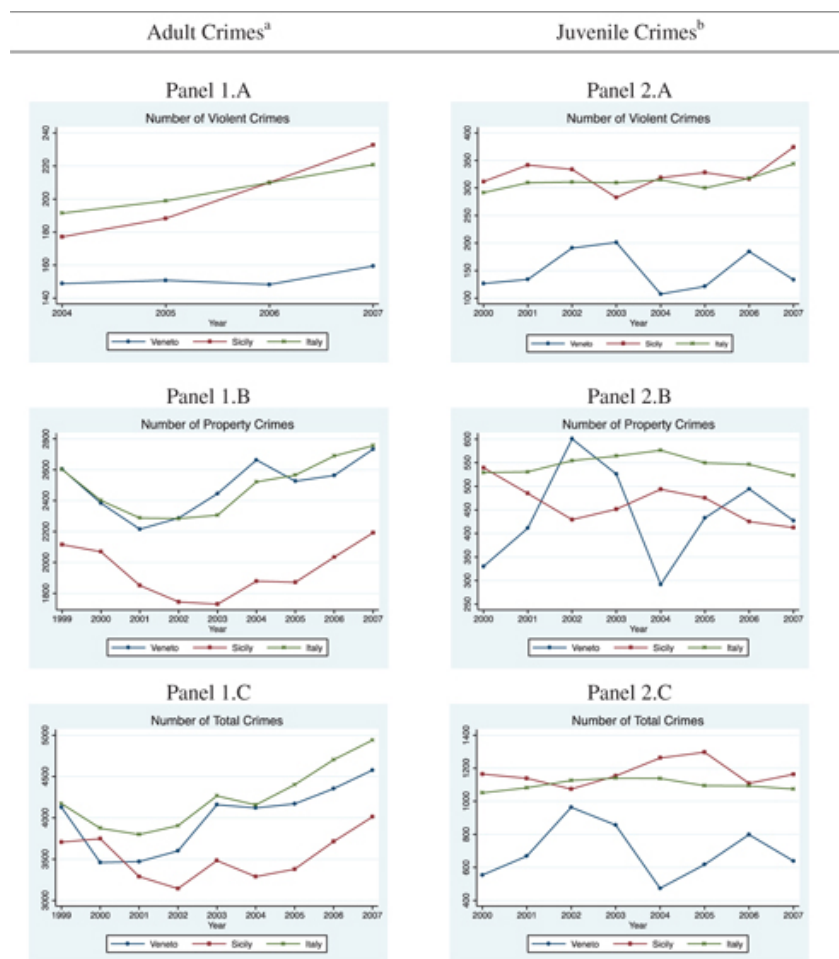


Figure 1: Number of adult and juvenile crimes.

Panel 1.A shows that the adult violent crime rate increased both at the regional and at the national level from 2004 to 2007. In Veneto, the violent crime rate increased by about 7 % from 2004 to 2007, while in Sicily by 31 % compared to an increase at the national level by 15 %. The number of violent crimes is constantly higher

in Sicily than in Veneto. Panel 1.B shows that the rate of adult property crimes increased in both regions, by 5 % in Veneto and 3.6 % in Sicily from 1999 to 2007. In sharp contrast, during these years, the property crime rate was constantly higher in Veneto than Sicily. In the same period, Veneto reported a higher total crimes rate than in Sicily (Panel 1.C), though slightly lower than the national average.

Panels 2.A–2.C show the number of crimes reported to the police involving children aged 10–17 per 100,000 children. Panel 2.A shows that the number of juvenile violent crimes increased by 5.5 % in Veneto from 2000 to 2007, while in Sicily the increase was 20 %. With regard to the juvenile property crime rate (Panel 2.B), data show sizable fluctuations from year to year in Veneto, whereas the figures show a considerable decline in the property crime rate in Sicily. The property crime rate increased by about 30 % in Veneto from 2000 to 2007, while it decreased by 24 % in Sicily. Overall, juvenile offenses increased by 15.4 % in Veneto, fluctuating considerably, over the eight years, while remained almost unchanged in Sicily (Panel 2.C). The number of juvenile crimes was considerably and constantly lower in Veneto as compared to Sicily.

Appendix B

Table 4: Preferences for social inclusion policies – score wild bootstrap p -values.

Dependent variable: 1 = respondent votes “yes” to finance juvenile rehabilitation programs (Sample size)	Veneto (513)		Sicily (514)	
	(1)	(2)	(3)	(4)
<i>Socio-economic characteristics</i>				
Age	–0.000 (0.898)	–0.000 (0.992)	–0.005 (0.264)	–0.005 (0.275)
Female	–0.084* (0.070)	–0.084* (0.070)	–0.020 (0.498)	–0.022 (0.486)
Married	0.007 (0.820)	0.005 (0.836)	0.165 (0.205)	0.165 (0.205)
Family size	–0.036 (0.117)	–0.035 (0.117)	0.064** (0.014)	0.064** (0.014)
Kids	0.216** (0.023)	0.215** (0.023)	–0.085 (0.428)	–0.088 (0.416)
Elderly	0.038 (0.242)	0.041 (0.211)	0.123* (0.092)	0.126* (0.092)
No high school	–0.074 (0.398)	–0.071 (0.414)	–0.114 (0.279)	–0.112 (0.300)
High school	0.032 (0.539)	0.032 (0.523)	–0.181 (0.201)	–0.184 (0.209)
Employed	–0.023 (0.711)	–0.018 (0.773)	0.036 (0.518)	0.038 (0.502)
1 st income quintile	–0.054 (0.445)	–0.053 (0.461)	0.139** (0.049)	0.125* (0.088)
2 nd income quintile	–0.154 (0.117)	–0.152 (0.117)	0.147* (0.061)	0.139* (0.080)
3 rd income quintile	–0.061 (0.164)	–0.064 (0.164)	0.157* (0.096)	0.135 (0.147)
4 th income quintile	–0.071 (0.414)	–0.073 (0.414)	0.175* (0.080)	0.156 (0.119)
<i>Ideological inclinations</i>				
Left-wing	0.157 (0.180)	0.158 (0.180)	0.082 (0.365)	0.077 (0.377)
Centre	0.089 (0.461)	0.086 (0.477)	–0.007 (0.861)	–0.009 (0.873)
Not political	0.019 (0.680)	0.018 (0.695)	–0.105 (0.107)	–0.109 (0.104)
Religious	0.026 (0.695)	0.027 (0.711)	0.091 (0.197)	0.094 (0.193)
<i>Concern about crime risk</i>				
Victim of crime	–0.012 (0.898)	–0.018 (0.820)	0.017 (0.721)	0.014 (0.772)
Safe neighbourhood	0.075	0.082	0.029	0.025

	(0.430)	(0.398)	(0.717)	(0.752)
Quite safe neighbourhood	0.105***	0.104***	0.064	0.059
	(0.008)	(0.008)	(0.498)	(0.498)
No home security	0.001	-0.000	-0.033	-0.033
	(0.945)	(0.992)	(0.623)	(0.646)
Burglary concern	0.268**	0.266**	0.161	0.147
	(0.039)	(0.039)	(0.494)	(0.541)
Rape concern	0.308**	0.310**	0.213	0.206
	(0.039)	(0.023)	(0.193)	(0.221)
Homicide concern	0.284*	0.285*	0.281	0.273
	(0.090)	(0.070)	(0.131)	(0.131)
Juvenile concern	0.221	0.221	0.269	0.262
	(0.164)	(0.164)	(0.162)	(0.174)
Other crime concern	0.099	0.110	0.445	0.459
	(0.742)	(0.727)	(0.291)	(0.951)
<i>Macro variables at provincial level</i>				
Property crime rate	-0.000		-0.000	
	(0.758)		(0.225)	
Violent crime rate	-0.009		0.001	
	(0.555)		(0.115)	
Other crime rate	0.001		-0.000	
	(0.617)		(0.658)	
Immigration rate	0.114		0.058**	
	(0.539)		(0.022)	
Province fixed effects	No	Yes	No	Yes
Log likelihood	-322.526	-321.762	-309.019	-308.387

Notes: p -values estimated by score wild bootstrap procedure for nonlinear models (Klein and Santos, 2012) are in parenthesis. *****, ***, **, * significant at the 1%, 5%, and 10% level, respectively.