# Cultural Transmission of Work-Welfare Attitudes and the Intergenerational Correlation in Welfare Receipt<sup>\*</sup>

Juan D. Barón Australian National University Deborah A. Cobb-Clark<sup> $\dagger$ </sup>

Australian National University and Institute for the Study of Labor (IZA)

### Nisvan Erkal

University of Melbourne

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#### Abstract

This paper considers the potential for the cultural transmission of attitudes toward work, welfare, and individual responsibility to explain the intergenerational correlation in welfare receipt. Specifically, we examine whether mothers and their 18-year-old children share similar attitudes towards social benefits and social inequality as well as whether these attitudes differ by patterns of welfare receipt. We find evidence in support of the cultural transmission of work-welfare attitudes from mothers to children. Young people are significantly more likely to support the public-provision of generous unemployment benefits and believe that social inequality is driven by factors outside the individual's control as their mothers' support for these views increases. Youths' work-welfare attitudes are also related to the welfare histories of their families, but not to the welfare experiences of other young people in their neighborhoods.

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<sup>&</sup>lt;sup>†</sup>All correspondence to Deborah Cobb-Clark, IZA, Schaumburg-Lippe-Str. 5-9, 53113 Bonn Germany. Phone: (49)228-3894-0. Fax: (49)228-3894-519. Email: deborah.cobb-clark@anu.edu.au.

# 1 Introduction

Social assistance programs affect individual and household behavior by altering the economic incentives to engage in certain labor market activities (e.g., employment or job search), pursue educational or training opportunities, and adopt particular family structures. Welfare may also influence behavior by changing the attitudes or preferences of welfare recipients. This possibility has led to concerns that the welfare system itself may produce a culture of dependence that results in welfare dependency being passed from one generation to the next. In particular, the concern is that growing up in families or in neighborhoods heavily reliant on social assistance alters children's preferences by weakening their work ethic and reducing the stigma associated with welfare receipt. Alternatively, exposure to welfare as a child may reduce the information costs associated with accessing the social assistance system. This welfare culture model has its antecedents in theories of poverty cultures from the 1960s and attributes welfare dependency to the values and attitudes that children learn from their parents and neighbors (see Duncan et al. 1988; Patterson 1986; Corcoran 1995; Gottschalk 2005; Bartholomae et al. 2004). As such, the welfare culture model represents a form of cultural transmission in which preferences, beliefs, and norms of behavior develop through social interactions both across and within generations.<sup>1</sup>

Although a vast literature documents that welfare receipt is correlated across generations,<sup>2</sup> this is not in itself evidence that parents' welfare receipt causes their children to have a higher probability of accessing the welfare system. Rather this correlation could stem from a correlation in the underlying social, economic, psychological, or geographic factors that lead parents and their children to have similar propensities to be poor —and therefore to need social assistance. There is a large literature addressing this issue. Identification of the causal effect of parental welfare receipt is generally achieved through a combination of exclusion restrictions, an intergenerational ordering

<sup>&</sup>lt;sup>1</sup>Bisin and Verdier (2008) discuss the process of cultural transmission.

 $<sup>^{2}</sup>$ See for example, Duncan et al. (1988), Antel (1992), Moffitt (1992), Gottschalk (1990, 1992, 1996), Borjas and Sueyoshi (1997), Pepper (2000), Beaulieu et al. (2005), Levine and Zimmerman (2005); Pech and McCoull (1998, 2000).

assumption (i.e., by assuming that parents affect children but not the reverse), and the use of information about the timing of benefit receipt and specific outcomes (see Gottschalk 1996; Pepper 2000; Beaulieu et al. 2005). The overarching conclusion from these studies is that while some of the intergenerational correlation in social assistance receipt is spurious, there is also evidence of a causal link.

Unfortunately, we are left with something of a black box. Most researchers have not specifically analyzed whether any causal effect of parents' welfare receipt on their children's welfare receipt operates by altering children's preferences for work versus welfare or through some other mechanism. In order for the welfare culture model to find support in the data it must be the case that: 1) welfare receipt alters the work-welfare attitudes of parents and/or their children; and 2) that these attitudes are related to subsequent outcomes. In fact, there is evidence that welfare receipt can affect psycho-social characteristics. Welfare receipt as a child seems to depress self-esteem as a young adult for example (Elliott 1996), while experimental data from Canada's Self-Sufficiency Project (SSP) indicate that improved employment outcomes lead welfare receipients to have a more internal locus of control (Gottschalk 2005). It is less clear that individuals' attitudes, beliefs, or values can be linked to their subsequent welfare receipt (see Edwards et al. 2001; Bartholomae et al. 2004) or that they can be linked across generations.

Our objective is to address these issues by assessing whether the cultural transmission of a poor work ethic—or alternatively welfare acceptance— from parents to children might be responsible for producing an intergenerational welfare culture. Specifically, we are interested in the following questions: Is there a relationship between the work-welfare attitudes of mothers and their adult children? Does this relationship depend on the family's previous interaction with the welfare system or on the welfare profile of the surrounding neighborhood? The data come from the Youth in Focus Project which interviewed approximately 2400 pairs of young people (aged 18) and their mothers about their attitudes towards work, welfare, and what it takes to get ahead in life. These survey data are linked to almost ten years of administrative welfare data for these families.

Our results provide evidence for the cultural transmission of work-welfare attitudes from mothers to children. Young people are significantly more likely to support the public-provision of generous unemployment benefits and believe that social inequality is driven by factors outside the individual's control as their mothers' support for these views increases. Youths' work-welfare attitudes are also related to the welfare histories of their families, but not to the welfare experiences of other young people in their neighborhoods.

# 2 The Cultural Transmission of Values

Bisin and Verdier (2001), Patacchini and Zenou (2007), and Bisin et al. (2006) develop theoretical models of cultural transmission in which social interactions between parents and children and/or within communities can lead to the development of particular social norms. The empirical evidence in favor of the cultural transmission hypothesis is somewhat limited, but nonetheless suggests that interactions within families and local communities do play a role in shaping individuals' preferences and values. Patacchini and Zenou (2007), for example, specify and test a model of intergenerational education transmission. They find a significant and positive effect of neighborhood quality on parents' efforts in fostering their children's education suggesting that the efforts of parents and local communities are complementarity. Similarly, Bisin et al. (2006) show that identity and socialization to an ethnic minority are, other things equal, more intense in mixed neighborhoods than in segregated neighborhoods.

Our paper contributes to this empirical literature by assessing the cultural transmission of welfare and work attitudes from parents and neighborhoods to young adults. We are particularly interested in understanding the extent to which this form of cultural transmission might underlie the intergenerational correlation in welfare receipt.

### 2.1 The Model

In this section, we develop a model which illustrates the intergenerational transmission of work attitudes. As in Bisin and Verdier (2001), we assume that individuals are influenced by both their parents and the neighborhoods in which they live.

Specifically, each family consists of one parent and a child. There are two types of parents. Type L has a high marginal utility of leisure (i.e. low work ethic), while type H has a low marginal utility of leisure (i.e. high work ethic). Parents have a total time endowment of one unit which they allocate across leisure and labor supply. The utility a parent of type i gets from consumption and leisure can be written as

$$U_i = c_i + (1 - \gamma_i) Z (1 - l_i)$$

where  $c_i$  represents consumption level,  $l_i$  represents labor supply, and  $\gamma_i \in [0, 1]$  reflects her work ethic. The utility received from leisure is given by  $Z(1 - l_i)$  which is a strictly concave and increasing function with  $Z'(0) = \infty$  and Z'(1) = 0. We assume that  $\gamma_H > \gamma_L$ .

Parents also care about their children's utility. Children are born without any inclinations and are shaped by their parents and the environment. Let  $q_{ij}$  for  $i, j \in \{L, H\}$  be the probability that a child with a parent of type i has values of type j. We assume that three things affect children's values: parental labor supply  $(l_i)$ , parental work ethic  $(\gamma_i)$ , and the proportion of people in their neighborhood with a high work ethic  $(\sigma)$ . If children see their parents going to work rather than taking welfare, they are more likely to believe that work is a good thing. However, a working parent with a low work ethic is less convincing than a working parent with a high ethic. This may be because those parents with a low work ethic complain more about work when they get home making them less effective in passing a strong work ethic on to their children.

With these assumptions, the transition probabilities are given by

$$q_{HH} = \gamma_H l_H + (1 - \gamma_H l_H) \sigma \tag{1}$$

$$q_{HL} = (1 - \gamma_H l_H) (1 - \sigma) \tag{2}$$

$$q_{LH} = \gamma_L l_L + (1 - \gamma_L l_L) \sigma \tag{3}$$

$$q_{LL} = (1 - \gamma_L l_L) (1 - \sigma).$$

$$\tag{4}$$

Parents are successful in passing on a high work ethic to their children with a probability that is proportional to their own work ethic and their labor supply behavior. For parents of type H this probability is given by  $\gamma_H l_H$ . If the parent is not successful in passing on a high work ethic (with probability  $1 - \gamma_H l_H$ ), then the child is randomly matched with someone in the neighborhood. The greater the proportion of people in the neighborhood with a high work ethic ( $\sigma$ ), the higher the chances the child will develop a high work ethic through a neighbor with a high work ethic. Thus, the child's probability of having a strong work ethic is given by equation (1). Equation (2) gives the probability that the child of a type H parent will have a low work ethic. This happens if both the parent and society were unsuccessful in passing a high work ethic on to the child, which happens with probability  $(1 - \gamma_H l_H)(1 - \sigma)$ . Equations (3) and (4) can be interpreted similarly. Given the assumption that  $\gamma_H > \gamma_L$ , it is easier for type H parents to pass a high work ethic on to their children.

As in Bisin and Verdier (2001), parents are altruistic, but in a paternalistic way. That is, they correctly anticipate their children's future labor supply behavior, but they evaluate their children's future utility from their own perspective. Let  $V_{ij}(\gamma_i, l_j^{C*})$  for  $i, j \in \{L, H\}$  represent the altruistic utility a parent of type *i* receives if her child is of type *j*. Since the utility of the child is evaluated from the perspective of the parent,  $V_{ij}$ is a function of the parent's taste parameter,  $\gamma_i$ , and the child's optimal labor supply choice,  $l_j^{C*}$ . It is defined as

$$V_{ij}(\gamma_i, l_j^{C*}) = c_j^{C*} + (1 - \gamma_i) Z (1 - l_j^{C*}).$$

Parents' paternalistic altruism implies that a parent of type *i*'s altruistic utility is maximized when  $l_i^{C*} = l_i$  whenever  $\gamma_i^C = \gamma_i$ . Hence,  $V_{ii}(\gamma_i, l_i^{C*}) - V_{ij}(\gamma_i, l_j^{C*})$  reflects the utility gain a parent receives if her child has the same work ethic as herself.

We can now write the expected utility of a parent of type i as

$$E[U_{i}] = c_{i} + (1 - \gamma_{i}) Z (1 - l_{i}) + q_{ii}V_{ii} + q_{ij}V_{ij}.$$

Given this framework, the only choice variable in the model is parents' labor supply. We assume that parents maximize their utility subject to their budget constraint and that they qualify for (and take up) welfare if their income falls below  $\overline{y}$ . Hence, the budget constraint is given by

$$c_{i} = l_{i}w \qquad \text{if} \quad l_{i}w > \overline{y}$$
$$c_{i} = l_{i}w + s\left(\overline{y} - l_{i}w\right) \quad \text{if} \quad l_{i}w < \overline{y}$$

The level of welfare received is equal to  $b_i = s (\overline{y} - l_i w)$ , where s is a positive constant. Parents receive welfare whenever their labor supply is less than  $\overline{y}/w$ .

#### 2.2 Analysis

Our transition probabilities imply that the likelihood that children will have a strong work ethic is increasing in the amount of time their parents work. In other words,

$$\frac{\partial q_{HH}}{\partial l_H} > 0; \ \frac{\partial q_{LH}}{\partial l_L} > 0; \ \frac{\partial q_{HL}}{\partial l_H} < 0; \ \frac{\partial q_{LL}}{\partial l_L} < 0.$$

We can solve for the parents' labor supply choices from the first order conditions. Our first result compares the effect of work ethic on the labor supply behavior of parents.

**Proposition 1** Parents with a high work ethic work more than parents with a low work ethic:  $l_H^* > l_L^*$ .

**Proof.** See the Appendix.

This result also implies that parents with a low work ethic are more likely to be on welfare than parents with a high work ethic.

Given the transition probabilities above, the following corollary immediately follows from Proposition 1 allowing us to link the work attitudes of children to those of their parents.

**Corollary 1** The children of parents with a high work ethic are more likely to have a high work ethic than are the children of parents with a low work ethic.

To investigate how children's work attitudes depend on the work attitudes of their neighbors ( $\sigma$ ) it is helpful to obtain the following comparative statics results regarding parental labor supply. Using the implicit function theorem, we note that

$$\frac{\partial l_{H}^{*}\left(\gamma_{H},\sigma\right)}{\partial\sigma} = \frac{\gamma_{H}\left(V_{HH} - V_{HL}\right)}{\left(1 - \gamma_{H}\right)Z''\left(1 - l_{H}\right)} < 0.$$

and

$$\frac{\partial l_{L}^{*}\left(\gamma_{L},\sigma\right)}{\partial\sigma}=-\frac{\gamma_{L}\left(V_{LL}-V_{LH}\right)}{\left(1-\gamma_{L}\right)Z''\left(1-l_{L}\right)}>0.$$

Hence, *ceteris paribus*, an increase in the number of people in the neighborhood with a high work ethic decreases the labor supply choices of type H parents, but increases the labor supply of type L parents. These differences occur because as the number of people in the neighborhood with a high work ethic decreases, a high work ethic parent tries to make up for it by increasing her labor supply. This implies cultural substitution in the terminology of Bisin and Verdier (2001). For a parent with low work ethic, on the other hand, there is cultural complementarity. Substituting for the optimal labor supply choices in the transition probabilities we get

$$q_{HH} = \gamma_H l_H^* (\gamma_H, \sigma) + (1 - \gamma_H l_H^* (\gamma_H, \sigma)) \sigma$$

$$q_{HL} = (1 - \gamma_H l_H^* (\gamma_H, \sigma)) (1 - \sigma)$$

$$q_{LH} = \gamma_L l_L^* (\gamma_L, \sigma) + (1 - \gamma_L l_L^* (\gamma_L, \sigma)) \sigma$$

$$q_{LL} = (1 - \gamma_L l_L^* (\gamma_L, \sigma)) (1 - \sigma).$$

**Proposition 2** An increase in  $\sigma$  has an ambiguous impact on  $q_{HH}$  and  $q_{HL}$ , causes  $q_{LH}$  to increase, and causes  $q_{LL}$  to decrease.

#### **Proof.** See the Appendix

While we leave the formal proof to the Appendix, the intuition for this result is straightforward. Holding constant parental labor supply, an increase in neighborhood work ethic would tend to increase the probability that children develop a strong work ethic. However, cultural substitution implies that as work ethic strengthens in the neighborhood, type H parents compensate by reducing their own labor supply and consuming more leisure. This tends to reduce the probability that their children acquire a high work ethic making the overall effect on  $q_{HH}$  and  $q_{HL}$  ambiguous. Cultural substitution, on the other hand, leads type L parents to increase their labor supply raising  $q_{LH}$  and reducing  $q_{LL}$ .

To summarize, the key feature of the model is that children's attitudes are shaped by socialization both inside and outside the family. That is, we allow for both horizontal and vertical transmission of values. Children's work-welfare attitudes are also shaped by their parents' labor supply—and consequently welfare—decisions. We find that parents with a high work ethic are more likely to have children with a high work ethic. Moreover, although a stronger neighborhood work ethic has an ambiguous impact on the attitudes of the children of parents with strong work ethics, it increases the probability that a parent with a low work ethic has a child that develops a high work ethic.

### 3 The Data

### 3.1 The Youth in Focus Data

We use data from the Youth in Focus Project (YIF) to estimate the relationship between young people's work-welfare attitudes and those of their mothers taking into account the family's welfare history.<sup>3</sup> The YIF data are unique in providing us with detailed information about attitudes toward work and welfare, welfare histories, and individual characteristics for a matched sample of mothers' and their 18-year-old children.

Specifically, the YIF Project uses Australian administrative social security records to identify all young people born in the six-month period between October 1987 and March 1988 who ever had contact with the social security system between 1993 and 2005 (see Breunig et al. 2007 for details). These social security records provide highquality, fortnightly data on the payment details for the universe of Australians receiving a wide range of social benefits. Although young people can appear in the administrative data if they receive social security payments themselves, most enter the system because a family member (generally a parent) received a payment which depended in part on the youth's relationship to the payee. Many families at some point received a benefit, e.g., unemployment benefits or sole parent payments, that is best thought of as welfare, however, many others did not. Approximately 40 percent of families in the administrative data receive only family tax or child care benefits during the period covered by our data.<sup>4</sup> Given the generosity of the Australian social security system, we estimate that approximately 90 percent of young people in the relevant six-month birth cohort are represented in the administrative data.<sup>5</sup> We

<sup>&</sup>lt;sup>3</sup>For more information about the project see http://youthinfocus.anu.edu.au.

<sup>&</sup>lt;sup>4</sup>The Family Tax Benefit is essentially an income tax credit to families with children rather than a welfare payment. Currently a family with two children would receive a Family Tax Benefit for incomes up to \$105,000 AUD.

<sup>&</sup>lt;sup>5</sup>In particular, the Australian social security system is nearly universal, with some benefits, e.g. Child Care Benefit, having no income test, and other benefits, e.g. Family Tax Benefit, being denied only to those households in the top 20 percent of the income distribution. Comparing the YIF youth sample with Australian Census data suggests that the administrative data capture roughly 90 percent of the youth born in the period (Breunig et al. 2007). See Centrelink (2007) for more information

summarize a family's welfare history by using the administrative data to categorize youths and their parents into one of six groups depending on the recency and intensity of the family's welfare receipt. Specifically, families who received a welfare payment for a total of six years or more (out of a possible 12) are classified as having had an intensive exposure to welfare. At the other end of the spectrum are families that never received welfare benefits at all. In between, are roughly 30 percent of families who had more limited exposure to the welfare system at some point in the previous 12 years (see Appendix Table A1 for more details). A stratified random sample of young people and a corresponding parent or guardian—in 96.5 percent of cases the biological mother—was selected from the administrative data for interview. The stratification into six groups was done on the basis of intensity and recentness of welfare receipt in order to ensure adequate samples of welfare recipients for analysis (see Breunig et al. 2007 for details). Data from separate phone interviews with youth and their parents as well as a self-completion questionnaire administered to youth were then matched to the administrative social security data.<sup>6</sup>

We have necessarily made a number of sample restrictions. We drop 74 pairs in which the responding parent was not the biological mother and 286 pairs in which either the youth or mother provided incomplete information. Consequently, our estimation sample consists of 2070 pairs of youth and their mothers who both have complete survey information for the variables of interest.<sup>7</sup> Mean characteristics are presented by welfare history in Appendix Table A2.

### 3.2 Work-Welfare Attitudes and Welfare History

Young people and parents in the sample were asked for their views about the government's role in supporting the unemployed and what it takes to get ahead in life.

about the Australian social security system.

<sup>&</sup>lt;sup>6</sup>The survey response rate was 34.2 percent for parents, and 34.7 percent for youth —73.1 percent of whom also completed the self-completion questionnaire. More than 96 percent of young people and 92 percent of parents completing the survey consented to having this information liked to their administrative records.

<sup>&</sup>lt;sup>7</sup>In some specifications of our multivariate model our sample reduces to 1375 observations due to missing values in some of the mothers' attitudinal variables .

In particular, individuals were asked whether the government or unemployed individuals (and their families) themselves should mainly be responsible for ensuring that the unemployed have enough to live on and whether current unemployment benefits are too high or too low.<sup>8</sup> Individuals were also asked about the importance of having 1) well-educated parents, 2) a good education themselves, 3) ambition, and 4) a job in getting ahead in life.<sup>9</sup> Finally, parents were also asked about the importance of coming from a wealthy background. Responses to these questions form the basis of our work-welfare measures.

Sabbagh and Vanhuysse (2006) argue that attitudes towards the welfare state can be understood in the context of two competing ideological frameworks; one based on markets and the other based on a welfare state. The market-based perspective is associated with a strong work ethic, a belief that individuals have the primary responsibility for their own welfare, and that it is individuals and their actions that drive social inequality. In contrast, the welfare-statist perspective is characterized by a desire for egalitarian redistribution, support for universal benefits, and a view that social inequality stems not from individuals' character defects, but from unconstrained market forces (see Sabbagh and Vanhuysse 2006). Drawing upon this conceptual framework, we create a series of seven indicator variables which take the value of one for responses that are consistent with the welfare-state frame and zero for responses that are consistent with the market-based frame (see Appendix Table A3). Weighted means, standard deviations, and p-values on tests for differences in mothers' and youths' mean responses are presented in Table 1.<sup>10</sup>

Mothers are significantly more likely than their 18 year old children to believe that unemployment benefits are too low and that the government has the responsibility to

<sup>&</sup>lt;sup>8</sup>Possible responses are "benefits for unemployed people are too low and cause hardship" or "benefits for unemployed people are too high and discourage them from finding jobs." The wording for each question and variable definitions are shown in Appendix Table A3.

<sup>&</sup>lt;sup>9</sup>Possible responses for this set of questions are "extremely important", "fairly important", "not to important", "doesn't matter at", and "undesirable, a bad thing". See Appendix Table A3 for details.

<sup>&</sup>lt;sup>10</sup>Results are weighted by the inverse probability of sample selection in order to account for sample stratification.

look after the unemployed. Almost two-thirds (62.0 percent) of mothers think that having a good education is very important in getting ahead in life, although only half (50.3 percent) of young people share this view. Rather, 18 year olds are significantly more likely to believe that it is having well-educated parents that leads to success in life. Mothers and youth appear to differ most in their perceptions of the importance of having a job in getting ahead in life with mothers being significantly more likely than their children (81.0 versus 59.0 percent) to see a job as very important. Both 18 year olds and mothers agree, however, that ones own ambition is very important in getting ahead. Finally, only 5.5 percent of mothers believe that life success is closely tied to coming from a wealthy background.

#### [Table 1 here]

It is also interesting to begin to consider how attitudes towards work and welfare might be correlated within families. Table 2 reports youths' views conditional on those of their mothers. Specifically, 53.9 percent of young people believe that unemployment benefits are too low when their mother reports believing the same. Only 32.1 percent of youth think that unemployment benefits are too low when their mothers disagree with this viewpoint. This difference is highly significant. Overall, young people appear to be much more likely to adopt a particular work-welfare perspective when their mothers are of the same opinion with the correlation in mother and youth attitudes ranging from 0.322 (the level of unemployment benefits) to 0.098 (the importance of a job in getting ahead).

#### [Table 2 here]

Perhaps not surprisingly, individuals' attitudes towards work and welfare also seem to be related to their families' exposure to the welfare system (see Table 3). Mothers and their 18-year-old children are both more likely to say that unemployment benefits are too low and that the government should look after the unemployed if the family has received welfare at some point in the past. For example, while 37.2 percent of young people in families with no exposure to the welfare system believe that benefits are too low the same is true of almost half (48.2 percent) of youth in families that received welfare at some point in the past. Young people are also significantly more likely to believe that the government should look after the unemployed when their families have a history of welfare receipt. We observe similar results for mothers. At the same time, the relationship between welfare history and perceptions of what it takes to get ahead in life is less clear cut. There is no significant relationship between welfare receipt and youths' views about the importance of various factors in achieving life success. In contrast, mothers with a history of welfare receipt are significantly more likely than those without to believe that having a good education, having a good job, and coming from a wealthy background are very important in getting ahead in life.

#### Table 4 Here

# 4 The Empirical Framework

Our interest is in understanding the extent to which work-welfare attitudes appear to be related to a family's welfare history. If the cultural transmission of work-welfare attitudes is at the heart of the intergenerational correlation in welfare receipt it must not only be true that young people share the attitudes of their parents, but also that the attitudes of welfare recipients are somehow worse than those of other people. In this section, we explore these relationships in more depth taking into account individual and neighborhood characteristics and accounting for the inter-related nature of our measure of work-welfare attitudes.

#### 4.1 The Econometric Model

Our primary empirical challenge is to make the best use of the fact that we have multiple indicators of each individual's unobserved attitude towards work and welfare.<sup>11</sup> In this situation, the approach most often taken in the economics literature is to aggregate the multiple indicators into a single index and then adopt an estimation

<sup>&</sup>lt;sup>11</sup>Specifically, there are six for youths and seven for their mothers.

strategy suitable for the latent-variable nature of the problem (cites, mental health). However, in our case the weights underpinning the index would necessarily be ad hoc given that we have no information about the contribution that each makes in predicting attitudes toward work and welfare.<sup>12</sup> Unfortunately, estimation results are likely to be sensitive to the weights we choose. Alternatively, other researchers prefer to analyze each indicator separately (see for example, Dohmen et al. 2006; others?). The difficulty with this single-equation, 'attitude by attitude' approach is that it treats our data as though each survey question provided information about a separate, perfectly measured concept. Instead, we want to allow for the possibility that answers to our specific survey questions are only indicators of one or more broader concepts of work ethic and attitudes towards welfare. Moreover, we may be able to improve the precision of our estimates by combining the information from several indicators.

Consequently, we specify and estimate a structural equation model which consists of two parts. The first is a structural (behavioral) model of the relationship between youths' and mothers' latent work-welfare attitudes. The second is a measurement model which relates our observed responses (indicators) to the underlying latent variables (see Skrondal and Rabe-Hesketh 2005; Ribar 2005; and Ribar et al. 2006). We discuss each in turn.

#### 4.1.1 Structural (Behavioral) Model

We model unobserved work-welfare attitudes for parent and youth as latent variables, and use responses to multiple YIF survey questions as imperfect measures, or indicators, of these unobserved variables.

Given our model of the cultural transmission of work ethic, we assume that the equation relating parental attitudes to youth attitudes is given by

$$\eta_c^* = \gamma \eta_p^* + \mathbf{X}\beta + \mathbf{C}\alpha + \varepsilon \tag{5}$$

<sup>&</sup>lt;sup>12</sup>Summing them, for example, assigns each an equal weight.

where  $\eta_c^*$  and  $\eta_p^*$  are the latent, continuous work-welfare attitudes for child and parent, **X** is a vector of variables likely to contribute to the formation of youths' work-welfare attitudes (specifically, gender, immigrant status, aboriginal status, mother's employment status at age 14, family background, and parental education), C is a vector of variables capturing the welfare history of the youth's family as well as the welfare histories of other young people in the youth's neighborhood,  $\varepsilon$  is a normally distributed error term with mean 0 and variance  $\sigma_{\varepsilon}^2$ , and  $\gamma$ ,  $\beta$ , and  $\alpha$  are coefficients to be estimated. We also assume that unobserved parental attitudes are distributed normal with mean 0 and variance  $\sigma_p^2$ , and uncorrelated with  $\varepsilon$ .

This specification allows us to test the main propositions of the theoretical model (see Section 2). In particular, we expect that youths' work-welfare attitudes will be positively related to those of their mothers and that growing up in a family with a history of welfare receipt or in which the mother did not work will be associated with having attitudes that are more consistent with the welfare-state frame. In contrast, the welfare profile of other young people in the neighborhood has a theoretically ambiguous effect on a youth's views about work and welfare.

#### 4.1.2 Measurement Model

If work-welfare attitudes were directly observed and measured, we would be able to use OLS to estimate our parameters of interest in (5). This is not the case and we instead use responses to the YIF survey questions as indicators of these unobserved attitudes. The nature of our survey questions implies, however, that individuals' responses cannot be used to create continuous indicators of work-welfare attitudes. Rather the data result in ordered, discrete variables reflecting individuals' perspectives on the role of government in assisting the unemployed and the importance of various factors in getting ahead in life. To take this into account, we assume that both youths' and mothers' unobserved work-welfare attitudes ( $\eta_c^*$  and  $\eta_p^*$ ) determine an associated vector of *latent* continuous indicators which we denote by  $y_{cj}^*$  and  $y_{pk}^*$ . Here j indexes the specific attitudinal questions answered by youth and k indexes the questions answered by the mother (see Appendix Table A3). Each indicator is then imperfectly related to individuals' unobserved work-welfare attitudes in the following way

$$y_{cj}^* = \lambda_{cj} \eta_c^* + v_{cj} ; \quad j = 1, 2, ..., J$$
 (6a)

$$y_{pk}^* = \lambda_{pk}\eta_p^* + v_{pk} \; ; \; k = 1, 2, ..., K$$
 (6b)

where  $v_{cj}$  and  $v_{pk}$  are idiosyncratic components, all uncorrelated with each other;  $\lambda$ s are coefficients (factor loadings); and J and K are the number of indicators used to account for youths' and mothers' unobserved work-welfare attitudes.<sup>13</sup> Higher values of  $\lambda_{cj}$  would indicate that youths' overall work-welfare attitudes ( $\eta_c^*$ ) are highly relevant for understanding youths' responses to questions about a particular belief j, views about the level of unemployment benefits for example. The interpretation of the other  $\lambda$  parameters is analogous.

As discussed, we do not observe these continuous indicators  $(y_{cj}^*, y_{pk}^*)$ . Instead we observe individuals' discrete, ordered responses to each associated survey question. By assuming that each  $v_{cj}$  and  $v_{pk}$  in equations (6a) and (6b) are distributed standard normal, we can model each indicator variable as an ordered probit:

$$y_{ij} = \begin{cases} 0 & \text{if } -\infty < y_{ij}^* \le \delta_{1j}, \\ 1 & \text{if } \delta_{1j} < y_{ij}^* \le \delta_{2j}, \\ \vdots & \vdots \\ M & \text{if } \delta_{Mj} < y_{ij}^* < \infty \end{cases}$$
(7)

for  $i = \{c, p\}$ . In equation (7), the  $\delta$ s are threshold parameters satisfying the restriction that  $\delta_{1j} < \delta_{2j} < ... < \delta_{Mj}$  while M denotes the number of categories for an indicator. The value of M changes from indicator to indicator; in particular, some survey questions permitted only two responses implying that M = 2. This case results in a binary probit model yielding one threshold parameter.

 $<sup>^{13}\</sup>mathrm{Depending}$  on the specification we include two or four indicators for youths and two or five indicators for mothers.

### 4.2 Estimation Strategy

Our structural equation model results in a system of J (ordered) probit models, one for each of the observed work-welfare attitudinal variables for youth. To see this, substitute equation 5 into 6a to get

$$y_{cj}^* = \lambda_{cj} \gamma \eta_p^* + \lambda_{cj} \mathbf{X} \beta + \lambda_{cj} \mathbf{C} \alpha + \lambda_{cj} \varepsilon + v_{cj} \quad ; \quad j = 1, 2, ..., J.$$
(8)

Given the assumption that  $v_{cj} \sim N(0, 1)$  and equation 7, we obtain a system of J (ordered) probits. This system, however, imposes cross-equation restrictions on some of the parameters. Moreover, each equation includes a common error term  $\varepsilon$  in addition to the common latent attitudinal for the parent  $\eta_p^*$  (which was assumed to be independently normally distributed with mean 0 and variance  $\sigma_p^2$ ).

We use the software aML to generate Maximum Likelihood estimates of the parameters in the system.<sup>14</sup> In other words, our model produce estimates of the parameters in equation (5), the sets of equations given by (6a) and (6b), and the expressions described by (7). Since the unobserved attitude variables have no intrinsic units of measurement, we normalize one  $\lambda$  parameter in each equation (6a) and (6b) to one in order to identify the model. This procedure then yields estimates for 1) the behavioral relationship between mothers' and youths' work-welfare attitudes ( $\gamma$ ,  $\beta$ ,  $\alpha$ ), 2) the of the latent parental attitude index and the variance of the error term in the youth attitude equation ( $\sigma_p^2$ ,  $\sigma_{\varepsilon}^2$ ), and 3) the factor loadings in the measurement model ( $\lambda_{cj} \forall j = 1, ..., J - 1, \lambda_{pj} \forall k = 1, ..., K - 1$ ).<sup>15</sup> A visual representation of the model is provided in Figure 1.

This estimation strategy allows us to combine all of the information from multiple (imperfect) measures of work-welfare attitudes for both youth and mothers without

<sup>&</sup>lt;sup>14</sup>aML uses Gauss-Hermite quadrature to "integrate-out" the common terms in our system of (ordered) probits (Lillard and Panis (2003)).

<sup>&</sup>lt;sup>15</sup>The strategy also yields estimates of the threshold parameters  $(\delta_{cj}, \delta_{pk})$  underlying the measurement model. These parameters correspond to the thresholds in a standard ordered or bivariate probit models. Given our interests and space limitations, these are not reported here, but are available upon request.

imposing an ad hoc weighting of the different indicators on overall work-welfare attitudes. Moreover, the procedure allows for differences in the response error associated with each indicator in the measurement model. This is done through the  $\lambda$  parameters which are inversely related to the degree of indicator-specific variance. The disadvantage of this approach is that the model is complex and the resulting estimates can be difficult to interpret due to the model's nonlinearity and the fact that multiple indicators are used (Ribar et al., 2006).

### 5 Results

We use the above empirical framework to estimate the intergenerational relationship in two alternative dimensions of work-welfare attitudes. The first, which we interpret as support for social benefits, encompasses views about the level of unemployment benefits and the appropriate role of the government in supporting the unemployed. The second captures individuals' views about the determinants of social inequality, i.e., the importance of own versus family characteristics in life success. We explicitly distinguish between these two dimensions of work-welfare views because preliminary analysis revealed that the variation in the data was not adequately described by a single, latent work-welfare attitude. Moreover, this distinction is consistent with Sabbagh and Vanhuysse's (2006) results which also suggest that preferences for egalitarian redistribution can be differentiated from beliefs about the internal vs. external attribution of social inequality. Results are presented in Table 4. The estimated coefficients for the explanatory variables in the behavioral equation (5) are shown in the top panel, while the middle and bottom panels present the factor loadings from the measurement models in (6a) and (6b) and the estimated standard deviations for the parental attitude latent variable  $(\sigma_p^2)$  and the error term  $\varepsilon$  in the equation determining youth attitudes  $(\sigma_{\varepsilon}^2)$ . Results for the model of support for social benefits are shown in the first two columns and results for views about the determinants of social inequality are shown in the last two columns.

The results provide evidence for the cultural transmission of work-welfare attitudes. Young people are significantly more likely to support the public-provision of generous unemployment benefits and believe that social inequality is driven by factors outside the individual's control as their mothers' support for these views increases.

Youths' work-welfare attitudes are also related to the welfare histories of their families. Young people who grow up in a family with a history of intensive welfare receipt are significantly more likely to support the public-provision of generous unemployment benefits than are young people in non-welfare families. At the same time, youth in families with a more moderate interaction with the welfare system do not differ significantly in their views on unemployment from youths in non-welfare families. Thus it appears that it is the intensity, rather than the incidence, of welfare receipt which is most important in shaping young people's views about social benefits. Interestingly, welfare receipt has a weaker impact on young people's beliefs about the source of social inequality. Those in families with a history of intensive welfare receipt have the same views about getting ahead in life as young people with no exposure to the welfare system. Moreover, while those with a history of modest welfare receipt are more likely to believe that social inequality stems from family-background rather than own characteristics this effect is only marginally significant.

Unfortunately, it is very difficult to interpret the magnitude of these relationships because the two underlying latent work-welfare attitude variables  $(\eta_c^* \text{ and } \eta_p^*)$  have no intrinsic units of measurement. Our estimation strategy does provide estimates of the standard deviation of the parents' attitudinal latent variable, however, which can be used to assess the relative magnitude of these effects. Specifically, mothers' latent attitudes towards social benefits are estimated to have a standard deviation of 1.134. This implies that in the baseline model a one standard deviation increase in mothers' support for the public-provision of generous unemployment benefits is associated with an increase in youths' propensity to support these views of 0.525. This is slightly larger than the estimated effect of experiencing intensive welfare receipt on youths' support for social benefits (0.435). Turning now to views about social inequality, the same calculation implies that a one standard deviation increase in mothers' propensity to believe that social inequality stems from family (not individual) characteristics is associated with a 0.144 increase in youths' propensity to believe the same. Although it appears that the effect of mothers' attitudes on the attitudes of her children is weaker in this case than in the previous case, we are unable to make direct comparisons across the two models because the latent work-welfare attitudes of youths do not necessarily have the same distribution in the two cases. We note, however, that the estimated effect of mothers' views about social inequality is substantially smaller than the estimated effect of having a history of moderate welfare receipt (0.244). Thus, cultural transmission appears to be relatively more important in generating support for the public-provision of generous unemployment benefits than in shaping beliefs about the source of social inequality. In short, young people and their mothers are much less likely to have similar views about what it takes to get ahead in life than they do about social support for the unemployed.

Interestingly, there is no significant interaction between a mother's work-welfare attitudes and having an family history of intensive welfare receipt (see models 2 and 4). In other words, the effect of having a mother who strongly supports social benefits and who believes that social inequality stems more from family-background characteristics rather than individual effort is not compounded when the family also has a history of intensive welfare receipt. Nor is the positive relationship between youths' work-welfare attitudes and the family's previous welfare receipt reduced when welfare mothers themselves do not share these views.

We find no evidence that young people's attitudes towards work and welfare are driven by the welfare experiences of other young people in their neighborhoods. This suggests that in the case of work-welfare attitudes cultural transmission occurs within families rather than neighborhoods.

Finally, work-welfare attitudes are related to both individual and family background characteristics. There is some evidence, for example, that young women are more likely than young men to favor a system of generous unemployment benefits. This effect is small in magnitude and only marginally significant, however. Immigrants from non-English-speaking backgrounds and Aboriginal/Torres Strait Islanders are also more likely to express support for unemployment benefits. This later effect is on the same order of magnitude as a one standard deviation increase in mothers' support for unemployment benefits or having a history of intensive welfare receipt. Moreover, indigenous youth are also significantly less likely to believe that getting ahead in life depends on family rather than individual characteristics. This effect is much larger than that associated with mothers' attitudes or welfare history. Lastly, young people are less likely to believe that social inequality stems from family background characteristics when they have a highly educated father and consistent with our theoretical model youths whose mothers worked when they were age 14 are significantly less likely to support the public provision of generous welfare benefits.

The middle panel of Table 4 also provides estimates of the factor loadings  $(\lambda_{cj}, \lambda_{pk})$ from (6a) and (6b). Each estimated factor is the weight (loading) that the common latent attitude variable (either  $\eta_c^*$  or  $\eta_p^*$ ) has on responses to the associated survey question. As Ribar et al. (2006) notes, the inverses of these estimated factors indicate the degree of residual question-specific response variation. When  $\hat{\lambda}$  is high most of the question-specific variation is accounted for by the common latent variable. When  $\hat{\lambda}$  is low little of the variation is responses to the associated survey item are accounted for by the underlying latent attitude variable.

# 6 Conclusions

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Attitudinal Variables <sup>(a)</sup>		Youth			Mother		Equality of means
	Mean	Std. Dev.	Obs.	Mean	Std. Dev.	Obs.	[p-value]
1. Unemployment benefits are too low	.428	(.495)	2151	.484	(.500)	1866	000.
2. Govern. should take care of the unemployed	.436	(.496)	2251	.481	(.500)	2059	.003
3. Parental education is (very) important	.150	(.357)	2351	.106	(.308)	2348	.000
4. Own education is (very) important	.503	(.500)	2347	.620	(.486)	2347	.000
5. Own ambition is (very) important	.762	(.426)	2347	.769	(.421)	2342	.546
6. Having a job is (very) important	.590	(.492)	2356	.810	(.392)	2356	000.
7. Having a wealthy family is (very) important	n.a.	n.a.	n.a.	.055	(.228)	2356	n.a.
8. Index	.482	(.217)	2073	.478	(.194)	1677	.552
Notes: (*) Standard deviations in parentheses. Sample weights used. (a) Variables 3 to 7 were transformed into binary variables as follows: <sup>1</sup> binary. n.a.: not available.	Variables take	value 1 if persor	n answered	"Extremely	important" and	0 otherwi	se. Variables 1 and 2 were alrea

Table 1: Means of Work-Welfare Attitudinal Variables (\*)

Couth's Attitudinal Variables <sup>(a)</sup>	M	other: Agree	S	Mot	ther: Disagr	res	Equality of mean
I	Mean	Std. Dev.	Obs.	Mean	Std. Dev.	Obs.	p- $value$
. Unemployment benefits are too low	.539	(.499)	906	.321	(.467)	806	000.
. Govern. should take care of the unemployed	.486	(.500)	981	.392	(.488)	992	000.
To get ahead in life							
. Parental education is (very) important	.182	(.367)	266	.146	(.354)	2077	.152
. Own education is (very) important	.532	(.499)	1473	.458	(.499)	865	.001
. Own ambition is (very) important	.776	(.417)	1802	.715	(.452)	532	.005
. Having a job is (very) important	.602	(.490)	1918	.539	(.499)	438	.017
. Index	.474	(.222)	912	.474	(.213)	1161	.040

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Attitudinal Variables <sup>(a)</sup>		Youth's Attit	udes		Mother's Atti	tudes
	No receipt	Any receipt	Equality of means (p-value)	No receipt	Any receipt	Equality of means (p-value)
1. Unemployment benefits are too low	.372 (.484)	.482 (.500)	.000	.382 (.486)	.578 (.494)	000.
2. Govern. should take care of the unemployed	.402 (.491)	.468 (.499)	.004	.450 (.498)	.511 (.500)	.012
3. Parental education is (very) important	.152 $(.359)$	.148 (.355)	.798	.095 (.293)	.117 $(.321)$	.109
4. Own education is (very) important	.518 (.500)	.487 (.500)	.169	.598 (.491)	.640 (.480)	.058
5. Own ambition is (very) important	.775 (.418)	.749 (.434)	.175	.763 (.426)	.776 (.417)	.499
6. Having a job is (very) important	.587 (.493)	.592 (.492)	662.	.794 (.405)	.825 (.380)	.083
7. Having a wealthy family is (very) important	n.a. n.a.	n.a. n.a.	n.a.	.041 (.199)	.068 (.252)	200.
8. Index	.474 (.217)	.490 (.218)	.136	.450 (.190)	.502 (.194)	000.

Tabla 3. Means of Work-Welfare Attitudes for Vouthe and Mothers by Family Welfare History(\*)

(a) Variables 3 to 7 were transformed into binary variables as follows: Variables take value 1 if person answered "Extremely important", and 0 otherwise. Variables 1 and 2 were already binary. n.a.: not available.

	Supi Social	oort for Benefits	External Social Ir	l View of nequality
	Baseline	Interaction	Baseline	Interaction
Explanatory variables				
Parental attitudes (high=low work-ethic)	$.463^{***}$	$.442^{***}$	$.303^{**}$	$.395^{**}$
	(.123)	(.122)	(.119)	(.157)
Heavily exposed to welfare at home (Strata B)	$.435^{**}$	$.422^{**}$	.205	.208
	(.170)	(.170)	(.127)	(.128)
Intermediately exposed to welfare at home (Strata C to F)	.120	.123	$.244^{*}$	$.247^{*}$
	(.115)	(.113)	(.132)	(.128)
Parental attitudes $x IS (B)$		.078		273
		(.157)		(.264)
% of youth receiving income support in the Post-Code	.072	.067	303	308
	(.451)	(.444)	(.387)	(.394)
Youth is female	$.164^{*}$	$.164^{*}$	026	026
	(.091)	(.089)	(.139)	(.133)
Immigrant (non-English speaking background)	$.343^{**}$	$.336^{**}$	221	228
	(.163)	(.161)	(.141)	(.139)
Immigrant (English speaking background)	.201	.199	017	016
	(.124)	(.122)	(.102)	(.104)
Lived with both parents when 14 y.o.	.006	600.	.073	.074
	(.115)	(.113)	(.107)	(.108)
Youth is indigeneous/TSI	$.475^{**}$	$.477^{**}$	$520^{**}$	$534^{**}$
	(.222)	(.219)	(.263)	(.261)
Mother worked when youth was 14 y.o.	$217^{**}$	$211^{**}$	001	004
			Continued	on next page

Table 4: The Determinants of Youths' Work-Welfare Attitudes

	Sup] Social	port for Benefits	External Social In	View of equality
	Baseline	Interaction	Baseline	Interaction
	(.107)	(.106)	(960.)	(960.)
Parents attended school committees more than a year	0.03	001	017	019
	(.095)	(.093)	(260.)	(.095)
Mother has bachelor's degree or above	.003	900.	111	109
	(.128)	(.126)	(.106)	(.107)
Father has bachelor's degree or above	.160	.159	335**	$336^{**}$
	(.128)	(.126)	(.160)	(.153)
Indicator's loading factors $(\lambda s)$				
Youth's latent variable indicators				
Unemployment benefits are too $low^{(a)}$	1.000	1.000		
$C_{\alpha i \alpha i n}$ . Should take ears of incomplexed noonly $(a)$	***SUV	A1 &***		
GOVELLI, DITOULU LAKE CALE OF ULTETIPPIOYEU PEOPLE	(139)	.410 (144)		
To get a head in life, own education is NOT important $^{(b)}$		(++++)	1.000	1.000
To set ahead in life own amhition is NOT important $^{(b)}$			210**	206**
			(103)	(1085)
To get a head in life, having a job is NOT important $^{(b)}$			$.159^{*}$	$.156^{*}$
			(.089)	(.082)
To get ahead in life, parental education IS important <sup><math>(b)</math></sup>			459	$446^{*}$
			(.296)	(.261)
Mother's latent variable indicators				
Unemployment benefits are too $low^{(a)}$	1.000	1.000		

Continued on next page...

	ě			
	Supp Social	ort for Benefits	External Social In	View of equality
	Baseline	Interaction	Baseline	Interaction
Govern. Should take care of unemployed people <sup><math>(a)</math></sup>	.857*** (.308)	.874 (.311)		
To get a head in life, own education is NOT important $^{(b)}$			1.000	$1.000^{***}$
To get a head in life, own ambition is NOT important $^{(b)}$			.395***	.397***
To get a head in life, having a tob is NOT important <sup>(b)</sup>			$(.116)$ $_{472^{***}}$	(.116) $.474^{***}$
			(.115)	(.115)
To get a head in life, parental education IS important $^{(b)}$			$-2.867^{***}$	$-2.854^{***}$
			(1.012)	(1.008)
To get ahead in life, having a wealthy family IS important <sup><math>(b)</math></sup>			$-1.370^{***}$	$-1.365^{***}$
			(.194)	(.194)
Standard deviations				
Youth Equation $(\hat{\sigma}_{\varepsilon}^2)$	.887***	.864***	$1.316^{***}$	$1.340^{***}$
	(.259)	(.253)	(.584)	(.545)
Latent Parent $(\hat{\sigma}_n^2)$	$1.134^{***}$	$1.120^{***}$	$.476^{***}$	$.478^{***}$
	(.234)	(.228)	(.064)	(.064)
Log-likelihood (`000s)	-3.6196	-3.6194	-15.7081	-15.7073
Observations	1375	1375	2070	2070

Notes: Heteroskedasticity-robust standard errors in parentheses. \*\*\*, \*\*\*, and \* denote significance at 1%, 5%, and 10%. <sup>(a)</sup> This variable takes value 1 if the individual *agrees* with the statement and 0 if he or she disagrees. <sup>(b)</sup> This variable takes four values. High values indicate that the individual *strongly agrees* with the statement in the table, low values indicate disagreement.

### APPENDIX

Stratum Code	Stratification Category
A	No parental welfare history
В	Heavy exposure to welfare programs (more than six total years on income support)
$\mathbf{C}$	First exposure to the welfare system after $1998$
D	First exposure to the welfare system between 1994 and 1998 and less than three total years on welfare
Ε	First exposure prior to 1994 and less than six total years on welfare
F	First exposure to the welfare system between 1994 and 1998 and more than three but less than six total years on welfare

Source: Breunig et al. 2007

	No	welfare	Heavy v	velfare receipt	Intermed.	welfare receipt
	Mean	Std. Dev.	Mean	$Std. \ Dev.$	Mean	$Std. \ Dev.$
Youth is female	.524	(.500)	.531	(.499)	.512	(.500)
Youth Immigrant	.051	(.221)	.064	(.245)	.077	(.267)
Youth Immigrant (English speaking background)	.035	(.185)	.025	(.157)	.024	(.152)
Youth Immigrant (non-English speaking background)	.016	(.126)	.039	(.193)	.054	(.225)
Parent Immigrant	.319	(.466)	.358	(.480)	.368	(.482)
Youth is indigeneous/TSI	.016	(.126)	.072	(.259)	.027	(.162)
Immigrant (English speaking background)	.166	(.373)	.191	(.394)	.207	(.405)
Immigrant (non-English speaking background)	.153	(.360)	.166	(.373)	.161	(.368)
Mother has bachelor's degree or above	.273	(.446)	.095	(.294)	.172	(.378)
Father has bachelor's degree or above	.251	(.434)	.104	(.305)	.165	(.372)
Mother has less than year 12	.455	(.498)	.706	(.456)	.586	(.493)
Father has less than year 12	.290	(.454)	.586	(.493)	.419	(.494)
% of youth receiving income support in the Post-Code	.237	(860.)	.298	(.111)	.262	(.102)
Parents attended school committees less than a year	.721	(.449)	.575	(.495)	.632	(.482)
Parents attended school committees more than a year	.596	(.491)	.416	(.493)	.528	(.500)
Mother worked when youth was 14 y.o.	.813	(.391)	.559	(.497)	.725	(.447)
Lived with both parents when 14 y.o.	.938	(.241)	.424	(.494)	.751	(.432)
Obs.		680		752		924

Table A2: Descriptive Statistics by Family Welfare  $\operatorname{Receipt}^{(*)}$ 

Notes: (\*) Standard deviations in parentheses. Sample weights used.

### **Proofs of Propositions**

**Proof of Proposition 1.** (i) Suppose both  $l_H^* > \frac{\overline{y}}{w}$  and  $l_L^* > \frac{\overline{y}}{w}$ . That is, neither type takes income support. The following first order conditions implicitly define the utility-maximizing choices,  $l_H^*(\gamma_H, \sigma)$  and  $l_L^*(\gamma_L, \sigma)$ .<sup>16</sup>

$$\frac{\partial E\left[U_{H}\right]}{\partial l_{H}} = w - (1 - \gamma_{H}) Z' (1 - l_{H}) + \gamma_{H} (1 - \sigma) (V_{HH} - V_{HL}) = 0 \qquad (9)$$

$$\frac{\partial E\left[U_L\right]}{\partial l_L} = w - (1 - \gamma_L) Z' (1 - l_L) - \gamma_L (1 - \sigma) (V_{LL} - V_{LH}) = 0$$
(10)

Reorganizing the first order conditions we get

$$\frac{w + \gamma_H (1 - \sigma) (V_{HH} - V_{HL})}{(1 - \gamma_H)} = Z' (1 - l_H)$$
(11)

$$\frac{(1 - \gamma_H)}{(1 - \gamma_L)} = Z'(1 - l_H)$$
(11)  
$$\frac{w - \gamma_L (1 - \sigma) (V_{LL} - V_{LH})}{(1 - \gamma_L)} = Z'(1 - l_L).$$
(12)

The numerator of (11) is greater than the numerator of (12) and the denominator of (11) is smaller than the denominator of (12). Thus, the result follows.

(ii) Now suppose that both  $l_H^* < \frac{\overline{y}}{w}$  and  $l_L^* < \frac{\overline{y}}{w}$ . The same argument follows.

Proof of Proposition 2. The results follow from investigating

$$\frac{\partial q_{HH}}{\partial \sigma} = \gamma_H (1-\sigma) \frac{\partial l_H^* (\gamma_H, \sigma)}{\partial \sigma} + (1-\gamma_H l_H^* (\gamma_H, \sigma)) - \text{ambiguous}$$

$$\frac{\partial q_{HL}}{\partial \sigma} = -\gamma_H (1-\sigma) \frac{\partial l_H^* (\gamma_H, \sigma)}{\partial \sigma} - (1-\gamma_H l_H^* (\gamma_H, \sigma)) - \text{ambiguous}$$

$$\frac{\partial q_{LH}}{\partial \sigma} = \gamma_L (1-\sigma) \frac{\partial l_L^* (\gamma_L, \sigma)}{\partial \sigma} + (1-\gamma_L l_L^* (\gamma_L, \sigma)) > 0$$

$$\frac{\partial q_{LL}}{\partial \sigma} = -\gamma_L (1-\sigma) \frac{\partial l_L^* (\gamma_L, \sigma)}{\partial \sigma} - (1-\gamma_L l_L^* (\gamma_L, \sigma)) < 0.\blacksquare$$

 $<sup>^{16}\</sup>mathrm{The}$  second order condition is satisfied because of the concavity of the  $Z\left(.\right)$  function.

Question	Exact wording of	Coding for
Number	the question	descriptive statistics
Question 1.	<ul> <li>Opinions differ about the level of benefits for unemployed people. Which of these two statements comes closest to your own view?</li> <li>Benefits for unemployed people are too low and cause hardship</li> <li>Benefits for unemployed people are too high and discourage them from finding jobs</li> </ul>	Takes value 1 if too low and 0 if too high
Question 2.	<ul><li>Who do you think should be mainly responsible for ensuring that people have enough to live on if they become unemployed? Takes value 1 if the government and 0 if the person themselves or their family.</li><li>Mainly the government</li><li>Mainly a person themselves or their family</li></ul>	
	Now, we have some questions about how people get ahead in life. For each question, I would like you to tell me whether it is "extremely important", "fairly important", "not too important", "doesn't matter at all", or "undesirable, a bad thing". <sup>†</sup>	
Question 3	To get ahead in life, how important is it to have well educated parents?	Equals 1 if "ex- tremely important" and 0 otherwise.
Question 4.	How important is it for a person to have a good education?	Equals 1 if "ex- tremely important" and 0 otherwise.
Question 5.	How important is a person's own ambition?	Equals 1 if "ex- tremely important" and 0 otherwise.
Question 6.	How important is it for a person to have a job?	Equals 1 if "ex- tremely important" and 0 otherwise.
Question 7.	How important is it to come from a wealthy family? (only asked to parents)	Equals 1 if "ex- tremely important" and 0 otherwise.

Table A3: Parameterizing Work-Welfare Attitudes

Notes: <sup>†</sup> Youth were not given the option to answer "doesn't matter at all."



Notes: The squares represent observed variables. See Table 4 for parameter estimates in this model.

Figure 1: Path Diagram for Support of Social Benefits Model (Baseline)