Working Paper

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Culture of Origin, Parenting, and Household Labor Supply

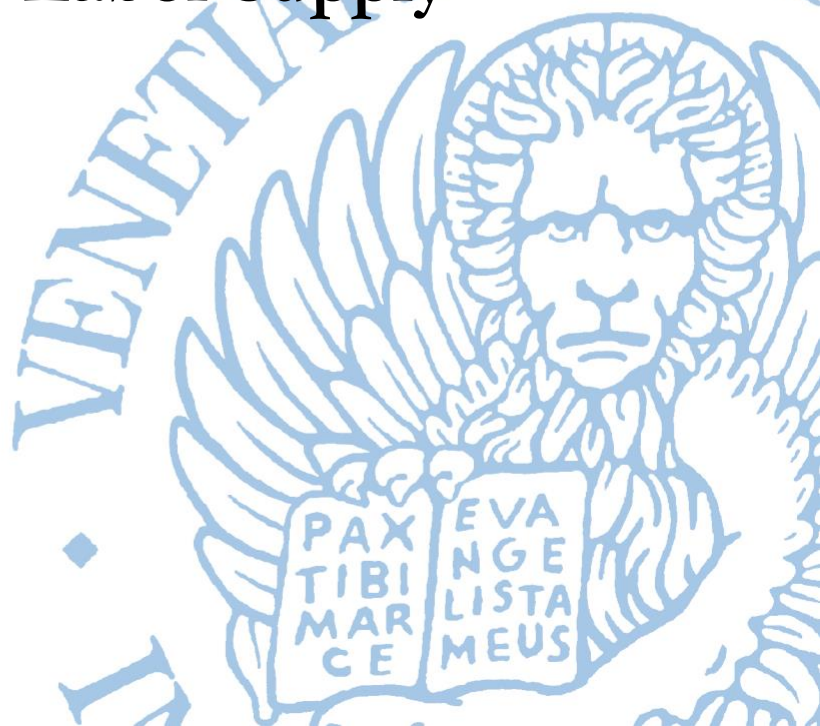# Culture of Origin, Parenting, and Household Labor Supply

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Abstract

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July 12, 2023

Abstract

This paper analyzes how a cultural trait that values "engagement" in child-rearing activities affects the choice of parents concerning parental investments and labor supply. We use data from the World Value Survey to construct a country-specific measure of parental engagement, which we associate with the time investments in children of first- and second-generation migrants in Australia. We show that migrant parents from more engaged cultures increase their time investment during weekends, in particular in play activities, while spending less time with their children during working days. We also show that these parents are more affectionate and are more likely to discipline the children and to reason about their children's misbehavior than individuals from less engaged cultures. Finally, we provide evidence that culture-specific parental engagement features a more egalitarian allocation of parenting vs. labor supply tasks by the couple. We interpret this as indirect evidence that fathers may have a greater marginal utility from parenting time than mothers, on average.

JEL Classification: D10, J13, J15, J22, Z13

Keywords: culture, parental investments, parenting, labor supply

1 Introduction

In the last half-century, there have been major changes in the way men and women spend their time. Women's time spent in paid work has increased substantially, as has the time parents, particularly fathers, spend with children (Bianchi et al., 2006). The long-term effects of this process are not restricted to the labor supply, productivity and gender roles in society but also involve the quality of children raised by families. It is well known that parenting inputs and family environment are essential for child development, particularly during the early years (Heckman and Mosso, 2014; Heckman, 2008; Almond and Currie, 2011; Doepke and Zilibotti, 2017). Financial inputs to the parenting process should also be considered, which make household labor supply an important dimension of parental engagement.

A well-established literature has analyzed the microlevel determinants of monetary and time investments of parents in children (see, e.g., Guryan et al., 2008; Agostinelli and Sorrenti, 2018). However, we know much less about the way preferences for parenting activities determine the time allocations of households. Some papers investigate individual preferences for family amenities vs. work that are deeply rooted in cultural factors. They show that the relative intensity of such preferences shapes individual labor supply decisions and the allocation of tasks within the household in different ways for men and women . (see, e.g., Fernández, 2007; Fernández and Fogli, 2009; Alesina and Giuliano, 2010; Moriconi and Peri, 2019; Blau et al., 2020).[1] Individual engagement in parenting activities seems likely to play a key role in this. Attitudes and preferences regarding parenting practices can have important effects on the amount and quality of time spent with children and ultimately determine the labor supply of parents. A recent literature provides evidence of large cross-country heterogeneity in societal preferences regarding the way parents intervene in children's choices (Doepke and Zilibotti, 2017; Doepke et al., 2019). Obviously, parenting preferences are naturally embodied in the time allocations of parents. For this reason, we know very little about the way preferences translate into actual decisions.

This paper tries to advance in this direction by analyzing how engagement in child-rearing activities determines the time parents spend with their children and affects their labor supply. We take three steps to identify parental engagement and separate its effect from other individual or contextual determinants of parental investments. First, we construct a culture-specific dimension of parental engagement that is different across countries of origin. This is likely to change slowly over time, and we consider it a predeter-

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[1]These studies adopt the widely acknowledged definition of culture by Fernández (2016), which stresses that cultural differences consist of "systematic variation in beliefs and preferences across time, space, or social groups". This definition takes a practitioner's approach and suggests that cultural effects, e.g., on individual behaviors or economic outcomes, can be better identified by exploiting cross-cultural variations in preferences and beliefs.

mined preference parameter. Second, we analyze whether this country-specific parental engagement affects the investment decisions of first- and second-generation migrant parents regarding their children. We analyze total time investment and its allocation during weekdays and weekends. We also consider the different activities carried out with the child and the quality of parent–child interactions. In the final part of the paper, we shift the analysis from the individual parent to the household. This allows us to assess how parental engagement affects the distribution of parenting tasks and labor supply between the mother and the father within the household.

Our research methodology relies largely on the epidemiological approach proposed by Fernández (2007) that separates the effect of culture from that of economic and institutional incentives operating in the destination country of migrants (see Alesina and Giuliano (2015) for a comprehensive discussion). We construct an origin-specific indicator of parental engagement by using individual-level data from the World Value Survey (WVS). In particular, we focus on the following question: *Here is a list of qualities that children can be encouraged to learn at home. Which, if any, do you consider to be especially important?* We consider individuals who listed *obedience* as an important child quality. We isolate a predetermined, country-specific component of the importance attached to obedience as the fixed country effect in a regression including all WVS respondents in surveyed countries after controlling for their observable characteristics. We then associate this country-specific indicator with the corresponding origin of migrant parents living in the country of destination.

We measure the parenting behaviors of migrant parents by using a very rich survey dataset on Australian children and their families. These data contain several questions revealing how much time each parent spends with the child alone, how this time is used (e.g., for childcare, play, education purposes) during the week and weekends, and parental attitudes (whether warm, discipline enacting, or reflective) in the interactions with their children. These measures are taken when children are aged 4 or 5 years.[2] Compared to similar datasets available for the U.S. (e.g., ATUS), our data have very precise identifiers for the country of birth of the child, parents and grandparents. We use this information to define first-generation migrant parents as those who are residents in Australia but were born abroad and second-generation migrant parents as those born in Australia but whose parents (i.e., the grandparents of the children) were not born in Australia.[3]

The Australian study case offers high external validity to our analysis. First, the Australian population has a very large share of immigrants.[4] with a composition by

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[2]The economic literature on human capital accumulation suggests that investments received at this age may have long-term implications (Heckman, 2008).

[3]A first-generation migrant is born in the country of origin, while a second-generation migrant is born in Australia from foreign parents. In contrast to "migrants," we call *natives* parents those who are born in Australia and whose parents (i.e., the grandparents of the child) were also born in Australia.

[4]Data from the Australian Bureau of Statistics show that residents without Australian citizenship account for 12% of the Australian population. Spielvogel and Meghnagi (2018) shows that immigrants

continent of origin, which is very similar to the average of OECD destinations (OECD, 2012). Our survey data are representative of the Australian population, which implies that we have a relatively large sample of first-generation and second-generation migrant parents from up to 35 countries of origin located on all continents. Second, the parenting style in Australia is quite similar to that in the U.S., as it balances elements of interventionist and permissive parenting (Doepke et al., 2019).

The empirical analysis relates the country-of-origin indicator of parental engagement with the individual parenting outcomes of migrant parents in Australia. We argue that after controlling for their own individual characteristics, the characteristics of their children and the family, origin-specific migration stocks, and other characteristics of the country of ancestry, the coefficient of the country-specific indicator measures the effect of culturally determined parental engagement on parental investment. This is because idiosyncratic individual preferences, which can be correlated with individual characteristics and with the choice of migration, do not affect the construction of the country-specific indicator of parental engagement. Throughout the paper, we extensively discuss the validity of our empirical strategy.

We find that parental engagement in the country of origin does not alter the total time investment of parents, as the results do not show any statistically or economically significant effect on total weekly hours parents spend with their children. Our results suggest that cultural engagement in parenting is associated with a redistribution of time investment from weekdays to weekends, especially for quality time involving play with the child.

To have an idea of the magnitude of the estimated effect, consider a one standard deviation increase in country-specific engagement, which is comparable to the distance between the French parenting culture (relatively engaged) and the Italian culture (more permissive). Our estimates suggest that, on average, individuals with a French parenting background spend 15 minutes less time alone with their own child during the week and approximately 8 minutes more during the weekend compared to an observationally equivalent parent of Italian origin. These are sizeable magnitudes, larger than one standard deviation of the respective variables in the sample. We also show that parents coming from a more engaged culture are up to 5 percentage points more likely to be affectionate and warm and able to enact discipline and engender reflection and reasoning in their child. Finally, the household-level analysis suggests that a one standard deviation increase in parental engagement induces a redistribution of parenting time from mother to father and an increase in maternal employment probability by 2.5 percentage points. This is approximately one-fifth of the employment gap differential between Italy and France. We interpret this result as evidence that greater parental engagement of the household in-

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contributed to a 9.5% growth of the labor force between 2005 and 2015, which is the fourth-largest share in the OECD, after Switzerland, Luxembourg, and Ireland.

duces a higher investment of time by the parent who draws more utility from parenting time at the margin, that is, the father.

Our results have important implications for the child development literature. We find that parenting culture increases parental time in play and social activities and the parent's warmth and discipline with the child, which have been found to be among the most productive inputs for child cognitive and noncognitive development at this age (Fiorini and Keane, 2014). Moreover, even though the evidence on the role of the fathers' time is still limited, according to a few notable exceptions (Del Boca et al., 2014), our findings that fathers' time increases may translate into an increase in child cognitive development.

The paper is structured as follows. Section 2 discusses the contribution of this paper in the context of the literature. Section 3 presents a theoretical framework that rationalizes our research question and analysis and introduces some key issues for identification. Section 4 presents the econometric strategy and discusses the potential threats to identification. Section 5 describes the individual-level dataset used for the analysis. Section 6 presents the main results on parental investments, while Section 7 extends the analysis to consider implications at the household level. Finally, Section 8 concludes.

2 Literature review

This paper relates to two lines of research. The first line has studied the nature and determinants of parental investment in terms of the time and material resources devoted to raising their children (see, e.g., Guryan et al., 2008). The second has analyzed how the cultural transmission of family attitudes affects the labor supply of the household, with a somewhat specific focus on women (see, e.g., Fernández et al., 2004; Fernández and Fogli, 2009). While they nourish two distinct strands of the economics literature, these two directions of research are highly complementary. They both build upon the Beckerian framework that discusses the time allocation between market production versus alternative uses of time (Becker, 1965). The first line of research points out that time spent with children is a unique form of investment that increases the productivity of "future adults", being as agreeable to parents as individual leisure activities. The second line uncovers that preferences for family amenities (relative to market consumption) are rooted in family culture and determine the choice between home production and labor supply within the household. This paper points out a preference trait related to parental engagement that allows us to establish a precise connection between these two strands.

Guryan et al. (2008) show that in most developed countries, the time parents spend with their children is characterized by a strong positive income and educational gradient (opposite to that observed for typical home production activities). More educated parents spend more time with the child in all activities than less educated parents, despite the higher opportunity cost induced by better labor market opportunities. Hsin and Felfe

([2014](#)) follow up on this evidence by analyzing the existence of a trade-off between work and time spent with children by U.S. mothers. They show that employed mothers do not necessarily spend less quality time with their children than nonemployed mothers. If anything, maternal work reduces time spent in activities that are unproductive (or even detrimental) to the child. Recently, several papers have attempted to analyze the contribution of time and money inputs to children's development. By using a structural estimation approach, Del Boca et al. (2014) show that maternal time is more important than the father's time during early childhood, while Brilli (2022) shows that the time spent with a highly educated mother is more productive than that spent with a less-educated mother for the child's subsequent cognitive development. Similarly, Del Bono et al. (2016) find that maternal time is a quantitatively important determinant of cognitive and noncognitive skill formation. Fiorini and Keane (2014), by using the same data source that we use in this paper, take a step further and analyze the productivity of a variety of activities performed by children with their parents or with alternative carers. They find that time spent with parents and the quality of parent–child interactions are the most productive inputs for noncognitive skill development.[5] While not looking explicitly at children's outcomes, our paper is also related to these studies, as it points to culture as an important determinant of parental investments.

Our novel contribution to this literature is to identify parenting preferences as a determinant of the investment of parents in their children, conditional on all relevant individual and family characteristics.[6] The psychological development literature had pointed out long ago the importance of preferences and attitudes for parental behavior in child rearing (Baumrind, 1967; Maccoby and Martin, 1983). More recently, Doepke and Zilibotti (2017) and Doepke et al. (2019) built on this knowledge to formalize a taxonomy of 'parenting styles', which are based on the different societal views regarding the role of parents in children choices. These path-breaking studies in economics highlight remarkable cross-country differences in parenting styles based on data from the World Value Survey. They show that in some countries, parenting attitudes value (among other things) children's obedience to and compliance with the authority of parents.[7] Such attitudes emphasize

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[5]Fiorini and Keane (2014) also show that time spent in educational activities is the most productive input for cognitive skills. An established literature in economics showed that cognitive and noncognitive skills could be modeled from early childhood and that both play an important role in subsequent human capital accumulation (see seminal papers by Cunha et al. (2010) and Heckman et al. (2006)). In addition to parental time and parenting behavior, many studies have analyzed the role of maternal employment (see Ermisch and Francesconi, 2005 for a review), household income (e.g., Blau, 1999; Dahl and Lochner, 2012; Løken et al., 2012), and nonparental forms of care (e.g., Bernal and Keane, 2010; Bernal, 2008; Brilli, 2022) as important inputs of the human capital production process during early years.

[6]Guryan et al. (2008) proposed parenting preferences for time spent with their children as a plausible explanation consistent with the positive educational gradient of parental time. However, they do not offer any evidence in favor (or against) this explanation relative to competing reasons. They mention these channels as an important task for future research.

[7]Notice that these recent studies in economics do not attach to "authority" the negative connotation this term had in development psychology beginning with Baumrind (1967). As authoritarian parenting

the engagement of parents to intervene directly in their children's choices and to explain the reasoning behind their decisions to affect children's preferences.[8] In other countries, societal views support more permissive parenting styles, which value independence and autonomy as important child qualities instead and require less effort from parents.

Building upon this literature, we implement the "epidemiological approach" by Fernández (2007) and Fernández and Fogli (2009) to establish a direct association between parental engagement in the country of ancestry and the actual investment by migrant parents in Australia. In practice, we relate parental engagement measured in the countries of origin to the time allocation of migrant parents in Australia, as well as the quality of their interactions with children (in terms of warmth, discipline, and reasoning induction). The specific parenting style adopted in the country of origin of the immigrant may obviously depend on the institutional context in which individuals live and respond to economic incentives (notably the return to education and the level of inequality in the society; see Doepke and Zilibotti, 2017). However, institutional and economic factors do not affect the behavior of emigrant parents to a different country (in particular those who were born in the destination or moved there very young). Accordingly, any association between parenting attitudes in the country of origin and the corresponding behaviors of those who emigrated from that country to the destination may only be driven by culturally transmitted factors. To the best of our knowledge, there is no evidence of an effect of culture on the way parents raise their children.[9] There is widespread evidence on the effect of preference formation and culture on living arrangements, female and male labor supply, and fertility decisions (see Giuliano, 2007; Fernández et al., 2004; Giavazzi et al., 2013; Moriconi and Peri, 2019; Fernández and Fogli, 2009). There is also evidence on family ties and gender culture, explaining employment differentials between males and females, youth and elderly across developed economies (see Algan and Cahuc, 2005; Alesina and Giuliano, 2010). These studies suggest that strong family ties and traditional gender cultures are associated with higher home production, larger families, and lower labor force participation of women. Some related studies show that the characteristics of the country from which migrants emigrated affect the gender allocation of tasks within the household (e.g., Blau et al., 2020). A related strand of this literature analyzes how the values and beliefs in the country of ancestry shape education decisions and achievements, also from a gender perspective (Nollenberger et al., 2016; Figlio et al., 2019; Rodríguez-Planas and

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covers many aspects of parenting behavior, they simply use the concept of authority to denote a direct intervention of parents to restrict their children's choices (e.g., in the selection of peers; see Agostinelli et al., 2020).

[8]The emphasis on direct and indirect intervention of parents in children choices characterizes authoritarian, authoritative, intensive, and helicopter forms of parenting in different ways. See Doepke et al. (2019) for a thorough discussion.

[9]By using data from Australia, Cobb-Clark et al. (2019) show that parenting styles can be distinguished from time-intensive investment and respond to family socioeconomic status. However, they do not address the role of culture.

[Nollenberger](), 2018). This is the first paper to explore the role of culture in the analysis of parenting, and to shed light on its effect on parental investment and the household labor supply. In particular, our household-level analysis reveals that culture-specific parental engagement is associated with a reallocation of labor supply tasks between the father and the mother. This is an important finding that touches upon the literature showing that nontraditional norms mitigate the employment penalty of mothers relative to fathers or childless women ([Moriconi and Rodriguez-Planas](), 2021; [Kleven](), 2022). This literature examines beliefs regarding the more balanced roles that men and women should have in the family and the labor market from a cross-country perspective. Our paper points out a similar effect of parental engagement at the household level, particularly through channels provided by the culture of the mother.

3   Theoretical Framework

In this section, we present a framework that provides a theoretical foundation for our empirical analysis and prompts an interpretation of the estimated coefficients and a discussion of identification and possible biases. The model describes an agent time allocation decision between labor and nonlabor activities in the spirit of [Becker]() (1965). In particular, we consider a specific type of nonlabor activity, i.e., parenting. The model allows us to obtain an equilibrium prediction about the time investment in parenting activities of an individual from culture of origin o residing in the representative country of destination r.

3.1   Preferences over parenting activities

Consider an individual parent i of culture o, which denotes her country of origin, working in the representative country of residence r. For expositional simplicity, we assume that each individual splits her time endowment (which we standardize to one for convenience) between parenting activities with measure h_{io} and supply of labor with measure $(1-h_{io})$.[10] The subscript "io" makes explicit that the time allocation choice between labor and parenting by the individual depends on individual characteristics and on the country of origin o. The time allocation is made to maximize a quasilinear utility function, which depends positively on consumption and time spent in parenting activities, as follows:

$$U_{io} = c_{io} + \theta_{io} v(h_{io}) \tag{1}$$

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[10]In practice, we abstract from leisure in the model. This is consistent with evidence from the U.S. that sees a constant rise in working and parenting hours starting in the 1960s ([Bianchi et al.](), 2006). This is also consistent with what we observe in our data, where, on average, parenting time and work (including housework) already account for 11.5 hours a day.

where c_{io} is individual consumption and $v(h_{io})$ is the utility that the parent obtains from time spent in parenting activities h_{io}.[11] We assume that $v(.)$ is strictly concave, and its shape is common to all individuals. Parameter θ_{io} captures individual engagement in parenting activities. A larger value of θ_{io} implies that an individual experiences higher utility from investing his or her own time in children compared to work.

3.1.1 Cultural and Individual Preferences and the Selection of Migrants

The parental engagement variable θ_{io} can be thought of as random and distributed across the population of the country of origin o, whose realization is specific to each individual i. We assume that the culture-specific component of the variable is the average preference in country of origin o, common to all individuals from that culture of origin. Namely, while there is variation among individuals in their culturally determined preference for parenting activities, there is an average level determined by norms, traditions and culture in a country. For simplicity, we assume that the parental engagement parameter is log linear in its average cultural component and in its idiosyncratic component, so that for a generic individual born in country o, it can be written as:

$$\ln \theta_{io} = \ln(\overline{\theta}_o) + \ln(\theta_i). \tag{2}$$

Our focus is on identifying the impact of the "culturally determined" component of parental engagement, $\ln(\overline{\theta}_o)$. Featuring Moriconi and Peri (2019), there are two main advantages of focusing on this origin-specific component of parental engagement compared to $\ln \theta_{io}$. First, the idiosyncratic component, $\ln(\theta_i)$, varies across individuals and, once the culture-specific average, $\ln(\overline{\theta}_o)$, is subtracted, this component has a zero mean across the population in the country of origin. The idiosyncratic component may not be orthogonal to other characteristics of the individual (such as her productivity, e_i, which we will introduce below). This implies that part of the correlation between $\ln \theta_{io}$ and individual time allocation choices can be due to correlation with an individual's unobserved characteristics.

Moreover, one should consider that we observe the parameter θ_{io} for a group of emigrants from country o in the representative destination (call it r). If there is selection and sorting of emigrants along the preference dimension, then the average value of θ_i for migrants from o can be nonzero and possibly correlated with some feature of the country of residence. The expression of preference for the group of migrants from o to country r can therefore be written as:

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[11]As the parenting dimension considered here is the time spent by the parent with the child, by establishing that the parent obtains direct utility from it, we are implicitly assuming that the cost associated with parenting is forgone labor (see also Section 3.1.2). This is consistent with a framework in which parenting represents an activity that the parent considers meaningful or rewarding by itself (see, e.g., Wang, 2013 for the U.S..)

$$\ln \theta_{io}^r = \ln(\overline{\theta}_o) + \ln(\overline{\theta}_o^r) + \ln(\theta_i^1). \tag{3}$$

In expression (3), the term $\ln(\overline{\theta}_o^r)$ represents the average (positive or negative) selection and sorting of the migrants to country r, and $\ln(\theta_i^1)$ is the idiosyncratic residual preference of that group of migrants. A problem will arise if the selection term is correlated with the characteristics of country r, such as its productivity and economy. As we will see below, such a correlation may bias the estimate of the impact of preferences on parental investment.

However, focusing on $\ln(\overline{\theta}_o)$ addresses both concerns. This value can be measured for the total population from country o, and it is orthogonal to individual characteristics and to immigrant selection. If the three components are log linearly separable and independent, as assumed above, then a consistent estimate of the culture-specific preferences for the country of origin is the average preference of people living in country o, which is very close to the average preference of the population in country o (as emigrants are usually a small fraction of the population).

3.1.2 Parenting time

The trade-off between work and parenting for individual "io" is easily derived if we assume that she only perceives labor income and she consumes all of it in one period (which can be treated as one year). The budget constraint can be written as:

$$c_{io} = (1 - h_{io})w_{io} \tag{4}$$

where w is the individual hourly wage. Maximizing (1) with respect to h_{io}, subject to the budget constraint (4), we obtain the first-order condition:

$$\theta_{io}v'(h_{io}) = w_{io}, \tag{5}$$

where given the quasilinear structure of preferences, the marginal utility of consumption is equal to the marginal utility of income, which is equal to 1. Equation (5) describes that the optimal choice of time devoted to parenting is such that the marginal benefit of one additional hour of parenting in terms of the reward from parental engagement equals its opportunity cost in terms of foregone wages. By performing comparative statics on the first-order conditions, we derive how parental engagement and wages affect parenting hours:

$$\frac{\partial h_{io}}{\partial \theta_{io}} = -\frac{w_{io}}{v''_{hh}} > 0, \quad and \quad \frac{\partial h_{io}}{\partial w_{io}} = \frac{1}{\theta_{io}^2 v''_{hh}} < 0 \tag{6}$$

From (6), it is intuitive that a higher engagement in parental activities induces the individual to spend more time with his or her own child; conversely, an increase in the market wage reduces parenting hours by raising their cost relative to labor supply.

3.2 Equilibrium and Estimating Equation

To formally derive the estimating equation, let us now assume that parenting utility takes the following functional form $v(h_{io}) = h_{io}^{\beta}$, where β is a parameter between 0 and 1, which guarantees decreasing marginal utility from parenting. By rewriting equation (5), we obtain the following allocation of time to parenting:

$$h_{io} = (\theta_{io}\beta)^{\frac{1}{1-\beta}} (w_{io})^{\frac{1}{\beta-1}}. \tag{7}$$

Take the natural logarithm on both sides of equation (7) and obtain:

$$\ln(h_{io}) = \frac{1}{1-\beta}(\ln \beta) + \frac{1}{1-\beta}(\ln(\theta_{io}) - \ln(w_{io})) \tag{8}$$

Additionally, let us assume that wages are described by a standard mincerian wage function

$$\ln(w_{io}) = a(e_{io}) + b(A_o). \tag{9}$$

Equation (8) describes wages as depending on an individual's observable and unobservable abilities, e_i, determined by his schooling, ability, experience and skills, and persistent characteristics of the country/culture of origin, A_o, that affect the productivity of individuals, such as work ethic, values, language and beliefs. By incorporating the wage equation (9) and the decomposition (3) into equation (8), we obtain the estimating equation:

$$\ln(h_{io}) = \widetilde{\beta}\ln\beta + \widetilde{\beta}\ln(\overline{\theta}_o) + \widetilde{\beta}\ln(\overline{\theta}_o^r) + \widetilde{\beta}\ln(\theta_i^1) - \widetilde{a}\ln(e_i) - \widetilde{b}\ln(A_o) \tag{10}$$

where $\widetilde{\beta} = 1/(1-\beta)$, $\widetilde{a} = a/(1-\beta)$, and $\widetilde{b} = b/(1-\beta)$. In expression (10), variable $\ln(h_{io})$ measures the natural logarithm of the time allocated to parenting activities by individual i with culture of origin o in the destination country. Variable $\ln(\overline{\theta}_o)$ captures the culture-of-origin-specific engagement in parental activities. This is what we define as "culturally determined" engagement, and it is uncorrelated with the individual-specific aspect $\ln(\theta_i^1)$. Similarly, it is also uncorrelated with the ability term e_i. Hence, the component $\ln(\overline{\theta}_o)$, which can be measured from all people with origin in country o, identifies the effect of culturally determined parental engagement on the parental investments of migrants. The migrant sorting part, $\ln(\overline{\theta}_{or})$, is a term capturing the migrant average preference as a group, if they are different from those of all people with origin in o. The other variable specific to country o in equation (10) is the country-of-origin specific component of productivity described by A_o. Both terms should be properly controlled for in

the empirical analysis. While one might argue that the cultural engagement of country o may affect the labor market institutions and regulations of country o itself, the impact on the time allocation of individuals of culture o working in a different country is likely mediated by culture-specific preferences alone. By considering first- and second-generation migrants, we aim to isolate such an effect.

4   Empirical Implementation and Discussion of Identification

Equation (10) provides the basis for our empirical strategy and for the discussion of important issues of estimation, identification and potential biases. First, let us emphasize that we are interested in the estimates of the causal impact of culture-of-origin-specific parental engagement, $\ln(\overline{\theta}_o)$, on parental investment for individual i from culture o working in the representative country of destination. Note that in equation (10), the parameter $\widetilde{\beta}$ is also the coefficient of terms $\ln(\theta_i^1)$ and $\ln(\overline{\theta}_{or})$. The former describes individual-specific preferences that can correlate with the unobserved components of skills and abilities, the term $\ln(e_i)$. The latter is the selection component of migrant preferences that can correlate with characteristics or institutions of the representative country of destination. Both correlations, if not properly accounted for, would imply that the estimated coefficient on those variables is a combination of $\widetilde{\beta}$ and $\widetilde{a}$. For instance, if individuals more engaged in parenting are also more skilled in a nonobservable way, then this nonobservable characteristic will generate a spurious positive correlation between $\ln(\theta_i)$ and $\ln(e_i)$, inducing a bias in the estimate of $\widetilde{\beta}$. Alternatively, if migrants to the destination country, as a group, are positively selected in their preference for parenting activities because the country of origin has institutions that, e.g., help preserve the work–life balance, this will generate a spurious correlation that will bias the estimated coefficient of $\ln(\theta_o^r)$ on $\ln(h_{io})$. Hence, in our analysis, we isolate the measure of $\ln(\overline{\theta}_o)$ and its coefficient as the one of interest.

We generate the measure $\ln(\overline{\theta}_o)$, which we label *parental engagement*, by using a data source, the World Value Survey (WVS), which is different from the one from which we obtain information on migrants' parenting behavior. In particular, we use all individuals with origin from o, and control for individuals' characteristics, so that such a measure is independent of migrant selection and should not be affected by individual biases. We use the following question, which is available in all waves of the WVS: *Here is a list of qualities that children can be encouraged to learn at home. Which, if any, do you consider to be especially important?.* Thus, we use the proportion of individuals listing *obedience* as an important child quality as a measure of parental engagement. Indeed, the recent literature that investigated cross-country differences in parenting values and styles identified the importance attached to the *obedience* of children as a revealed preference trait, which may

characterize the effort of parents that intervene in the education of children in general. The evidence presented in Figure 1 supports this statement. The figure displays a positive correlation of our cultural measure of *parental engagement* (details about construction are in the next paragraph) with a comparable country-specific measure of time-intensive parenting (left-hand side panel) and a negative correlation with permissive parenting, featuring weak interventions (if any) of parents in the education of their children. Both correlations are sizeable and highly significant.[12]

To measure *parental engagement*, we consider working-age individuals (i.e., aged 15–70) in the countries of origin and construct a dummy variable equal to 1 if the individual i from country o lists *obedience* as an important child quality, and 0 otherwise. To retrieve a country-specific component from individual engagement, we estimate the following equation on the national samples of all countries included in the WVS:

$$(Parental\_Engagement)_{io} = \varphi_o + bX_{it} + \epsilon_{io}. \tag{11}$$

In equation (11), φ_o is the country fixed effect, while X_{it} is a vector of individual controls including age, a dummy for females, two dummies for secondary and tertiary education, a dummy for being married, one dummy for having children and two dummies for being unemployed or inactive in the labor market. We use the predicted country FE (φ_o) as our proxy of country-specific engagement in child-rearing activities ($Parental\_Engagement_o$). This has the advantage of being a country-specific average, which is conditional on individual characteristics. Being obtained in the country of origin of the migrants, after partialling out the effect of individual characteristics, this component is immune to reverse causality going from local economic outcomes to individual preferences, which is a typical advantage of the epidemiological approach (Fernández, 2007). As this is the predicted country-specific effect from equation (11), it describes a "latent component of parenting attitudes that relates to the country of origin only.

($Parental\_Engagement_o$) obtained in this way is the baseline regressor in our main empirical specification. The main outcomes of interest are proxies for $\ln(h_{ior})$ in expression (10). In the main analysis, these are time investment measures such as total weekly hours of parenting, distinguishing between weekdays and weekends, and between childcare and quality time (e.g., playtime). Throughout the paper, we also draw implications regarding the quality of parent–child interactions (in terms of warmth, firmness, and induction of reasoning with the child) and for the labor supply of the household.

In our baseline regressions, the unit of observation is the migrant parent i, from country of origin o, residing in Australia. Hence, the basic estimated specification is:

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[12]Notice that in the main analysis, we do not use the measure of intensive parenting because this is partly based on the importance parents attach to "hard work", a dimension that has little relevance for small children. However, in Table 5, we directly relate our analysis to parenting styles that feature heterogeneous degrees of engagement of parents, namely, intensive, helicopter and permissive parenting (See Doepke and Zilibotti, 2017, Doepke et al., 2019).

Figure 1
Parental engagement and parenting styles
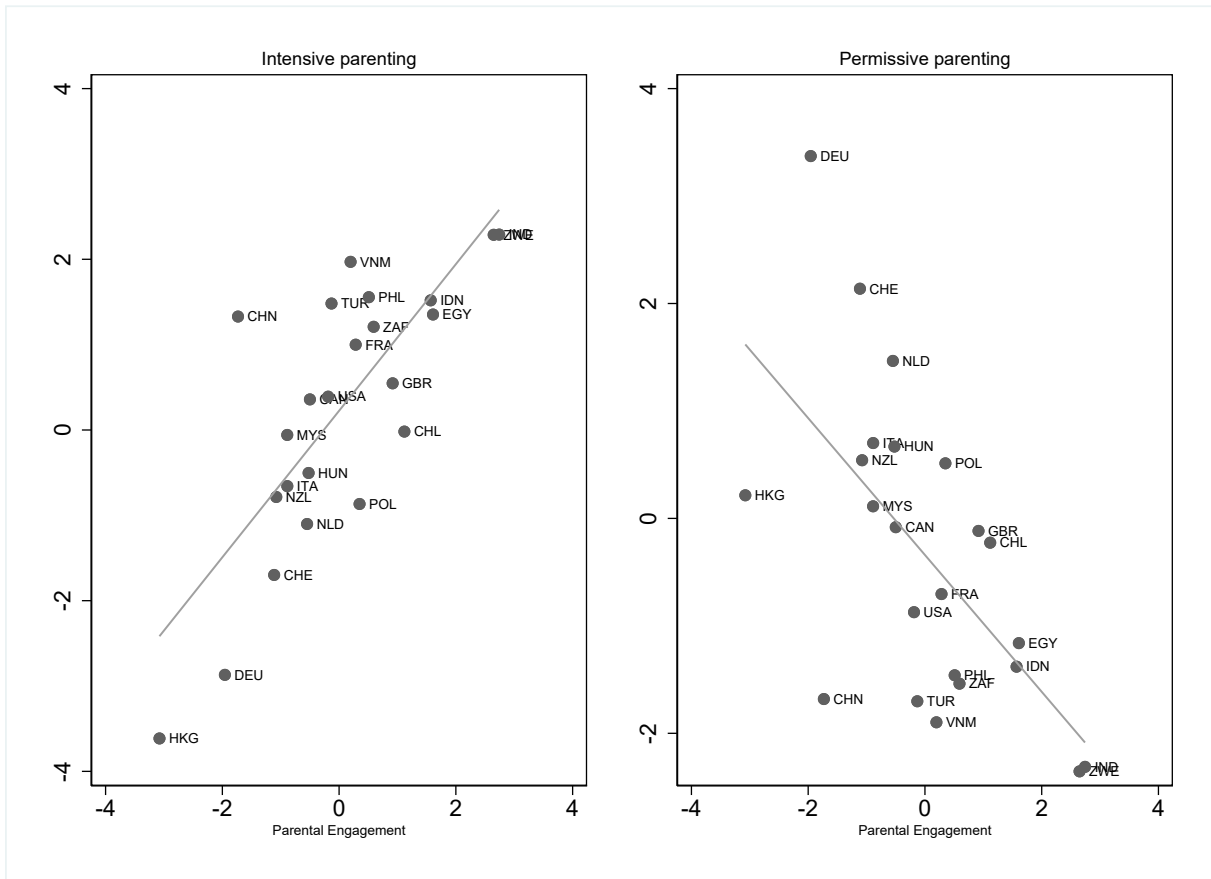
Notes. The figures report the correlation of $Parental\_Engagement_o$ with $Intensive\_parenting_o$ (left-hand side) and $Permissive\_parenting_o$ (right-hand side). $Intensive\_parenting_o$ is the country-specific fixed effect obtained from equation (11) on a dummy equal to 1 if parents value the importance of obedience or hard work, and 0 otherwise. $Permissive\_parenting_o$ is the country-specific fixed effect obtained from equation (11) on a dummy equal to 1 if parents value the importance of imagination or independence and neither value obedience nor hard work, and 0 otherwise. All regressions are conditional on the usual vector of individual characteristics (age, a dummy for females, two dummies for secondary and tertiary education, a dummy for being married, one dummy for having children and two dummies for being unemployed or inactive in the labor market). The estimated coefficient for intensive parenting is 0.859 (0.155), the estimated coefficient for permissive parenting is -0.637 (0.177), and both are statistically significant at the 1% level. **Source**: Own elaborations on WVS data.

$$y_{io} = \alpha + \beta(Parental\_Engagement_o) + \delta X_{io} + \phi Y_{io} + \varphi Z_{io} + \gamma C_o + \epsilon_{io} \qquad (12)$$

where y_{io} is the parenting outcome of parent i from country o and $Parental\_Engagement_o$ is the parenting culture of origin country o. The coefficient β in equation (12) represents the effect of culture in the country of origin on the parenting choice of the migrant parent. This is estimated conditional on X_{io}, Y_{io}, and Z_{io}, which are vectors of individual characteristics of the parent, the child, and the family as a whole, respectively.[13] These observable characteristics are important determinants of productivity and efficiency, i.e., the term $\ln(e_i)$ may be correlated with parenting behavior in equation (10). The term C_o captures country-of-origin characteristics that potentially affect individual unobserved human capital and productivity, which may be correlated with the culture-of-origin preference for parenting, namely, the term $\ln A_o$ in equation (10).[14] Finally, the term ε_{io} is a zero-average idiosyncratic error, capturing measurement error and other unobservable characteristics affecting individuals' decisions about parenting.[15]

Given the arbitrary units of the variable $(Parental\_Engagement)_o$, we estimate the parameter β using a reduced-form epidemiological approach rather than estimating a two-stage specification in which culture of origin is a proxy (instrument) for individual parenting preferences. The identifying assumption in equation (12) is that, conditional on the control variables, the culture of origin engagement affects the parenting behaviors of immigrants in Australia only via their own parenting preferences. While immune to reverse causality, the epidemiological approach is sensitive to the selection and sorting of migrants. If people select themselves into migration and to Australia as a function of their parenting or work preferences, then migrants as a whole will have different preferences than the average in the country of origin, which may generate a bias in the estimate. This issue is exacerbated by the fact that our data refer to a specific country of destination, Australia, and the parents in our sample may have chosen to migrate to Australia because of its cultural or institutional features.

To ensure that these issues of selection and sorting do not bias our estimates, we perform several important checks. First, we repeat the baseline analysis by including the country-of-origin's immigration rates to Australia or emigration rates from the country of

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[13]In the analysis, we control for the parent's gender, age at childbirth, level of education and region of residence, as well as for the child's gender, number of siblings and birth order; we also control for whether the child lives in an intact household where both mother and father are present. More details on the specification of dependent and control variables used in the analysis are provided in Section 5 and in Appendix B.

[14]In the baseline specification, we control for the country-of-origin's GDP, proportion of individuals with tertiary education, and labor force participation rate. In a further robustness check, we add the unemployment rate and the fertility rate in the country of origin.

[15]In the baseline analysis, we cluster the standard errors at the country-of-origin level. However, as specified in Section 5 below, given that in the data we may observe both parents of the same child, we also perform a robustness analysis in which we cluster standard errors at the country-of-origin and at the child level.

origin, which allows us to control for the intensity of selection and sorting between each country of origin and Australia. Second, while the baseline analysis includes both first- and second-generation migrant parents, we show that the results hold if we only consider second-generation parents or first-generation parents who migrated before age 10. For this group of migrants, which we label the *1.5 migrant generation*, there is less scope for selection because the migration decision was made by their parents. Third, we account for the biases that may be introduced into the analysis by special relationships between source countries (in particular, the UK) and Australia that determine an overrepresentation of migrants from these countries. We show that the results are not crucially affected if we randomly decrease the number of observations from these source countries, despite the significant reduction in sample size.

5   Data

For our analysis on the effect of culture on the parenting behavior of parents, we obtain individual-level information on the parenting behaviors of migrant parents from the Longitudinal Study of Australian Children (LSAC hereafter). We use the LSAC data to obtain information on (i) parenting and (ii) demographic characteristics at the parent and child levels for a sample of migrants living in Australia.

Starting in 2003, the LSAC surveys two cohorts of children every two years and collects information on their well-being, education and health, as well as on their families. The first cohort was born in 2003–2004 (this is called *B-cohort*), and the second cohort was born in 1999–2000 (this is called *K-cohort*). For our analysis, we use both cohorts and exploit questions on children's time allocation, parenting attitudes and behaviors, as well as on demographic information on the child and the parents. A nice feature of the data is that information on time allocation and parenting is provided for both mothers and fathers; hence, our sample includes parents of both genders.

We investigate two complementary dimensions of parenting outcomes, both measured when the children are aged 4–5. The first dimension regards the amount of time parents invest in several parental activities, as well as their allocation during the week. LSAC includes a children's time use diary module on a weekday and a weekend day, which provides information on the type of activity performed and on the person with whom the activity was carried out. We thus define the total weekly time spent by the parent *alone* with the child, and we also distinguish the amount of weekly time spent in *play*, *educational activities* and using *media*.[16] In addition to the total weekly time spent in each category, we distinguish between weekdays and weekend days. This is an important feature of our data, which allows us to investigate the implications of parental activities

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[16]This classification follows Fiorini and Keane (2014), who use the same data source. See Appendix B for additional details on the time classification.

for the labor supply of the household, likely occurring during the week.[17]

The second dimension refers to the quality of parent–child interactions, measured as the degree to which the parent shows warmth or firmness or stimulates child's reasoning when carrying out parental activities (Zubrick et al., 2014). The parenting dimension of *warmth* or responsive parenting refers to displays of affection; the *firmness* dimension refers to the credible enforcement of age-appropriate rules; and *reasoning* refers to the act of talking over and explaining to the child why she or he has misbehaved. LSAC data provide several questions about the frequency with which certain events related to parent–child interactions occur.[18] For each parent and for each dimension, we define the average over the frequency of the corresponding events, which ranges between 1 (*Never*) and 5 (*Always*). From each set of items, we then define binary variables indicating whether the levels of *warmth*, *firmness* and *reasoning* in parenting are larger than the median (Zubrick et al., 2014).

Importantly, LSAC data provide information on the country of birth of both parents and on the country of birth of the grandparents of the sampled children. As all children in the sample are born in Australia, this allows us to identify whether a child is a third- or second-generation migrant and whether a parent is a first- or second-generation migrant. To the best of our knowledge, this is the only survey dataset in the world that allows researchers to observe a sufficiently large number of migrant parents and provide extensive information on parenting behaviors. For the first-generation migrant parent, we define the country of origin as the country of birth. For a second-generation migrant parent, we assume the country of origin is the country of birth of the migrant grandparent, giving priority to the country of origin of the grandmother in case both grandparents are migrants.[19] Having identified the country of origin for each immigrant parent in Australia, we attach to him or her the country-of-origin specific measure of parental engagement described in Section 4.

For our analysis, we select first- and second-generation migrant parents in the LSAC data, and we thus drop parents who were born in Australia. In general, we consider only the 35 countries of ancestry that have at least five migrants in Australia. For the baseline analysis, we further restrict the sample to countries with at least ten immigrants in Australia. After also excluding parents for which we do not observe all outcome and control variables, we remain with a sample of 2,767 migrant parents from 23 countries of

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[17]In a further analysis, we look explicitly at outcomes related to labor force participation at the extensive and intensive margins. See Section 7 and Appendix D.

[18]See Appendix B for a list of the questions used. Notice that the questions are the same for the B- and the K-cohorts.

[19]In practice, we assume the country of origin of the second generation migrant parent is the country of birth of the grandmother, if she is a migrant, or the country of birth of the migrant grandfather in case the grandmother is born in Australia. This is consistent with evidence that mothers are more relevant for the cultural transmission process, e.g., for norms related to attitudes and gender equality (Fernández et al., 2004; Moriconi and Peri, 2019).

ancestry.

Table 1 reports descriptive statistics for the baseline sample of migrants and their families. Panel A reports information on the allocation of parenting time (in hours). On average, parents in our sample spend approximately 17 hours per week on parenting activities. Approximately three-quarters of these are allocated during weekdays, and the remaining quarter is allocated during the weekend, with considerable variability in the sample. Panel B displays information on the characteristics of parenting styles. On average, 57% of the sample exert a high level of warmth and affection to their children; a similar share of parents reports to be severe, i.e., engaged in having their own children respect rules. Finally, 76% of the sample reported engagement in a reasoned parenting style, which prioritizes children's understanding of their misbehavior.

Panel C summarizes the characteristics of the final sample in terms of the characteristics of parents, children, and family composition. It shows that the majority of parents in our sample are second-generation migrants, highly educated, with slightly more females than males.[20] The 31% lives in the capital region. The vast majority of households are intact; in these families, 80% of parents are employed and work approximately 30 hours per week on average (see Section 7 below for a detailed analysis of household labor supply). Finally, Panel D reports average characteristics of the country of origin of the migrant parents.

5.1 Descriptive Evidence

Figure 2 shows the geographical distribution of the 35 countries of origin of our migrant parents. Migrants to Australia come from all continents. Focusing on 23 countries that have at least ten migrants in our data implies the exclusion of some countries from Eastern Europe and Asia (evidenced in light gray) from the baseline analysis.[21] Figure 3 reports the distribution of $Parental\_Engagement_o$ across these 23 countries of origin of immigrants included in the baseline sample.[22] We have standardized the variable so it has zero mean and unity standard deviation. The value of the indicator varies between the minimum value of -3.1 for Hong Kong and the maximum value of 2.7 for India. Australia is in the middle of the distribution $(-.12)$, very close to the U.S. $(-.19)$,

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[20]We define a parent as having a high level of education if he or she obtains a secondary education degree. A parent is defined as young at childbirth if his or her age at the birth of the child is below the 25th percentile of the corresponding gender distribution. The results presented below do not change if we include age dummies, identifying parents giving birth before age 30, between ages 30 and 39, and older than 40 years. Results available upon request.

[21]The choice of excluding countries of origins for which we observe fewer than 10 migrants is in line with standard practice in the cultural economics literature. In the robustness checks, we report results for all 35 countries (i.e., with at least five migrants). We also report results when we restrict the sample even more and consider only countries with at least twenty migrants in the LSAC data (which implies a final sample of 18 countries of ancestry). We report these results in Table 3, Panels G, and H.

[22]Similarly, Figure A-1 in the Appendix describes variation in $Parental\_Engagement_o$ across the 35 countries (5+ migrants; see Panel A) and the 18 countries (20+ migrants; see Panel B).

Table 1

Descriptive statistics.

	Mean	SD	Min	Max	N
Panel A. Parental time					
Parental time (Total)	16.673	17.076	0	84.500	2767
Parental time (Total - week days)	12.318	14.626	0	72.500	2767
Parental time (Total - weekend)	4.355	5.691	0	28.500	2767
Parental time (Share weekend/total)	0.320	0.360	0	1	2767
Panel B. Parenting					
Warmth	0.575	0.494	0	1	2767
Firmness	0.567	0.496	0	1	2767
Reasoning	0.761	0.426	0	1	2767
Panel C. Individual and family characteristics					
Parent is 1st-generation migrant	0.447	0.497	0	1	2767
High-educated parent	0.786	0.410	0	1	2767
Young parent (at birth)	0.242	0.428	0	1	2767
Parent is mother	0.527	0.499	0	1	2767
Both parents are migrants	0.416	0.493	0	1	2767
Child born in 2003/2004	0.535	0.499	0	1	2767
Child is male	0.525	0.499	0	1	2767
Child is first born	0.445	0.497	0	1	2767
Child has no siblings	0.556	0.497	0	1	2767
Family lives in Capital region	0.311	0.463	0	1	2767
Intact household	0.948	0.223	0	1	2767
Parent is employed	0.802	0.399	0	1	2712
Hours of work of the parent	29.575	22.102	0	120	2712
Panel D. Country of origin characteristics					
GDP per capita	30740.296	13167.979	765.186	67807.927	2767
Prop tertiary education	19.861	9.475	1.018	48.474	2767
Labour Mkt Participation Rate (Tot)	60.739	6.147	46.116	79.454	2767

Notes. The table reports descriptive statistics of the main outcome variables (Panels A-B) and regressors (Panels C-D) considered in the baseline analysis. Panel C also reports the probability that a parent works and the number of hours worked in a week, which will be considered as outcomes in a subsequent analysis; these variables are reported only for intact households ($N = 2712$). See Section 5 and Appendix B for additional details on LSAC data and for a description of the variables reported in Panels A-C. Panel D reports the control variables at the country-of-origin level (GDP per capita, proportion of individuals with a tertiary education, total labor market participation rate), that refer to the year 2000,i.e., before the parenting measures in LSAC data are taken. **Source**: Own elaborations on LSAC data. Variables at the country level are taken from the World Development Indicators (World Bank).

Figure 2
Origin countries of migrants in our sample.
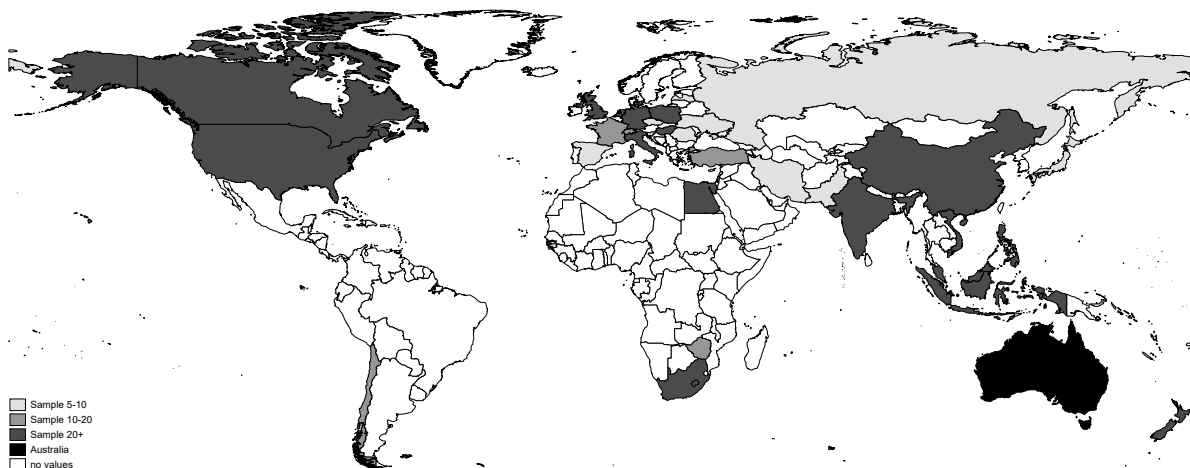
Notes. In light gray origin countries with between 5 and 9 migrant observations. In gray, origins featuring between 10 and 20 migrant observations. In dark gray origins featuring more than 20 migrant observations. In black, the destination country of migrants (Australia).

as it balances elements of more and less interventionist cultures. One standard deviation of $Parental\_Engagement_o$ is comparable to the difference between a country such as France (equal to 0.28), characterized by a culture whose parents are more engaged in time-intensive parenting activities compared to a country such as Italy (equal to -0.88), characterized by a more permissive culture.

Figure 4 presents the first cross-country correlation between parental engagement and time investments by immigrant groups in Australia. The figure shows on the horizontal axis the $Parental\_Engagement_o$ indicator (cfr. Figure 3 above). On the vertical axis, we plot the country-of-origin residual variation of parenting outcomes of immigrants after controlling for the set of individual characteristics reported in Panel C of Table 1. In Panel A, the parenting outcome on the Y-axis is the origin-specific total number of parenting hours. The graph does not seem to show any significant correlation with parental engagement. In Panel B, we consider the predicted origin-specific parental time immigrants allocate to weekends (as a share of total parenting time). We now see a positive correlation that indicates that emigrants from countries with high parental engagement tend to spend a higher share of their parenting time during the weekends. The OLS coefficient is equal to 0.012 with a standard deviation of 0.010; hence, it is not significant but suggestive of a positive association. In line with predictions from the epidemiological approach, this correlation is not driven by the exposure of immigrants to policies and institutions of the country of origin; instead, it must derive from the fact that immigrants to Australia share parenting attitudes with people in their country of origin.

While not conclusive, evidence in Figure 4 suggests that parental engagement has a component common to all people with the same culture of origin and that this component is correlated with the parenting behavior of immigrants from that culture of origin residing

Figure 3

Distribution of *Parental Engagement* across origin countries
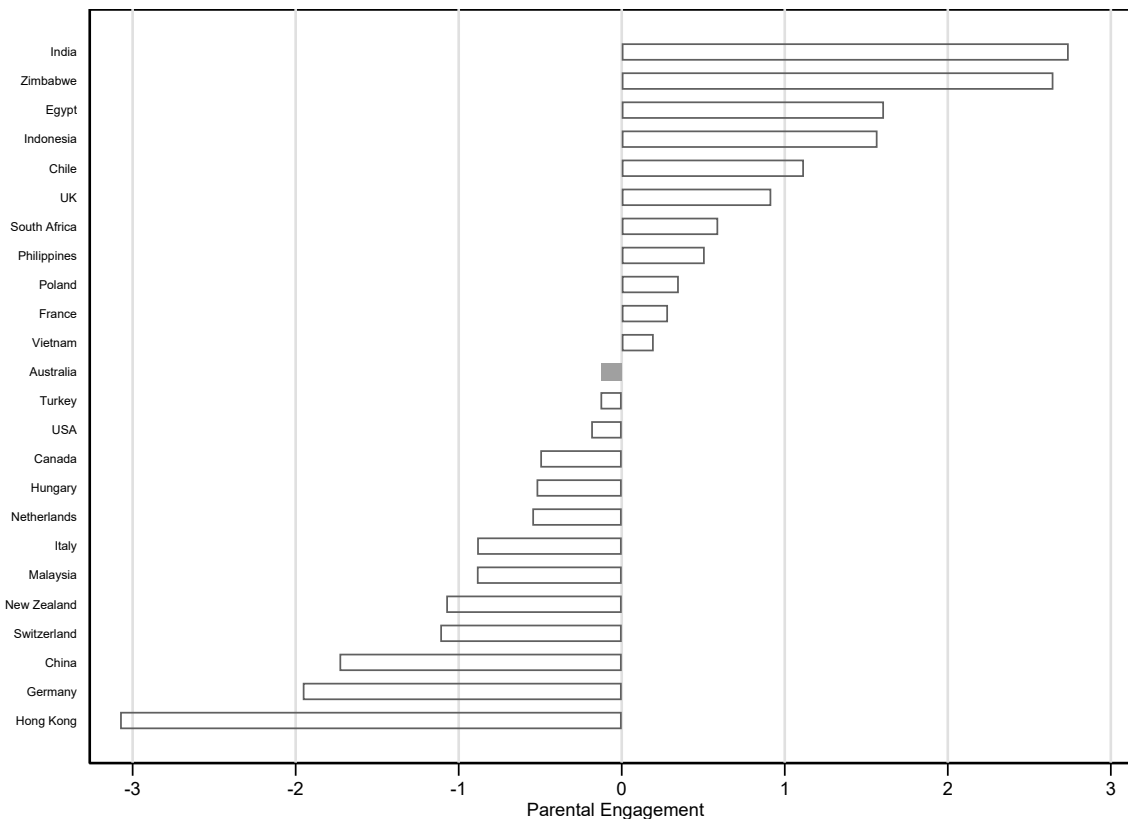
Notes. The figure reports the cross-country distribution of *Parental_Engagement_o*. **Source**: Own elaborations on WVS data.

in Australia. Country-specific parental engagement does not seem to correlate with the quantity of time devoted to parenting activities in total. Rather, it correlates to a larger share of "higher quality" time spent with children during the weekend. In the empirical analysis, we aim to more precisely isolate this association.

6   Results

Table 2 reports the baseline results as we estimate equation (2) on parenting time. In Column (1), we do not find any significant effect of *Parental_Engagement_o* on the total amount of time the parent spends with their own children, on average. Column (2) suggests that country-specific parental engagement is associated with a shift of parenting activities from weekdays to the weekend: a one standard deviation increase in *Parental_Engagement_o* implies a 0.9 p.p. increase in total parental time allocated to weekends. In Columns (3) and (4), we analyze the allocation dimension further, as we check for the association of country-specific parental engagement with parenting hours during weekdays and weekends separately. Estimates suggest that a one standard devia-

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Figure 4

Correlation between parental engagement at the country-of-origin level and parental time investments
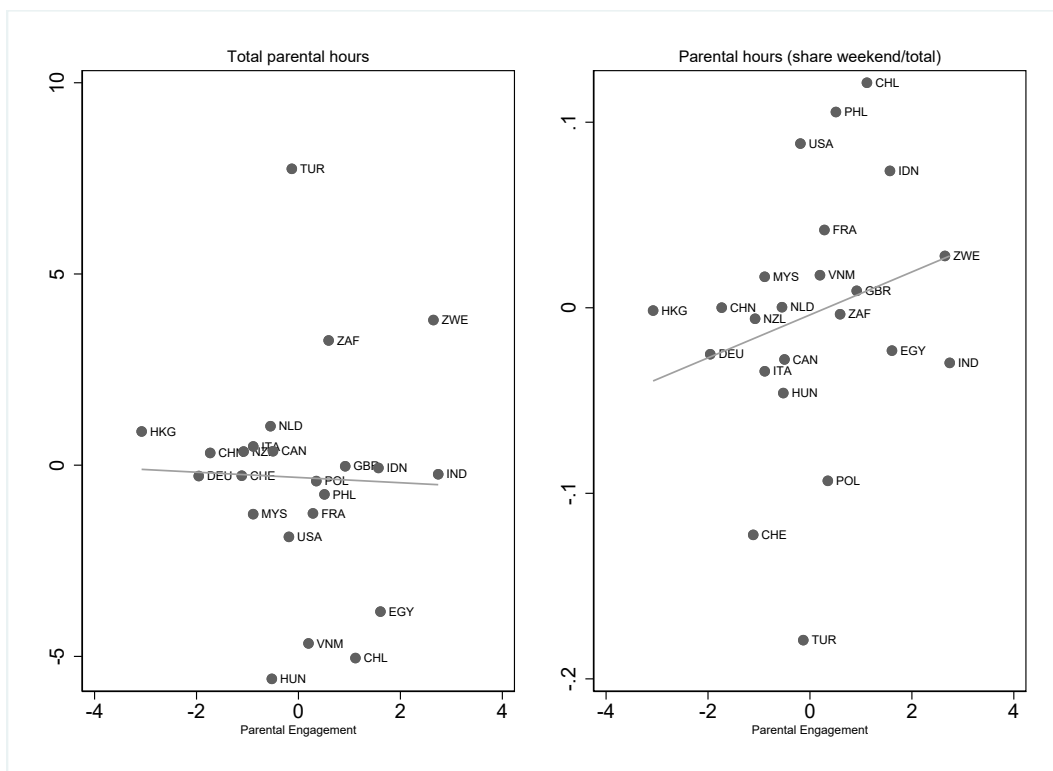
Notes. The parenting outcome on the Y-axis is measured as country-of-origin residual variation of parenting outcomes, after controlling for the set of individual characteristics reported in Panel C of Table 1. The coefficient for total time is -0.069 (0.450); the coefficient for the share of time during the weekend is 0.012 (0.010). **Source**: Own elaborations on LSAC and WVS data.

Table 2

Culture of origin and time investments

	(1) Total weekly time	(2) Weekend share	Total time (3) Total weekdays	(4) Total weekend	Play time (5) Total weekdays	(6) Total weekend
$Parental\_Engagement_o$	-0.086	0.009***	-0.226**	0.139***	-0.048	0.061***
	(0.111)	(0.003)	(0.095)	(0.047)	(0.032)	(0.019)
Parent is 1st-generation migrant	-0.450	-0.017	-0.129	-0.321*	-0.014	-0.111*
	(0.744)	(0.015)	(0.633)	(0.168)	(0.207)	(0.062)
High-educated parent	-0.594	0.024*	-0.495	-0.099	-0.034	-0.050
	(0.492)	(0.012)	(0.467)	(0.220)	(0.275)	(0.056)
Young parent	-0.765	0.026**	-1.034**	0.268	-0.119	0.004
	(0.536)	(0.011)	(0.456)	(0.214)	(0.169)	(0.063)
Parent is mother	19.816***	-0.125***	16.797***	3.018***	3.257***	0.402***
	(0.521)	(0.013)	(0.458)	(0.187)	(0.152)	(0.045)
Child born in 2003/2004	0.458	-0.019**	0.499	-0.041	0.433***	0.032
	(0.474)	(0.008)	(0.476)	(0.116)	(0.120)	(0.060)
Child is male	0.306	-0.006	0.347	-0.041	0.303***	0.131*
	(0.459)	(0.010)	(0.352)	(0.156)	(0.092)	(0.073)
Child is first born	1.532**	0.004	1.041**	0.492*	0.141	0.080
	(0.591)	(0.006)	(0.473)	(0.260)	(0.212)	(0.076)
Child has no siblings	-0.390	0.004	-0.154	-0.236	-0.060	-0.064
	(0.469)	(0.011)	(0.393)	(0.172)	(0.118)	(0.062)
Family lives in Capital region	0.833	0.013	0.532	0.301**	-0.092	0.010
	(0.532)	(0.013)	(0.477)	(0.134)	(0.116)	(0.063)
Both parents are migrants	-0.176	-0.028***	0.015	-0.191	-0.092	-0.063
	(0.480)	(0.009)	(0.348)	(0.221)	(0.129)	(0.065)
Intact household	-11.288***	-0.078***	-4.455***	-6.833***	0.425	-1.319***
	(1.778)	(0.015)	(1.317)	(0.733)	(0.412)	(0.263)
GDP pc	0.000	-0.000	0.000	0.000	0.000*	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Prop. Tertiary Edu	-0.022	0.001	-0.029	0.007	0.004	-0.000
	(0.033)	(0.001)	(0.026)	(0.009)	(0.007)	(0.003)
Tot LFP	0.004	0.002**	-0.004	0.008	-0.007	0.008
	(0.051)	(0.001)	(0.039)	(0.019)	(0.014)	(0.006)
Constant	15.997***	0.345***	7.361**	8.636***	-0.115	1.456***
	(3.872)	(0.046)	(2.624)	(1.676)	(0.822)	(0.384)
Observations	2767	2767	2767	2767	2767	2767

Notes. The table reports the results from OLS regressions on the variables reported at the top. See the footnote to Table 1 for a description of the outcome and control variables. Standard errors are clustered at the country-of-origin level. Significance levels: *** p<0.01, ** p<0.05, * p<0.1. **Source**: Own elaborations on LSAC and WVS data.

tion increase of $Parental\_Engagement_o$ is associated with a reduction of parenting time during the week of approximately 14 minutes ($= 0.226 * 60$) and with a corresponding increase of parenting time during the weekend by 8 minutes ($= 0.138 * 60$). These values are not negligible considering that a sizeable cultural divide between the engaged U.S. parenting culture and the relatively permissive German culture is described by roughly two standard deviations of our country-specific parental engagement indicator. Our results suggest that, by their own parenting culture only, someone with U.S. ancestry spends 30 minutes less with their own children during the week and 15 minutes more during the weekend compared to an observationally equivalent parent with German ancestry, on average. In Columns (5) and (6), we consider only the play-time component of parenting time. Now, a one standard deviation increase of $Parental\_Engagement_o$ induces a small increase of playtime during the weekend of (approximately 4 minutes $= 0.061 * 60$), and a correspondingly similar reduction during the week, which is not estimated precisely.

In Table 3, we confirm the robustness of baseline results in a number of important directions. We start by varying the set of controls. In our baseline estimates, only the gender of the parent and the dummy for the intact household have a consistent significant effect on the time investment of parents across all specifications. In Panel A, we exclude the control variables at the parent, child and country-of-origin level altogether. In Panel B, we include additional individual controls instead, i.e., English language and religious denomination, which have been considered relevant in the literature on migrants' assimilation and parenting.[23] We carry out similar exercises for the vector of origin-specific controls, as we exclude the entire vector C_o in Panel C, while we add to it the unemployment rate and fertility rates in Panel D. We also check the robustness of our results to the inclusion of origin-specific parenting values other than engagement, i.e., the importance that origin-specific culture attaches to children's imagination (Panel E) and independence (Panel F). Interestingly, the former cultural trait turns out to be as important as parental engagement as a determinant of playtime during the weekend in Column [4], while the latter indicator makes no difference. Next, we mitigate concerns of selective migration discussed for equation (12) above. In Panel G, we include in vector C_o the origin-specific immigration rates to Australia. In this way, we control for the intensity of selection and sorting between each country of origin and Australia.[24] In Panel H, we

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[23]While Chen (2013) shows that the language spoken affects a wide range of economic behaviors (from saving to health-related decisions and retirement), Borjas (2015) reports that English-language proficiency is a strong determinant of migrants' assimilation. Psychological and pedagogical studies indicate that religion and the degree of assimilation in the host country may strongly affect parenting behaviors of immigrant families (Horwath et al., 2008; Mahoney et al., 2001; Frosh, 2004).

[24]The immigration rates are defined as the stock of migrants from each country of origin divided by the Australian population and refer to the year 2000 (sources: Dumont et al. (2010) and Australian Bureau of Statistics). We also perform an additional analysis in which we control for the bilateral emigration rates between each origin country and Australia, taken from the database developed by Marfouk et al. (2009) and defined as the stock of migrants from each country of origin divided by the source countries labor force. The results from this analysis are reported in Appendix Table C-1, Panel A.

Table 3
Time investments: sensitivity analysis

	Total time		Play time	
	(1) Total weekdays	(2) Total weekend	(3) Total weekdays	(4) Total weekend
Panel A: Drop individual, child, and family characteristics				
Parental Engagement_o	-0.473***	0.094*	-0.089**	0.054**
	(0.092)	(0.051)	(0.041)	(0.022)
Observations	2767	2767	2767	2767
Panel B: Include religious denomination, english skills				
Parental Engagement_o	-0.299**	0.111*	-0.088*	0.047**
	(0.116)	(0.058)	(0.045)	(0.019)
Observations	2751	2751	2751	2751
Panel C: Drop country-of-origin characteristics				
Parental Engagement_o	-0.245**	0.133**	-0.066	0.056**
	(0.088)	(0.052)	(0.042)	(0.024)
Observations	2767	2767	2767	2767
Panel D: Additional country-of-origin characteristics				
Parental Engagement_o	-0.309***	0.107*	-0.070*	0.055**
	(0.104)	(0.062)	(0.038)	(0.025)
Observations	2767	2767	2767	2767
Panel E: Control for importance of imagination				
Parental Engagement_o	-0.216	0.144**	-0.048	0.041*
	(0.160)	(0.059)	(0.056)	(0.020)
Imagination important_o	-0.019	-0.010	-0.002	0.041*
	(0.238)	(0.065)	(0.069)	(0.023)
Observations	2767	2767	2767	2767
Panel F: Control for importance of independence				
Parental Engagement_o	-0.313***	0.131**	-0.077**	0.069***
	(0.104)	(0.048)	(0.030)	(0.019)
Independence important_o	-0.445	-0.045	-0.145	0.044
	(0.262)	(0.081)	(0.085)	(0.028)
Observations	2767	2767	2767	2767
Panel G: Control for immigration rates				
Parental Engagement_o	-0.240**	0.138***	-0.046	0.061***
	(0.091)	(0.047)	(0.029)	(0.020)
Observations	2767	2767	2767	2767
Panel H: Analysis on 1.5 generation migrant parents				
Parental Engagement_o	-0.515**	0.120	-0.219**	0.085***
	(0.224)	(0.091)	(0.080)	(0.028)
Observations	1954	1954	1954	1954
Panel I: Keep origin countries with 5+ migrants				
Parental Engagement_o	-0.220**	0.137**	-0.071*	0.044**
	(0.092)	(0.051)	(0.037)	(0.021)
Observations	2850	2850	2850	2850
Panel J: Keep origin countries with 20+ migrants				
Parental Engagement_o	-0.231**	0.131**	-0.060*	0.058***
	(0.091)	(0.046)	(0.031)	(0.018)
Observations	2696	2696	2696	2696
Panel K: Two-way clustering				
Parental Engagement_o	-0.226**	0.139***	-0.048	0.061***
	(0.096)	(0.049)	(0.032)	(0.019)
Observations	2767	2767	2767	2767

Notes. The table reports the results from OLS regressions on the variables reported at the top. See Appendix B for a description of the outcome and control variables. Standard errors are clustered at the country-of-origin level, unless differently specified. Significance levels: *** $p<0.01$, ** $p<0.05$, * $p<0.1$. **Source**: Own elaborations on LSAC and WVS data.

report estimates based on 1.5 migrant parents only. This group includes $2nd$-generation immigrants and $1st$-generation immigrants who arrived in Australia before the age of 10; as the decision to migrate for them was made by the parents, there is less scope for selection into migration. In Panels I and J, we show that the results are not sensitive to the number of countries considered; while in the baseline estimates, we kept countries of origin for which we have at least 10 observations in LSAC data, we, respectively decrease (at 5 observations) and increase (at twenty observations) this threshold, which induces corresponding changes in sample sizes and the number of origin countries in our data (see Figure 2 above). Finally, in Panel K, we cluster standard errors two-way, by country of origin and child (as each child can have two parents in our data), by implementing the multiway clustering estimation method proposed by Cameron et al. (2011). Finally, in Appendix Table C-1, we return to selection concerns, as we tackle the issue that the UK is the country of origin of approximately 40% of parents in our sample. This may not be related to a selection based on preferences about parenting, but it is likely to derive from the historical connections between the UK and Australia. Nevertheless, the fact that one single country of origin has such weight in the data may still bias our results. We address this issue by progressively dropping observations with the UK as the country of origin: the results are qualitatively the same if we keep 75%, 50%, 25% or 20% observations from the UK in Panels B-E. The results confirm the main findings, despite the significant decrease in sample size.[25]

Thus far, the results point to country-specific engagement inducing some reallocation of parenting time from the week to the weekend. In general, they are also evidence that this reallocation is somewhat incomplete. From the baseline results in Table 2, parents seem to recover during the weekend roughly the 50% of the total time they subtract from parenting activities during the week (cfr. columns [3] and [4]). This gives the idea of country-specific engagement inducing somewhat of a net "loss" in parenting time. One complementary interpretation is that country-specific engagement affects not only the quantity of time parents devote to their children but also their quality characteristics. Table C-2 in the Appendix helps dissect the effects of country-specific engagement on the components of total time investments. The results suggest that the net foregone parenting time during the week is driven by pure childcare. Additionally, $Parental\_Engagement_o$ shows significant effects neither on time devoted to education nor on time devoted to media-related activities. This indirectly confirms that playing with their own child is the activity through which parents raise the "quality" of time spent with their young children. Indeed, the results in Tables 2 and 3 do not point to major net losses in regard to the

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[25]When we keep 75% or 50% of UK observations, the UK remains the largest country of origin. Instead, when we keep only 25% of UK observations, we assign the UK the same weight as New Zealand, i.e., the second largest origin country, and when we keep only 20% of UK observations, we assign the UK only 206 observations, which correspond to the median number of observations per country in the sample without the UK.

reallocation of playtime from weekdays to the weekend.[26]

In Table 4, we investigate the effect of country-specific engagement on the quality of parent-to-child interactions in terms of the degree to which the parent exerts warmth, exhibits firmness or engenders reasoning with the child. The baseline results in Panel A suggest that a one standard deviation increase in country-specific engagement significantly increases parenting intensity in all three dimensions: the probability of being a warm parent who displays affection for his or her own child increases by 3.6 p.p. (cfr. Column (1)). The probability of being a firm parent able to set and enforce rules for their children increases by 2.8 p.p. The probability of being a parent who stimulates reasoning and reflection by the child, e.g., over own misbehavior, increases by 1 p.p. Panels B-L report estimates across the same specifications as in Table 3. These estimates broadly confirm the baseline results.[27] Across the various specifications, country-specific engagement has a sizable, statistically significant and stable effect on warmth. The effect on reasoning induction is relatively smaller, estimated somewhat less precisely; it disappears as we control for the country-specific importance attached to imagination (cfr. Panel F). Estimates in Panel I suggest that country-specific engagement places less emphasis on the firmness dimension of parenting among 1.5-generation migrants relative to the full sample of migrants.[28]

It is interesting to relate these results to the literature that analyzes parenting styles (see, e.g., Doepke and Zilibotti, 2017; Doepke et al., 2019). By construction, $Parental\_engagement_o$ features a cultural trait of 'authoritarian' parenting. This describes a direct intervention of the parent to restrict the children's choice set, which possibly triggers a conflict between parents and children (see Agostinelli et al., 2020). Our findings confirm an authoritarian cultural trait of parental engagement that manifests itself through the direct intervention of parents. However, our results also highlight a cultural trait that stresses the importance of warm parent–child interactions and parental effort to affect children's behavior by stimulating their reasoning. In Table 5, we map more precisely the parental engagement cultural trait to parenting styles. To do this, we replace country-specific indicators for parenting styles with $Parental\_engagement_o$ in equation (12).[29] The results are fully

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[26]The only exception is in Table 3, Panel H, which shows that country-specific engagement induces a reduction in playtime of approximately 13 minutes during the week and an increase of only 5 minutes during the weekend. This may signal a somewhat different behavior of 1.5-generation migrants.

[27]Notice that the inclusion of country-of-origin controls matters now, as estimates become much less precise in Panel D as we omit them. In fact, they turn out to be statistically significant determinants of parenting behavior, particularly firmness. See Table C-3 in the appendix, which reports the full set of coefficients for the baseline specification (Panel A).

[28]Table C-4 in Appendix C reports the results of the sensitivity analyses on the selection of migrants (Panel A) and on the issue of overrepresentation of migrants from the UK (Panels B-E).

[29]More precisely, we follow Doepke and Zilibotti (2017) and Doepke et al. (2019) and define four variables at the country-of-origin level, reporting, respectively, the degree of *intensive*, *helicopter*, *authoritative* and *permissive* parenting. By using the same WVS question used to define $Parental\_engagement_o$, we define intensive parenting as the proportion of individuals listing obedience or hard work as important child qualities; we define helicopter parenting as the proportion of individuals listing both obedience and

Table 4

Culture of origin and parenting behaviors.

	(1) Warmth	(2) Firmness	(3) Reasoning
Panel A: Baseline specification			
Parental Engagement_o	0.036***	0.028***	0.010*
	(0.007)	(0.007)	(0.006)
Observations	2767	2767	2767
Panel B: Drop individual, child, family characteristics			
Parental Engagement_o	0.034***	0.028***	0.007
	(0.008)	(0.007)	(0.007)
Observations	2767	2767	2767
Panel C: Include religious denomination and english skills			
Parental Engagement_o	0.033***	0.027***	0.011
	(0.008)	(0.007)	(0.007)
Observations	2751	2751	2751
Panel D: Drop country-of-origin characteristics			
Parental Engagement_o	0.034***	0.021	0.008
	(0.011)	(0.017)	(0.007)
Observations	2767	2767	2767
Panel E: Additional country-of-origin characteristics			
Parental Engagement_o	0.029***	0.021***	0.014**
	(0.008)	(0.006)	(0.006)
Observations	2767	2767	2767
Panel F: Control for importance of imagination			
Parental Engagement_o	0.048***	0.025**	0.003
	(0.007)	(0.009)	(0.007)
Imagination important_o	-0.025**	0.006	0.014**
	(0.011)	(0.014)	(0.006)
Observations	2767	2767	2767
Panel G: Control for importance of independence			
Parental Engagement_o	0.037***	0.031***	0.011*
	(0.007)	(0.006)	(0.006)
Independence important_o	0.007	0.017	0.008
	(0.012)	(0.011)	(0.012)
Observations	2767	2767	2767
Panel H: Control for immigration rates			
Parental Engagement_o	0.036***	0.028***	0.010**
	(0.007)	(0.006)	(0.005)
Observations	2767	2767	2767
Panel I: Analysis on 1.5 generation migrant parents			
Parental Engagement_o	0.033***	0.008	0.010*
	(0.009)	(0.009)	(0.006)
Observations	1954	1954	1954
Panel J: Keep origin countries with 5+ migrants			
Parental Engagement_o	0.033***	0.029***	0.011*
	(0.007)	(0.007)	(0.005)
Observations	2850	2850	2850
Panel K: Keep origin countries with 20+ migrants			
Parental Engagement_o	0.034***	0.027***	0.010*
	(0.008)	(0.007)	(0.005)
Observations	2696	2696	2696
Panel L: Double clustering			
Parental Engagement_o	0.036***	0.028***	0.010*
	(0.007)	(0.007)	(0.006)
Observations	2767	2767	2767

Notes. The table reports the results from OLS regressions on the variables reported at the top. See Appendix B for a description of the outcome and control variables. Standard errors are clustered at the country-of-origin level, unless differently specified. Significance levels: *** p<0.01, ** p<0.05, * p<0.1. **Source**: Own elaborations on LSAC and WVS data.

consistent with the interpretation above. Migrants coming from countries characterized by an intensive parenting culture, which stresses the importance of parental engagement (either through direct or indirect intervention in children's behavior), tend to reallocate parenting time from weekdays to weekends and are more likely to be warm but also firm parents. The same holds true for parents who come from helicopter-parenting cultures, which aim to form responsible children without necessarily acting in a coercive way. In contrast, we find that parents coming from permissive cultural backgrounds which stress values other than parental engagement tend to spend less time with their children during weekends and are more likely to be disaffected and indulgent parents. Conversely, we find no association of authoritative culture with our parenting outcomes. One possible reason is that children in our sample are too young for the authoritative trait of hard work that is emphasized in WVS data to manifest itself in daily parenting.

Table 5
Individual-level parenting and country-of-origin parenting styles

	Quantity				Quality		
	(1) Total weekdays	(2) Total weekend	(3) Play weekdays	(4) Play weekend	(5) Warmth	(6) Firmness	(7) Reasoning
Intensive_o	-0.228	0.202***	-0.098**	0.079***	0.032***	0.023***	0.005
	(0.143)	(0.043)	(0.037)	(0.027)	(0.009)	(0.006)	(0.007)
Observations	2767	2767	2767	2767	2767	2767	2767
Helicopter_o	-0.143	0.183**	-0.056	0.071**	0.037***	0.028***	0.008
	(0.145)	(0.068)	(0.057)	(0.029)	(0.010)	(0.009)	(0.008)
Observations	2767	2767	2767	2767	2767	2767	2767
Authoritative_o	0.101	0.069	-0.083	0.011	-0.024	-0.023	-0.016*
	(0.192)	(0.101)	(0.061)	(0.039)	(0.018)	(0.016)	(0.009)
Observations	2767	2767	2767	2767	2767	2767	2767
Permissive_o	0.121	-0.240***	0.075	-0.070*	-0.035***	-0.018*	-0.004
	(0.188)	(0.064)	(0.045)	(0.035)	(0.009)	(0.009)	(0.007)
Observations	2767	2767	2767	2767	2767	2767	2767

Notes. The table reports the results from OLS regressions on the variables reported at the top. Each row indicates a different regression, whose regressor of interests at the country-of-origin level is reported in the first column. See Appendix B for a description of the outcome and control variables. Standard errors are clustered at the country-of-origin level. Significance levels: *** $p<0.01$, ** $p<0.05$, * $p<0.1$. **Source**: Own elaborations on LSAC and WVS data.

7 Parenting & the Labor Supply of the Household

Thus far, we have not considered labor supply outcomes. Nevertheless, our results do not seem to suggest any significant trade-off between parenting and labor supply. Parental

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hard work as important child qualities; we define authoritative parenting as the proportion of individuals who do not list obedience but do list hard work; and we define permissive parenting as the proportion of individuals who do not list obedience and are not authoritative but list either independence or imagination as important child qualities.

engagement manifests itself through a reallocation of parenting time from weekdays to the weekend. If any, this may leave more space for labor supply.

In this section, we explicitly assess the role of parental engagement in the labor supply decisions that are made by household members. To this end, we shift the focus of analysis from the individual to the household. This allows us to analyze parenting and labor supply as outcomes of collective cooperative decisions between spouses. This household-level analysis complements the individual-level analysis developed above, building on the idea that the implications of parenting for labor supply decisions cannot be assessed from a purely individual perspective.

Let us extend the simple theoretical model developed in Section 3 to analyze individual parenting and labor supply outcomes in an intact household, i.e., composed of two parents, f, m, characterized by the following utility functions:

$$U_f = c + \theta_f h_f^{\beta} \quad and \quad U_m = c + \theta_m h_m^{\gamma}. \tag{13}$$

Equation (13) features parents f and m having different values of their parental engagement θ and different marginal utilities of parenting time, as $\beta \neq \gamma$.

The unit of observation is now a 'migrant family', which we define as a family where at least one parent between m and f is a migrant. For expositional simplicity, we omit the subscript o from the notation. Additionally, without loss of generality, we can abstract from the sorting and individual idiosyncratic component of parental engagement (i.e., the second and third (ln) terms in equation (3)), so that θ_m and θ_f describe the origin-specific engagement for the mother and the father, respectively.

The utility of the household is an average of the utilities of the two parents, weighted by the relative bargaining powers α and $(1 - \alpha)$ of parents f and m, respectively:

$$U = \alpha U_f + (1 - \alpha)U_m = c + \alpha \theta_f h_f^{\beta} + (1 - \alpha)\theta_m h_m^{\gamma}, \tag{14}$$

where c is collective household consumption, so the budget constraint is

$$c = (1 - h_m)w_m + (1 - h_f)w_f, \tag{15}$$

with w_m and w_f being the market wages of the two parents. We can solve the optimization problem of the household and maximize (14) relative to C, h_f, and h_m. From the first-order conditions, we obtain the parental investment of the mother relative to the father as follows:[30]

$$\frac{h_m}{h_f} = \frac{((1 - \alpha)\theta_m \gamma / w_m)^{\frac{1}{1-\gamma}}}{(\alpha \theta_f \beta / w_f)^{\frac{1}{1-\beta}}}. \tag{16}$$

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[30]There is no change with reference to the baseline model as far as the optimal choice of c is concerned, as the marginal utility of household consumption is still the same as the marginal utility of income.

Equation (16) can be written in the usual log-linear form (see equation (D-1) in Appendix D.1). We now make the assumption that the household is characterized by one common level of parental engagement θ_{mf}, which can be given by the prevalence of the culture of the mother, the father, or some linear combination of the two. After incorporating the wage functions (D-2) for the mother and the father, equation (16) can be rewritten as follows:

$$ln\left(\frac{h_m}{h_f}\right) = \frac{\gamma - \beta}{(1 - \beta)(1 - \gamma)}ln(\theta_{mf}) - \widetilde{a}\ e_m + \widetilde{c}\ e_f + \widetilde{z_f}\ A_f - \widetilde{z_m}\ A_m + \widetilde{k}, \qquad (17)$$

where coefficients $\widetilde{a}$, $\widetilde{c}$, $\widetilde{z}_m$, $\widetilde{z}_f$, and $\widetilde{k}$ are obtained as combinations of the initial parameters of the utility and wage functions (see Appendix D.1 for details).

In the empirical analysis at the household level, we look at the association between parental engagement and household-level measures of parental investment and labor supply based upon equation (17). It should be noted that relative to previous estimates, where the unit of observation was the individual migrant parent, the unit of observation in Table 6 is the migrant family. This has three main implications. First, to deliver sensible predictions regarding household-level interactions, these estimates are based only upon intact families in which both parents are present. Second, by its own definition, a migrant family may also include one native (Australian) parent. Third, we assume that each family has a common level of cultural engagement in parenting activities, shared by both spouses (i.e., θ_{mf} in eq. (17)). In line with views from the cultural economics literature, which shows that mothers have a crucial role in the transmission of cultural traits (see, e.g., Fernández et al., 2004, Rodríguez-Planas and Nollenberger, 2018), we make the assumption that the country-specific parental engagement of the mother carries over to the household. Our choice is supported by the fact that evidence of household-level interactions becomes much weaker as we use the culture of the father as a proxy for household-level engagement instead (see Appendix Table D-3 for details).[31]

Table 6 presents the main results. In Panel A, we present estimates of household engagement in parental activities (based on the culture of the mother) on the allocation of parental investments during weekdays. The results suggest that a one standard deviation increase in household engagement increases the parental investment of the father by approximately 20 minutes ($=0.33 * 60$) during weekdays. The effect on the parental investment of the mother is never significant. However, if any, the coefficient is negative both on the share of the mother in total parental time of the household (see Column (1)) and in the total parenting time of the mother during weekdays (see Column (3)). In Panel

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[31]The choice of the culture of the mother as a benchmark implies that estimates in Table 6 are based only on intact households in which the mother is a migrant. Appendix Table D-1 reports descriptive statistics for this sample. Appendix Table D-2 reports descriptive statistics for the sample of intact households in which the father is a migrant, used for estimates reported in Appendix Table D-3.

Table 6

Parental investment and labor supply: household-level interactions

|	(1) % time of mother	(2) Total time of father	(3) Total time of mother
A) Parental investments during weekdays			
Parental engagement of the household	-0.005	0.338**	-0.157
	(0.008)	(0.165)	(0.403)
Observations	1124	1124	1124
	two-earners family	father employed	mother employed
B) Household labor supply, extensive margin			
Parental engagement of the household	0.016	-0.010**	0.024*
	(0.013)	(0.004)	(0.013)
Observations	1124	1124	1124
	% of hours worked by the mother	hours of work father	hours of work mother
C) Household labor supply			
Parental engagement of the household	0.012**	-0.293	0.850**
	(0.006)	(0.428)	(0.406)
Observations	1124	1124	1124

Notes: The table reports the results from OLS regressions on the variables reported at the top of each panel. Each cell refers to a different regression, whose regressor of interests is the parental engagement in the country of origin of the mother. The regressions use a sample of intact households (i.e. for which we observe both mother and father), in which the mother is a migrant; the father can be either migrant or native. The dependent variables for parental investments are the percentage of time the child spends with the mother (over total parental time), the total time the child spends with the father, and the total time the child spends with the mother. The dependent variables for labor supply at the extensive margin are the probability that both mother and father work (*two-earners family*), and the probability that the father or the mother works, respectively. The dependent variables for labor supply at the intensive margin are the percentage amount of hours the mother works (over the total number of hours worked by the parents), the total number of hours worked by the father, and the total number of hours worked by the mother. For a list of regressors used in the analysis, see the footnote to Table D-1 in Appendix D.2. **Source**: own elaborations on LSAC and WVS data.

B, we present estimates of household parental engagement on the extensive margin of the labor supply of household members. These estimates show that a one standard deviation increase in parental engagement is associated with a 1 p.p. decrease in the employment probability of the father and a 2.4 p.p. increase in the employment probability of the mother. Finally, in Panel C, we present estimates for the intensive margin of the household's labor supply. The results show that a one standard deviation increase in parental engagement is associated with a 1.2 p.p. increase in the share of hours of work supplied by the mother within the household. This is driven by a weekly increase of working hours by the mother of 51 minutes ($= 0.85 * 60$), while the effect on the hours of work of the father is a negative, non-significant one.

Overall, this evidence suggests that culture-specific parental engagement of the household is associated with a reallocation of parenting vs. labor supply tasks between the father and the mother. This reallocation makes the distribution more gender egalitarian: on average, parental engagement in the household induces fathers to increase parenting time during the week and mothers to raise their labor supply. This result can be rationalized in terms of equation (17), which postulates a positive effect of parental engagement

on the allocation of parental time of the father if $\beta > \gamma$, i.e., if the father has a higher marginal utility from time spent with children relative to the mother. This, in turn, allows the mother to raise her labor supply. While we cannot directly test the hypothesis $\beta > \gamma$, for this condition to be consistent with the standard principle of diminishing marginal utilities in consumption (of parenting time in our case), we shall observe mothers having a larger stock of parental time relative to fathers. Figure 5 shows that this is indeed the case. On average, the parenting time ratio between fathers and mothers in our sample is 0.63, and it is below one for all continents represented in our data.[32]

Figure 5
Father-to-mother parenting time ratio by continent of origin
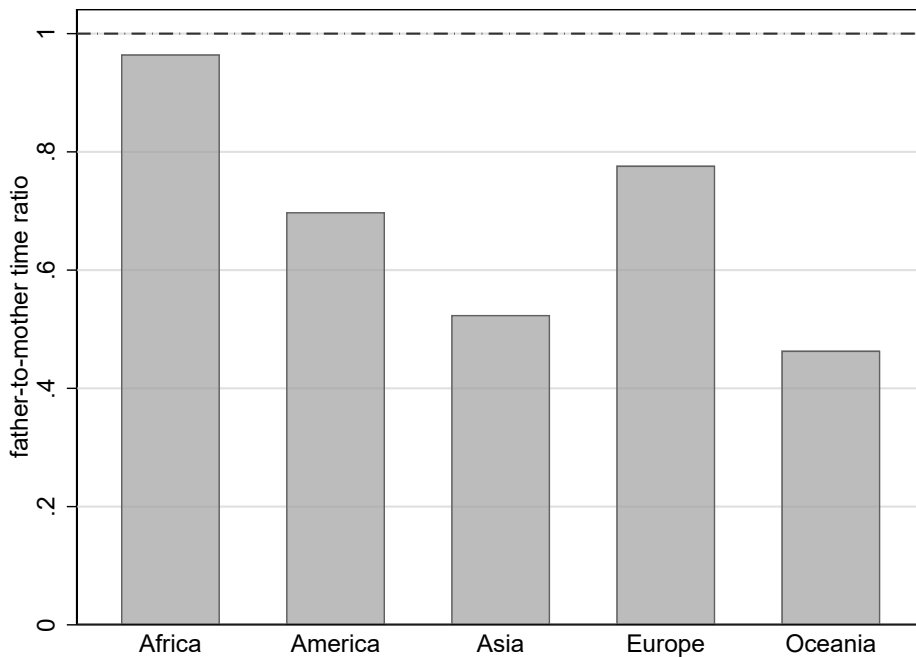
Notes. The figure reports the cross-continent distribution of the ratio in parenting time between father and mother by country of origin of the household (maternal definition). **Source**: Own elaborations on LSAC and WVS data.

8 Concluding Remarks

This paper provides first evidence that parental decisions about the allocation of time and the quality of parent-to-child interactions are strongly affected by an individual's culture of origin, transmitted from previous generations. In particular, we found that parents coming from cultures featuring a more direct engagement in the life of their children tend to concentrate their investment with their young children on quality time during weekends, particularly dedicated to playtime. We also show that parents from more engaged cultures

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[32]The ratios presented in Figure 5 do not change if we weight them by the number of observations in each continent or by the number of countries observed for each continent.

are more likely to be affectionate and warm parents, ready to enact discipline and induce a higher degree of reasoning in their children. This suggests that the cultural channel does not necessarily affect the quantity of time spent by parents with children but rather its quality in a broad sense. The analysis at the household level reveals that cultures of origin characterized by greater parental engagement lead to a more gender-egalitarian reallocation of time activities within the household, with mothers increasing their labor supply and fathers devoting more time to child care.

Our results bear important implications related to the intergenerational transmission of values and behaviors among migrant parents. In particular, as long as parental investment decisions affect children's development of cognitive and noncognitive skills, this intergenerational transmission of values and behaviors may have long-lasting effects on the lives of children.

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Appendix A   Additional figures

Figure A-1

Parental Engagement across origin countries: 5 vs. 20 migrant observations
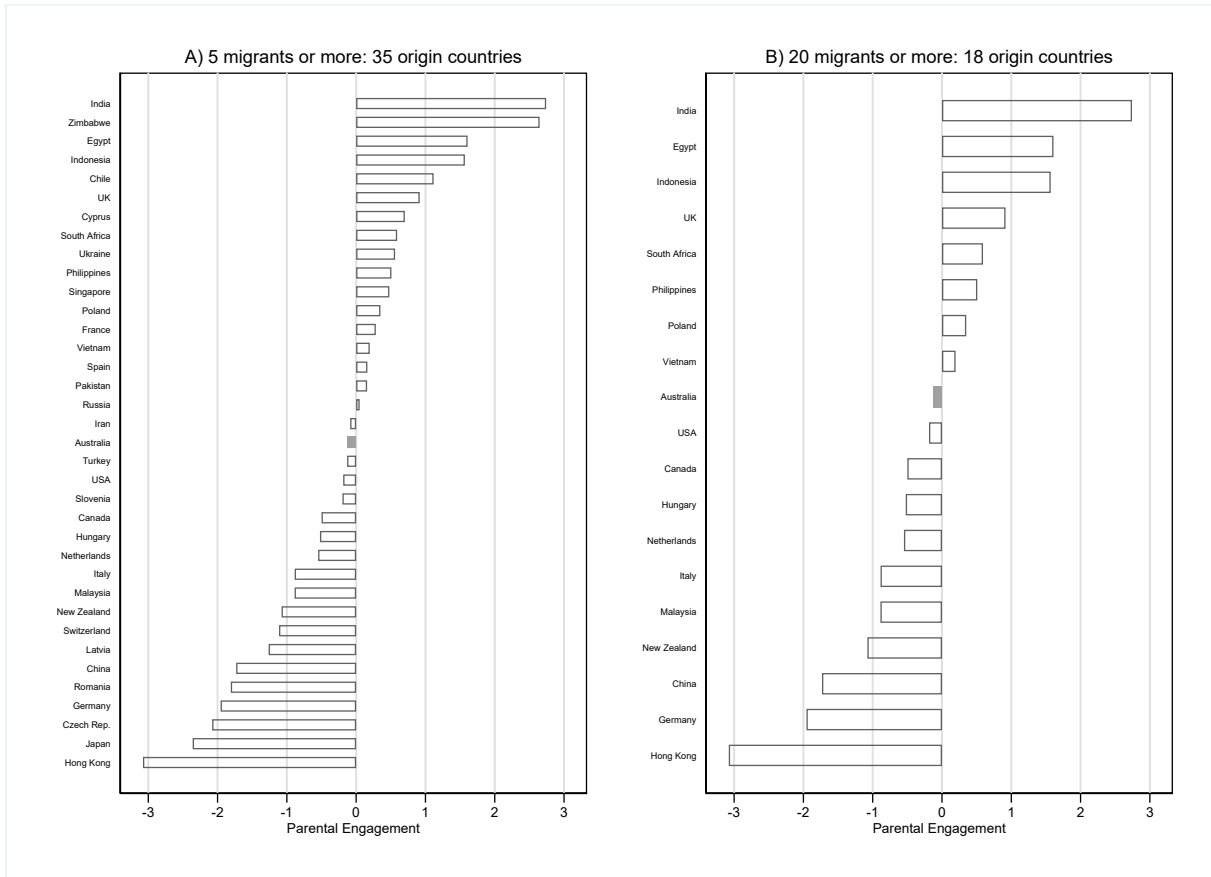
Notes. The figures report the cross-country distribution of $Parental\_Engagement_o$ in the sample based on countries of origin with more than 5 observations (Panel A) and in the sample based on countries of origin with more than twenty observations (Panel B). **Source**: Own elaborations on WVS data.

Appendix B   LSAC data

The Longitudinal Study of Australian Children (LSAC hereafter) starts in 2003 and is gathered every two years. LSAC surveys children born in 2003-2004 (*B-cohort*), who are observed since their first year of age, and children born in 1999-2000 (*K-cohort*), who are observed since their 4-5 years of age. LSAC examines a broad range of questions about children's well-being over the life course, in relation to topics such as parenting, family, peers, education, child care and health.

For our analysis, we focus on mothers and fathers of children belonging to both cohorts, and use questions on children's time allocation, parenting attitudes and behaviors, and demographic characteristics of the child (gender, number of siblings and birth order) and of the parent (gender, marital status, age at birth of the sampled child, level of education and region of residence). Importantly, we use the information on the country of birth of the child, the parents, and the grandparents, to identify first- or second-generation migrant parents. Demographic characteristics are taken from Wave 1 in 2003, when the B-cohort children were aged 0-1 and the K-cohort children were aged 4-5. Parenting behaviors are measured when children of both cohorts are aged 4-5: this occurs in Wave 3 (gathered in 2008-2009) for the B-cohort and in Wave 1 (2003-2004) for the K-cohort.

Regarding the parenting outcomes, we consider two dimensions, which are both measured when the child is aged 4-5. The first one regards the amount of time the parent spends with the child in several parenting activities, and is taken from a child's time use diary module, which provides information on the type of activity performed and on the person with whom the activity was done. We thus define the total weekly time spent by the parent *alone* with the child, and we also distinguish the amount of weekly time spent in *play*, *educational activities*, using *media*, and in *childcare*. *Play* time includes time spells in which the child performed active/physical exercises or quiet free play; *Educational* time includes activities like read a story, talk/sing, talked/sung to, drawing or colouring, or being taught to do chores or read; *Media* time includes listening to tapes/CDs and music, using computer, or watching TV; *Childcare* time includes e.g. eating, drinking, being fed, bathing, dressing, hair care, health care.

The second dimension refers to the quality of parent-child interactions, measured as the degree with which the parent shows warmth or firmness, or induces child's reasoning when carrying over parental activities. LSAC data provides several questions asking the frequency with which certain events related to parent-child interactions occur.

For warmth, the questions are the following: "Thinking about the study child over the last six months, how often did you...(i) Hug or hold this child for no particular reason; (ii) Tell this child how happy he/she makes you; (iii) Have warm, close times together with this child; (iv) Enjoy listening to this child and doing things with him/her; (v) Express affection by hugging, kissing and holding this child".

For firmness: "When parents spend time with their children, sometimes things go well and sometimes they don't. How often does the following happen? (i) When you give this child an instruction or request to do something, how often do you make sure that he/she does it? (ii) If you tell this child he/she will get punished if he/she does not stop doing something, but he/she keeps doing it, how often will you punish him/her? (iii) How often does this child get away with things that you feel should have been punished? (iv) How often is this child able to get out of punishment when he/she really sets his/her mind to it? (v) When you discipline this child, how often does he/she ignore the punishment?".

For reasoning: "(i) How often do you explain to this child why he/she is being corrected?; (ii) How often do you talk it over and reason with this child when he/she misbehave? ".

Importantly, the questions are the same for the B-cohort and for the K-cohort. We define, for each parent and for each dimension, the average over the frequency of the corresponding events, which ranges between 1 (*Never*) and 5 (*Always*). From each set of items we then define binary variables indicating whether the levels of *warmth*, *firmness* and *reasoning* in parenting are larger than the median, defined over the sample of migrants in LSAC data.

The outcome variables of the analysis are then defined as follows:

- *Parentaltime* indicates the total time (in hours) spent by the parent alone with the child in a week, during week-days, or during the week-end (also as a share of total time).

- Parenting dimensions are defined as binary variables: *warmth* indicates whether the parent exerts a level of warmth in parenting higher than the sample median; *firmness* indicates whether the parent exerts a level of firmness in parenting higher than the sample median; *reasoning* indicates whether the parent exerts a high level of reasoning in parenting higher than the sample median; the medians are defined over the entire sample of migrants in LSAC data, and not over the final sample considered for the analysis.

The control variables at the individual level are defined as follows:

- *High-educated parent* is a dummy equal to 1 if the parent has obtained a secondary education degree.

- $Youngparent(atbirth)$ is a binary variable equal to one if the parent, at the birth of the child, was younger than the 25th percentile of the corresponding gender distribution, which is 27 years for mothers and 31 years for fathers; these values are taken from the entire LSAC sample, before our sample selection;

- *Both parents are migrants* indicates if two parents in the sample are parents of the same child;

- *Childbornin*2003/2004 is a binary variable indicating whether the child was born in 2003/2004 and belongs to the B-cohort

- *Childisfirstborn* and *Childhasnosiblings* indicates whether the sampled child is first born and whether he/she has no siblings, respectively;

- *Intacthousehold* indicates that the parents live together;

- *FamilylivesinCapitalregion* indicates whether the household resides in the region of Australian Capital Territory (Canberra) or New South Wales.

Appendix C   Additional results: analysis at the parent-level

Table C-1

Time investments: selection into migration and over-representation of migrants from UK

	Total time		Play time	
	(1)	(2)	(3)	(4)
	Total weekdays	Total weekend	Total weekdays	Total weekend
Panel A: Control for emigration rates				
Parental Engagement_o	-0.179*	0.160***	-0.047	0.064***
	(0.093)	(0.045)	(0.034)	(0.021)
Observations	2767	2767	2767	2767
Panel B: Keep 75% of UK sample				
Parental Engagement_o	-0.177*	0.191***	-0.062*	0.073***
	(0.092)	(0.058)	(0.035)	(0.023)
Observations	2455	2455	2455	2455
Panel C: Keep 50% of UK sample				
Parental Engagement_o	-0.047	0.194***	-0.040	0.064**
	(0.087)	(0.068)	(0.039)	(0.025)
Observations	2142	2142	2142	2142
Panel D: Keep 25% of UK sample				
Parental Engagement_o	-0.080	0.203**	-0.041	0.074*
	(0.107)	(0.098)	(0.051)	(0.038)
Observations	1830	1830	1830	1830
Panel E: Keep 20% of UK sample				
Parental Engagement_o	-0.108	0.168*	-0.046	0.042
	(0.116)	(0.090)	(0.056)	(0.027)
Observations	1767	1767	1767	1767

Notes. The table reports the results from OLS regressions on the measures of time investments at the top, in which the regressor of interests is the parental engagement in the parent's country of origin. Each panel reports the results from a different specification. Panel A reports an analysis in which we control (in addition to the baseline control variables listed in Table 1) for the bilateral emigration rates between each origin country and Australia, taken from the database developed by Marfouk et al. (2009) and defined as the stock of migrants from each country of origin divided by the source countries labor force. Panels B-E report the results of regressions in which we randomly keep 75%, 50%, 25% and 20% observations for whom UK is the country of origin. Standard errors are clustered at the country level. Significance levels: *** $p<0.01$, ** $p<0.05$, * $p<0.1$. **Source**: Own elaborations on LSAC and WVS data.

Table C-2

Time investments: analysis on alternative type of activities

	Childcare		Media		Education	
	(1) weekdays	(2) weekend	(3) weekdays	(4) weekend	(5) weekdays	(6) weekend
Panel A: Baseline specification						
Parental Engagement_o	-0.096**	0.003	-0.050	0.003	-0.024	-0.002
	(0.039)	(0.012)	(0.041)	(0.015)	(0.044)	(0.016)
Observations	2767	2767	2767	2767	2767	2767
Panel B: Drop individual, child and family characteristics						
Parental Engagement_o	-0.200***	-0.011	-0.082**	-0.006	-0.094***	-0.013
	(0.048)	(0.012)	(0.035)	(0.016)	(0.034)	(0.018)
Observations	2861	2861	2861	2861	2861	2861
Panel C: Include religious denomination, english skills						
Parental Engagement_o	-0.126***	-0.007	-0.049	-0.005	-0.002	0.001
	(0.038)	(0.017)	(0.038)	(0.019)	(0.051)	(0.016)
Observations	2751	2751	2751	2751	2751	2751
Panel D: Drop country-of-origin characteristics						
Parental Engagement_o	-0.083	0.004	-0.050	0.004	-0.030	-0.002
	(0.048)	(0.013)	(0.046)	(0.014)	(0.055)	(0.016)
Observations	2767	2767	2767	2767	2767	2767
Panel E: Additional country-of-origin characteristics						
Parental Engagement_o	-0.144***	-0.013	-0.074	0.007	-0.039	-0.007
	(0.036)	(0.012)	(0.050)	(0.013)	(0.048)	(0.021)
Observations	2767	2767	2767	2767	2767	2767
Panel F: Control for importance of imagination						
Parental Engagement_o	-0.037	0.017	-0.028	-0.005	-0.037	-0.005
	(0.037)	(0.015)	(0.064)	(0.021)	(0.077)	(0.019)
Imagination important_o	-0.123***	-0.031*	-0.046	0.015	0.026	0.008
	(0.039)	(0.018)	(0.097)	(0.021)	(0.114)	(0.023)
Observations	2767	2767	2767	2767	2767	2767
Panel G: Control for importance of independence						
Parental Engagement_o	-0.112**	-0.003	-0.041	0.001	-0.039	-0.004
	(0.040)	(0.012)	(0.040)	(0.017)	(0.046)	(0.016)
Independence important_o	-0.081	-0.029	0.051	-0.010	-0.074	-0.013
	(0.082)	(0.022)	(0.078)	(0.029)	(0.118)	(0.025)
Observations	2767	2767	2767	2767	2767	2767
Panel H: Control for immigration rates						
Parental Engagement_o	-0.099**	0.002	-0.055	0.001	-0.034	-0.001
	(0.040)	(0.011)	(0.039)	(0.014)	(0.034)	(0.017)
Observations	2767	2767	2767	2767	2767	2767
Panel I: Analysis on 1.5 generation migrant parents						
Parental Engagement_o	-0.124**	0.013	-0.063	-0.010	-0.129	-0.016
	(0.050)	(0.021)	(0.056)	(0.024)	(0.090)	(0.037)
Observations	1954	1954	1954	1954	1954	1954
Panel J: Keep origin countries with 5+ migrants						
Parental Engagement_o	-0.102***	0.007	-0.033	0.005	-0.025	-0.001
	(0.036)	(0.013)	(0.041)	(0.015)	(0.041)	(0.018)
Observations	2850	2850	2850	2850	2850	2850
Panel K: Keep origin countries with 20+ migrants						
Parental Engagement_o	-0.089**	0.004	-0.036	0.005	-0.052	-0.005
	(0.041)	(0.013)	(0.043)	(0.014)	(0.040)	(0.017)
Observations	2696	2696	2696	2696	2696	2696
Panel L: Double clustering						
Parental Engagement_o	-0.096**	0.003	-0.050	0.003	-0.024	-0.002
	(0.039)	(0.012)	(0.041)	(0.015)	(0.043)	(0.017)
Observations	2767	2767	2767	2767	2767	2767

Notes. The table reports the results from OLS regressions on the variables reported at the top. See the footnote to Table 1 for a description of the control variables. The dependent variables are, respectively, the number of hours spent by the child with the parent in childcare activities, in media-related activities, and in educational activities (see Appendix Appendix B for further details). Standard errors are clustered at the country-of-origin level, unless differently specified. Significance levels: *** p<0.01, ** p<0.05, * p<0.1. **Source**: Own elaborations on LSAC and WVS data.

Table C-3

Baseline results on parenting measures

	(1) Warmth	(2) Firmness	(3) Reasoning
Parental Engagement_o	0.0358***	0.0275***	0.0098*
	(0.0075)	(0.0068)	(0.0056)
Parent is 1st-generation migrant	-0.0192	-0.0630***	0.0065
	(0.0217)	(0.0188)	(0.0126)
High-educated parent	-0.0137	0.1108***	0.0277
	(0.0159)	(0.0190)	(0.0230)
Young parent (at birth)	0.0318	-0.0184	-0.0132
	(0.0222)	(0.0232)	(0.0114)
Parent is mother	0.2145***	0.0764***	0.1572***
	(0.0276)	(0.0152)	(0.0203)
Child born in 2003/2004	0.0572***	0.0341**	-0.0097
	(0.0148)	(0.0149)	(0.0214)
Child is male	-0.0125	-0.0154	0.0208
	(0.0146)	(0.0117)	(0.0135)
Child is first born	0.0509***	0.0446***	0.0799***
	(0.0144)	(0.0145)	(0.0141)
Child has no siblings	0.0007	0.0033	0.0145
	(0.0110)	(0.0104)	(0.0097)
Family lives in Capital region	0.0289*	-0.0276*	0.0225
	(0.0152)	(0.0159)	(0.0225)
Both parents are migrants	-0.0049	0.0002	0.0104
	(0.0169)	(0.0130)	(0.0105)
Intact household	-0.0601	0.0583**	0.0273
	(0.0381)	(0.0272)	(0.0384)
GDP pc	-0.0000	0.0000**	0.0000
	(0.0000)	(0.0000)	(0.0000)
Prop. Tertiary Edu	0.0033***	0.0049***	0.0002
	(0.0009)	(0.0013)	(0.0008)
Tot LFP	-0.0057***	0.0017	-0.0016
	(0.0016)	(0.0017)	(0.0014)
Constant	0.7705***	0.1189	0.6364***
	(0.0966)	(0.1065)	(0.1002)
Observations	2767	2767	2767

Notes. The table reports the results from OLS regressions on the variables reported at the top. See the footnote to Table 1 for a description of the outcome and control variables. Standard errors are clustered at the country-of-origin level. Significance levels: *** p<0.01, ** p<0.05, * p<0.1. **Source**: Own elaborations on LSAC and WVS data.

Table C-4

Parenting: selection into migration and over-representation of migrants from UK

	(1) Warmth	(2) Firmness	(3) Reasoning
Panel A: Control for emigration rates			
Parental Engagement_o	0.035***	0.029***	0.009
	(0.008)	(0.008)	(0.006)
Observations	2767	2767	2767
Panel B: Keep 75% of UK sample			
Parental Engagement_o	0.039***	0.029***	0.009
	(0.007)	(0.007)	(0.006)
Observations	2455	2455	2455
Panel C: Keep 50% of UK sample			
Parental Engagement_o	0.042***	0.027***	0.005
	(0.007)	(0.008)	(0.006)
Observations	2142	2142	2142
Panel D: Keep 25% of UK sample			
Parental Engagement_o	0.045***	0.033***	0.006
	(0.009)	(0.008)	(0.007)
Observations	1830	1830	1830
Panel E: Keep 20% of UK sample			
Parental Engagement_o	0.044***	0.036***	0.005
	(0.010)	(0.008)	(0.007)
Observations	1767	1767	1767

Notes. The table reports the results from OLS regressions on the measures of parenting at the top, in which the regressor of interests is the parental engagement in the parent's country of origin. Each panel reports the results from a different specification. Panel A reports an analysis in which we control (in addition to the baseline control variables listed in Table 1) for the bilateral emigration rates between each origin country and Australia, taken from the database developed by Marfouk et al. (2009) and defined as the stock of migrants from each country of origin divided by the source countries labor force. Panels B-E report the results of regressions in which we randomly keep 75%, 50%, 25% and 20% observations for whom UK is the country of origin. Standard errors are clustered at the country level. Significance levels: *** $p<0.01$, ** $p<0.05$, * $p<0.1$. **Source**: Own elaborations on LSAC and WVS data.

Appendix D Household-level analysis

Appendix D.1 Model of household-level interactions

Equation (16) can be written in the usual log-linear form:

$$ln\left(\frac{h_m}{h_f}\right) = \frac{1}{1-\beta}ln(w_f) - \frac{1}{1-\gamma}ln(w_m) - \frac{1}{1-\beta}ln(\theta_f) + \frac{1}{1-\gamma}ln(\theta_m) + \widetilde{k} \qquad \text{(D-1)}$$

where $\widetilde{k} = \frac{ln(1-\alpha)+ln(\gamma)}{1-\gamma} - \frac{ln(\alpha)+ln(\beta)}{1-\beta}$. The wage functions of father and mother are:

$$ln(w_m) = a(e_m) + b(A_m)$$
$$ln(w_f) = c(e_f) + d(A_f). \qquad \text{(D-2)}$$

Equation (17) in the main text obtains from equation (D-1), after incorporating wage functions (D-2), provided that the household shares a common engagement of parenting activities $\theta_m = \theta_f = \theta_{mf}$. The coefficients of equation (17) are obtained as the following transformations $\widetilde{a} = \frac{a}{1-\gamma}$, $\widetilde{c} = \frac{c}{1-\beta}$, $\widetilde{z_f} = \frac{d}{(1-\beta)}$, and $\widetilde{z_m} = \frac{b}{(1-\gamma)}$.

Appendix D.2 Additional tables on the household analysis

Table D-1

Descriptive statistics of the sample of intact households; the cultural trait is the one of the mother

variable	mean	sd	min	max	N
Panel A. Regressors					
Mother is 1st-generation migrant	0.444	0.497	0	1	1124
High-educated mother	0.778	0.416	0	1	1124
Mother young at childbirth	0.181	0.386	0	1	1124
Child born in 2003/2004	0.543	0.498	0	1	1124
Intact household	0.995	0.073	0	1	1124
Child is male	0.512	0.500	0	1	1124
Child is first born	0.435	0.496	0	1	1124
Child has no siblings	0.568	0.496	0	1	1124
Family lives in capital region	0.300	0.458	0	1	1124
Panel B. Outcome variables					
Mother time on weekdays (share over total)	0.829	0.295	0	1	1124
Mother time on weekend (share over total)	0.555	0.410	0	1	1124
Mother time during weekdays	20.080	14.920	0	72.500	1124
Father time during weekdays	2.924	6.109	0	55.000	1124
Both mother and father employed	0.625	0.484	0	1	1124
Father is employed	0.967	0.179	0	1	1124
Mother is employed	0.645	0.479	0	1	1124
Mother hours of work (share over total)	0.213	0.229	0	1	1124
Mother hours of work	44.906	15.805	0	120	1124
Father hours of work	14.117	15.256	0	80	1124

Notes: The table reports descriptive statistics on the sample of intact households in which the mother is a migrant; the father can be either migrant or native. The variables reported in Panel A have been defined in Table 1 in the paper and are constructed at the household level. The outcome variables reported in Panel B are defined as follows. The dependent variables for parental investments are the percentage of time the child spends with the mother (over total parental time), the total time the child spends with the father, and the total time the child spends with the mother. The dependent variables for labor supply at the extensive margin are the probability that both mother and father work (*two-earners family*), and the probability that the father or the mother works, respectively. The dependent variables for labor supply at the intensive margin are the percentage amount of hours the mother works (over the total number of hours worked by the parents), the total number of hours worked by the father, and the total number of hours worked by the mother. **Source**: own elaborations on LSAC and WVS data.

Table D-2

Descriptive statistics of the sample of intact households; the cultural trait is the one of the father

variable	mean	sd	min	max	N
Panel A. Regressors					
Father is 1st-generation migrant	0.462	0.499	0	1	1133
High-educated father	0.813	0.390	0	1	1133
Father young at childbirth	0.284	0.451	0	1	1133
Child born in 2003/2004	0.538	0.499	0	1	1133
Intact household	0.999	0.030	0	1	1133
Child is male	0.514	0.500	0	1	1133
Child is first born	0.436	0.496	0	1	1133
Child has no siblings	0.564	0.496	0	1	1133
Family lives in capital region	0.294	0.456	0	1	1133
Panel B. Outcome variables					
Mother time on weekdays (share over total)	0.837	0.281	0	1	1133
Mother time on weekend (share over total)	0.562	0.409	0	1	1133
Mother time during weekdays	20.455	15.052	0	72.500	1133
Father time during weekdays	2.982	6.447	0	62.500	1133
Both mother and father employed	0.629	0.483	0	1	1133
Father is employed	0.974	0.161	0	1	1133
Mother is employed	0.645	0.479	0	1	1133
Mother hours of work (share over total)	0.203	0.220	0	1	1133
Mother hours of work	45.771	15.268	0	120	1133
Father hours of work	13.682	15.067	0	96.000	1133

Notes: The table reports descriptive statistics on the sample of intact households in which the father is a migrant; the mother can be either migrant or native. The variables reported in Panel A have been defined in Table 1 in the paper and are constructed at the household level. The outcome variables reported in Panel B are defined as follows. The dependent variables for parental investments are the percentage of time the child spends with the mother (over total parental time), the total time the child spends with the father, and the total time the child spends with the mother. The dependent variables for labor supply at the extensive margin are the probability that both mother and father work (*two-earners family*), and the probability that the father or the mother works, respectively. The dependent variables for labor supply at the intensive margin are the percentage amount of hours the mother works (over the total number of hours worked by the parents), the total number of hours worked by the father, and the total number of hours worked by the mother. For a list of regressors used in the analysis, see the footnote to Table D-1 in Appendix Appendix D.2. **Source**: own elaborations on LSAC and WVS data.

Table D-3

Parental investment and labor supply: household interactions; the cultural trait is the one of the father.

	(1) % time of mother	(2) Total time of father	(3) Total time of mother
A) Parental investments during weekdays			
Parental engagement of the household	-0.006	0.241	0.518
	(0.008)	(0.176)	(0.412)
Observations	1133	1133	1133
	two-earners family	father employed	mother employed
B) Household labor supply, extensive margin			
Parental engagement of the household	0.002	-0.006	0.007
	(0.013)	(0.004)	(0.013)
Observations	1133	1133	1133
	% of hours worked by the mother	hours of work father	hours of work mother
C) Household labor supply			
Parental engagement of the household	0.008	-0.694*	0.254
	(0.006)	(0.414)	(0.408)
Observations	1133	1133	1133

Notes: The table reports the results from OLS regressions on the variables reported at the top of each panel. Each cell refers to a different regression, whose regressor of interests is the parental engagement in the country of origin of the father. The regressions use a sample of intact households (i.e. for which we observe both mother and father), in which the father is a migrant; the mother can be either migrant or native. The dependent variables for parental investments are the percentage of time the child spends with the mother (over total parental time), the total time the child spends with the father, and the total time the child spends with the mother. The dependent variables for labor supply at the extensive margin are the probability that both mother and father work (*two-earners family*), and the probability that the father or the mother works, respectively. The dependent variables for labor supply at the intensive margin are the percentage amount of hours the mother works (over the total number of hours worked by the parents), the total number of hours worked by the father, and the total number of hours worked by the mother. For a list of regressors used in the analysis, see the footnote to Table D-1 in Appendix Appendix D.2. **Source**: own elaborations on LSAC and WVS data.