

# Parental unemployment and adolescent wellbeing – the moderating role of educational policies

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Crossover effects of parental unemployment on wellbeing of children attract growing attention in research on social inequalities. Recent economic crises call for identifying policies that mitigate the adverse effects of unemployment. Building on the theoretical insights from Capability Approach, we examine the relationship between parental unemployment and wellbeing of adolescents across countries with different educational policies. We use multilevel modelling and microdata on economic and subjective wellbeing of household members from the European Union Statistics on Income and Living Conditions (EU-SILC). We combine microdata on 45,992 adolescents in 32 countries with macro-level indicators of educational policies.

We find that parental unemployment is associated with lower adolescent wellbeing, but the magnitude of this association varies depending on access to financial support for participation in education. Adolescents who receive educational allowances and who live in countries with broader access to such support are less harmed by parental unemployment.

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#### Introduction

Intergenerational crossover effects of parental unemployment on health and wellbeing of children attract growing attention in research on social inequalities. While some empirical studies have demonstrated such effects, especially among adolescents (Brand and Simon-Thomas 2014; Moustgaard, Avendano and Martikainen 2018), little is known about variations across countries and institutional contexts. What is known, though, is that consequences of unemployment, as well as systems to support families in adverse circumstances, vary across contexts (Lindemann and Gangl 2020). Comparative analyses may therefore be well suited for uncovering mechanisms pertaining to societal conditions and contextual characteristics that vary little or not at all within single countries.

In this study, we investigate how parental unemployment affects the wellbeing of adolescents across European countries, and if these effects are moderated by countries' educational policies. To this end, we combine intergenerationally linked and cross-country harmonized microdata from the adhoc modules from European Union Statistics on Income and Living Conditions (EU-SILC) on about 45,992 adolescents aged 16-24, with institutional data on educational policies. We focus on educational policies, as this is of particular importance given the developmental stages characteristic of adolescence, and since existing research suggests that intangible resources, such as educational opportunities, may be central for explaining intergenerational crossover effects (Moustgaard, Avendano and Martikainen 2018; Peter 2016).

We contribute to the literature on the consequences of unemployment in several ways. First, we provide novel evidence of the cross-country variability in wellbeing among adolescents with unemployed parents, thereby allowing us to determine whether the crossover effects are universally present within Europe or if they are bounded in space. Second, by linking this cross-country variability to differences in institutional contexts, we provide theoretical insights that help us understand the mechanisms generating heterogeneity in intergenerational crossover effects. Specifically, we develop a conceptual framework and provide evidence for the effects of educational policies at two distinct levels of the analysis: individual- and country-level. We explain how, at the individual level, receiving educational allowances may alleviate the otherwise negative effects of parental unemployment. At the level of countries, we discuss arguments on how the benefits from educational policies extend to adolescents who do not receive this support at a specific time point, but might have access to it *should they need and want it*. Our research speaks to broader debates emphasizing how social policies can be viewed as a "collective resource" which supports not only the

direct beneficiaries, but also generates externalities for broader societal groups (Carr and Chung 2014; Haushofer et al. 2020; Högberg 2019a; Sjöberg 2010). Third, while adverse intergenerational crossover effects have been documented previously, research on the role of institutional characteristics in shaping these effects is scarce. By investigating the role of educational policies, we provide specific policy relevant knowledge with regard to the effectiveness of support for adolescents affected by parental unemployment. Such knowledge is imperative for designing interventions to mitigate adverse effects, and ensure an equitable start in life for all adolescents.

#### Background and previous research

#### Crossover effects of parental unemployment

The direct effects of unemployment on the wellbeing of the unemployed individuals are well understood. Unemployment reduces wellbeing by restricting opportunities to exercise personal agency and control one's life-course (Andersen 2008; Fryer 1986; Strandh 2000). Theoretical mechanisms explaining intergenerational crossover effects are less developed, but in this article, we propose that crossover effects on adolescent children emerge through similar processes as the direct effects on the unemployed. Previous studies on intergenerational crossover effects have found that that adolescents are a particularly vulnerable group (Brand and Simon-Thomas 2014; Moustgaard, Avendano and Martikainen 2018). This may be conceptualised from the perspective of adolescence as a distinct stage in life, in which parental unemployment can disrupt developmental processes and constrain the agency and autonomy of adolescents (Billari, Hiekel and Liefbroer 2019; Kalil and Ziol-Guest 2005). The negative consequences of reduced autonomy may, in some respects, be amplified for adolescents, since autonomy grows increasingly salient during adolescence (Inguglia et al. 2015), while simultaneously being more fragile as adolescents control fewer resources that can be used to underpin it.

Since adolescents often lack independent sources of income, lower household income following parental unemployment affects their economic standing as well. However, income losses experienced by families are only one of the mechanisms behind the crossover effects on adolescent wellbeing. If parents move to a different neighbourhood or region in search of a new job, residential mobility caused by unemployment can disrupt children's social networks and constrain opportunities for social participation (Brand 2015). Since adolescence is a period where non-family relationships become more salient, this may negatively affect their socio-emotional development and identity formation. Moreover, emotional distress in the unemployed parent, and associated disruption of parent-child relationships (McLeod and Shanahan 1993; Ponnet et al. 2015), may impair adolescents' own psychological development and wellbeing (Masarik and Conger 2017; Peter 2016). Compared to

younger children, who may lack the cognitive capacity to comprehend the situation, adolescents may furthermore be particularly sensitive to the stigma and status loss attached to unemployment (Brand and Thomas 2014).

Parental unemployment can also disrupt important life course transitions for adolescents, by limiting educational achievements (Layte 2021), constraining opportunities to enrol in postsecondary education (Lindemann and Gangl 2020), find a job (Haapakorva, Ristikari and Gissler 2017), form an autonomous household (Iacovou 2010), and form an own family (Billari, Hiekel and Liefbroer 2019). Since parents acts as role models for adolescents, the status loss and downward social mobility associated with unemployment may undermine their children's own educational ambitions, aspirations and ultimately attainment (Andersen 2011; Lehti, Erola and Karhula 2019; Mooi-Reci et al. 2019), with negative consequences for wellbeing (Buchmann and Kriesi 2011).

#### The moderating effect of educational policies

If an essential pathway through which parental unemployment reduces children's wellbeing is the constraints it imposes on their autonomy and agency, policies that support adolescents' autonomy should remove at least a part of the reduction in wellbeing. Given the developmental stage of adolescents in the focal age category of this study, educational policies are essential in this regard. Economic independence, with stable employment and income, is strongly tied to educational attainment, especially for young workers with little work experience (Blossfeld 2005). While the economic independence and security conferred by education improves wellbeing (Reynolds and Ross 1998; Strandh 2000), parental unemployment constrains adolescents' educational opportunities in multiple ways. Studies have demonstrated negative effects on adolescents' grades (Layte 2021; Lehti, Erola and Karhula 2019; Rege, Telle and Votruba 2011), educational ambitions (Andersen 2011), completion of secondary education (Brand and Thomas 2014; Kalil and Ziol-Guest 2008), postsecondary enrolment (Lehti, Erola and Karhula 2019; Lindemann and Gangl 2019), and overall attained education (Mooi-Reci et al. 2019).

Combining these insights – that education is key for autonomy and development, but that parental unemployment reduces both autonomy and educational opportunities – we can expect that educational policies that support adolescents' participation in education can foster autonomy and thereby reduce adverse crossover effects on wellbeing. To understand the role of educational policies in this process, we take Amartya Sen's Capability Approach as the point of departure. The Capability Approach distinguishes between achieved functionings – realized outcomes, or what a person has or does – and capabilities – what people are able to do *should they want to*. Capabilities thus refer to what kinds of functionings individuals can choose, while achieved functionings refer to

what they actually choose (Sen, 2006). A central tenet of the Capability Approach is that more opportunities to choose different paths in life has an intrinsic value, over and above the value of the path that is chosen. In this sense, capabilities are closely related to concepts such as autonomy and agency (Steckermeier 2021), and there is substantial empirical support that capabilities thus defined are positively associated with wellbeing (Anand, Hunter and Smith 2005; Graham and Nikolova 2015; Steckermeier 2021).

The Capability Approach allows us to conceptualize how educational policies, specifically financial support for students in the form of allowances, can moderate intergenerational crossover effects of unemployment on the individual as well as the contextual level. At the individual level, financial support can make education affordable, lessen adolescents' dependence on parental resources, and thereby counteract constraints on autonomy caused by parental unemployment. Consistent with this, financial support and lower out-of-pocket expenditure for education increase enrolment in post-secondary education for adolescents with unemployed parents (Lindemann and Gangl 2020), as well as for adolescents who are themselves unemployed (Högberg 2019b). Such support may then in extension lessen the constrains on autonomy caused by parental unemployment, not only by opening access to education, but also by enabling adolescent to form their autonomous household. This leads to our first hypothesis:

Hypothesis 1: The negative effects of parental unemployment on wellbeing is smaller for adolescents who receive educational allowances.

The moderating effect of support at the individual level is thus related to individuals' achieved functionings or realized outcomes. However, the intrinsic value of opportunities postulated by the Capability Approach implies that the above described benefits operate also at the contextual level, as characteristic that affect all prospective students. If individuals are forward-looking, their beliefs about what they can realistically do in the future, their perceived opportunities, shape their assessment of, and wellbeing in, the present (Seligman et al. 2013). Thus, educational policies can have externalities that apply also for those who currently do not receive educational allowances (and are not enrolled in education), but for whom the mere knowledge that education is a realistic opportunity provides comfort. Moreover, broad welfare state support for participation in education not only grant future perspectives to those who have not yet enrolled in education, but it also socially legitimates the fact that everyone has the right to do so. Such externalities have previously been found for educational policies (Högberg 2019a; Högberg et al. 2019), but also for active labour market and lifelong learning policies (Carr and Chung 2014; van Oorschot and Chung 2014), unemployment insurance (Sjöberg 2010) and health insurance (Haushofer et al. 2020). The intrinsic

value of opportunities, moreover, tends to be relatively greater for vulnerable groups such as adolescents with low education or working class background (Högberg 2019a; Högberg et al. 2019; Sjöberg 2010; Steckermeier 2021). This leads to our second hypothesis:

Hypothesis 2: The negative effects of parental unemployment on wellbeing are smaller in societies with broader access to educational allowances.

#### Research design

We use cross-sectional data from two European Survey on Income and Living Conditions (EU-SILC) ad-hoc modules carried out in 2013 and 2018, which provide information on life satisfaction among household members aged 16 or more (De Smedt 2013). The data includes 32 countries, including all EU members, as well as Norway, Serbia, Switzerland and UK. The EU-SILC has been designed with a standard methodology to yield comparable information across European countries on several features. Nevertheless, the data collection varies somewhat across countries, for instance, Nordic countries use registers and information which cannot be derived from registers is collected only from selected respondents. One of the features which makes this dataset particularly useful for the purposes of this study is that in each household, family members are assigned personal identity numbers, and individual records include also identification numbers of family members. Hence, we are able to link data on adolescents with information about mothers and fathers who co-reside in the same household. We focus on adolescents aged 16-24 living with at least one of the parents. This broad age range corresponds to adolescent development across a variety of societal contexts (Sawyer et al. 2018). The sample is restricted to observations with non-missing information in the background and outcome variables. Our total sample includes 45,992 adolescents.

The dependent variable is life satisfaction of adolescents measured on a scale of 0 (completely dissatisfied) to 10 (completely satisfied). The key explanatory variable measures parental labour market status. We distinguish the following categories: parental employment, unemployment, inactivity and we include an additional category of a parent who is absent in the household. The labour market status together with the absence of a parent operationalized this way allows examining separately the effects of mother's and father's unemployment, while including adolescents living with lone parents. The former is important because some studies suggest that the effects of a mother's and a father's unemployment differ in magnitude (Moreno-Maldonado et al. 2020). The latter ensures that we do not exclude families where the absence of a parent might trigger most drastic scarcity of resources. We acknowledge that since the labour market status of parents is measured cross-sectionally, it is not possible to distinguish the effects of long- and short-term unemployment or lagged and anticipatory effects.

The key moderator variables measure educational policies, and in particular, the access to educational allowances. EU-SILC provides measures of individual receipts of educational allowances, and we create a dummy variable identifying adolescents who receive educational allowances versus those who did not. In addition, following the Capability Approach outlined in the previous section, we also examine the role of the opportunity for all adolescents to participate in education *should they want to do so.* Therefore, we generate an aggregate measure of the coverage of these allowances in the whole population of students (defined as individuals participating in education and aged less than 26) in a given country. Next to the measure of the country-level coverage of the allowances, we also add a recently developed indicator of the generosity of this support, which relates the level of such allowances to the average wage (for details of how this measure is constructed see Czarnecki, Korpi and Nelson (2020)). This step incorporates insights from the research debates on how both the coverage and generosity of financial support targeting the unemployed may be relevant for wellbeing among the adults (Sjöberg 2010; Voßemer et al. 2018). We consider additionally both coverage and generosity of out of work benefits that are available at the country level for the unemployed adults (Nelson et al. 2020).

We include a battery of individual and family-level control variables, which are likely to determine parental labour market status and simultaneously are correlated with adolescent life satisfaction. We do not include variables that may be determined by parental labour market status or which mediate the impact of parental labour market status on adolescent wellbeing in order to avoid the overcontrol bias (Elwert and Winship 2014). For the same reason, we only control for labour market status of one of the parents, without adding the labour market status of another parent as a covariate. Given the insights from research on the interdependence of labour careers within couples (Bröckel, Busch-Heizmann and Golsch 2015; Vandecasteele and Esche 2015), including employment status of both parents would raise the risk of having collider variables in our regression models. We control for adolescents' age (in linear form), sex (with a dummy variable distinguishing between men and women) and suffering from any chronic illness (a dummy coded one in case of the presence of illness). We control for parental level of education attainment, which follows ISCED classification categories: primary education or less, lower secondary education, upper secondary education, postsecondary non-tertiary education and tertiary education. This variable is equal to mother's or father's education attainment, whichever is higher. In case of adolescents living with single parents, the level of education is equal to the non-absent parents' education attainment. We distinguish between adolescents, whose both parents were born in the same country where they live, and distinguish them from families where at least one parent was born outside of the country of residence. In

addition, we control for survey wave in order to capture the differences in wellbeing across time. The distribution of the control variables is presented in Table A1 in the Annex.

We also include a set of macro-level variables that may be correlated with both parental unemployment status and adolescent wellbeing. Specifically, we control for aggregate country-year specific unemployment rate, because when aggregate unemployment increases, it raises risk of job losses among parents and simultaneously has negative impact on adolescent wellbeing (Johansson et al. 2019). We control for country-level inequality measured with Gini inequality index. Both these measures are derived from the World Bank Databank. We control for the share of services in a country in order to capture the structural differences between countries. Growth in the service sector has been argued to create jobs that are less stable, with higher flexibility but also less employment security. Services typically offer jobs for young people which may imply opportunities for financing participation of education. We construct a measure of the services based on the proportion of employment in service sector based on NACE classification in EU-SILC. All macro-level covariates were standardized, hence the regression coefficients measure the change in association after a change in a covariate equal to one standard deviation. The distribution of the unstandardized values of the macro-level variables are included in Table A2 in the Annex.

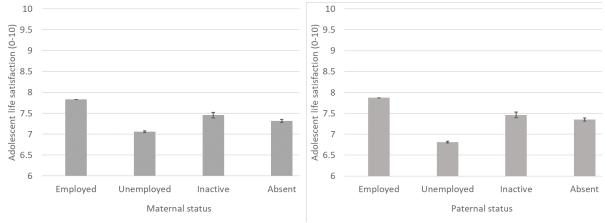
Our data have a hierarchical structure, with observations on adolescents nested within higher level units, i.e., country-years. We estimated linear probability multilevel models, where we control for individual characteristics such as having an unemployed parent or receiving educational allowances, and country-level characteristics such as coverage of educational allowances, as well as the interactions between these variables. To test hypotheses about how maternal and paternal unemployment are associated with adolescent life satisfaction, we use models without interactions (Model 1 and 2 in Table 1). Next, in we test whether the associations between parental unemployment and adolescent life satisfaction are moderated by receiving educational allowances by including interactions (Model 3 and 4 in Table 1). Finally, in Table 2 we present the evidence on the moderating role of country-level coverage of the educational allowances and the way it reduces the effects of parental unemployment on life satisfaction among adolescents. The models in Table 2 include cross-level interactions, measuring the combined effect of individual-level and contextuallevel factors. These models include random slopes for parental employment status, so that coefficients are allowed to vary across country-years. This approach also enables us to make more robust inferences regarding the interactions between the type of parental labour market status and the coverage of educational allowances (Heisig and Schaeffer, 2019). Additional analyses summarised at the end of the next section address concerns related to cross-sectional nature of our

measurements, heterogeneity in the effects of policies or error in their measurement as well as the selectivity of the sample.

#### **Empirical results**

The first step in our analysis comprises of descriptive evidence on the variation in adolescent wellbeing according to parental labour market status in a pooled sample for all European countries. Figure 1 compares means of life satisfaction scores according to maternal and paternal labour market status, respectively. Compared to adolescents with employed mothers, those with unemployed mothers have 0.77 scores lower life satisfaction. Maternal inactivity is associated with much smaller reduction in life satisfaction by 0.38 scores. Adolescents in household where a mother is absent report life satisfaction lower by 0.51 scores as compared to adolescents where a mother is present and involved in paid work. Regarding paternal status, the pattern is similar. Compared to adolescents with employed fathers, those with unemployed fathers have 1.02 scores lower life satisfaction. Fathers inactivity is associated a decrease in life satisfaction, by 0.37 scores. Being raised by a single mother is related to a reduction in life satisfaction by 0.48 scores.

**Figure 1.** Adolescent life satisfaction according to maternal (left hand panel) and paternal (right hand panel) status (with 95% confidence intervals).



Source: EU-SILC Wellbeing Modules 2013 and 2018.

In the next step, we present evidence from multilevel models that control for adolescents' background characteristics, as well as macro-level variables. After controlling for confounders, the associations between parental unemployment and adolescent wellbeing become somewhat weaker. The results presented in Table 1 indicate that in the multivariate setting, maternal unemployment is related to a 0.47 score decrease in life satisfaction of adolescents (Model 1). Adolescents in households where a mother is inactive or absent report life satisfaction lower by 0.19 and 0.34 scores, respectively, compared to adolescents whose mothers are employed. Regarding the role of paternal employment status, adolescents with unemployed fathers report life satisfaction lower by

0.66 scores compared to adolescents with employed fathers (Model 2). Paternal inactivity and absence are related to reductions in life satisfaction by 0.24 and 0.43 scores, respectively. Note that the relationship between parental unemployment and adolescent life satisfaction is rather strong. For instance, it is comparable in strength to chronic illness, which reduces life satisfaction by about 0.55 scores.

Further, we examine how receiving educational allowances moderates the negative association between parental unemployment and adolescent wellbeing. The results from models including interactions (Model 3 and 4) suggest that receiving these allowances does not seem to play a role for adolescents with employed parents, but only for those, whose families have reduced resources due to parental joblessness or absence. While adolescents with unemployed mothers have life satisfaction lower by 0.49 scores when not receiving educational allowances, this negative effect is mitigated by 0.24 scores if they receive educational allowances (Model 3). We also observe that receiving educational allowances reduces the otherwise negative effects of maternal inactivity or absence. Similarly, while adolescents whose fathers are unemployed have life satisfaction lower by 0.72 scores when not receiving educational allowances, receiving educational allowances diminishes this association by 0.56 scores (Model 4). The association between father's absence is reduced when adolescents receive educational allowances, but we do not observe such moderation effect in case of paternal inactivity.

The relationships between the control variables and adolescent wellbeing are consistent with previous research and similar across specifications. In brief, we observe negative associations between age and wellbeing among adolescents, we find that female adolescents report higher life satisfaction, whereas adolescents with chronic illness report lower life satisfaction. We also observe positive associations with parental education and negative associations with parental immigrant status. At the macro level, we find that unemployment rate and higher inequality are related to lower life satisfaction among adolescents.

**Table 1.** Life satisfaction among adolescents according to parental status and receiving educational allowances.

	Model 1		Model 2		Model 3		Model 4	
	X = Mothe	r's labour	X = Father	's	X = Mothe	r's	X = Father	's
	market sta	atus	labour ma	rket status	labour ma	rket status	labour ma	rket status
	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE
Parental labour market status (ref. employed)								
Unemployed	-0.47***	(0.03)	-0.66***	(0.03)	-0.49***	(0.03)	-0.72***	(0.04)
Inactive	-0.19***	(0.02)	-0.24***	(0.03)	-0.22***	(0.02)	-0.26***	(0.03)
Absent	-0.34***	(0.04)	-0.43***	(0.02)	-0.37***	(0.04)	-0.45***	(0.02)
Educational allowances					0.01	(0.03)	0.04	(0.03)
Parental labour market status # Educational a	llowances							
Unemployed # allowances					0.24**	(0.10)	0.56***	(0.11)
Inactive # allowances					0.31***	(0.06)	0.10	(0.10)
Absent # allowances					0.22*	(0.12)	0.16***	(0.06)
Control variables								
Age	-0.08***	(0.00)	-0.07***	(0.00)	-0.08***	(0.00)	-0.07***	(0.00)
Women	0.08***	(0.02)	0.09***	(0.02)	0.08***	(0.02)	0.08***	(0.02)
Chronic illness	-0.55***	(0.02)	-0.53***	(0.02)	-0.55***	(0.02)	-0.53***	(0.02)
Parental immigrant status	-0.11***	(0.03)	-0.10***	(0.03)	-0.11***	(0.03)	-0.11***	(0.03)
Parental education (ref. elementary)								
Lower secondary	0.18***	(0.04)	0.16***	(0.04)	0.18***	(0.04)	0.16***	(0.04)
Upper secondary	0.58***	(0.04)	0.53***	(0.04)	0.57***	(0.04)	0.52***	(0.04)
Postsecondary	0.60***	(0.05)	0.56***	(0.05)	0.59***	(0.05)	0.56***	(0.05)
Tertiary	0.77***	(0.04)	0.72***	(0.04)	0.77***	(0.04)	0.71***	(0.04)
Wave: 2018	0.18***	(0.04)	0.18***	(0.04)	0.18***	(0.04)	0.18***	(0.04)
Unemployment rate	-0.11**	(0.06)	-0.11**	(0.06)	-0.11**	(0.06)	-0.11**	(0.06)
Gini coefficient	-0.10**	(0.04)	-0.10**	(0.04)	-0.09**	(0.04)	-0.09**	(0.04)
Share of services	-0.05	(0.06)	-0.06	(0.06)	-0.05	(0.06)	-0.05	(0.06)
Constant	8.77***	(0.11)	8.83***	(0.11)	8.77***	(0.11)	8.83***	(0.11)
St. Dev. (country)	0.39***	(0.05)	0.39***	(0.05)	0.39***	(0.05)	0.39***	(0.05)
St. Dev. (country-year)	0.15***	(0.02)	0.15***	(0.02)	0.15***	(0.02)	0.15***	(0.02)
St. Dev. (residual)	1.68***	(0.01)	1.68***	(0.01)	1.68***	(0.01)	1.68***	(0.01)
N	45992		45992		45992		45992	

Source: EU-SILC Wellbeing Modules 2013 and 2018

We have argued that educational policies matter not only for adolescents who directly benefit from these policies, i.e. who are currently receiving educational allowances, but also to other adolescents who may have potential access to such support. We have expected that the mere possibility to benefit from these policies may mitigate the otherwise negative effects of parental unemployment, and we address these hypotheses based on results from multilevel models with cross-level interactions (Table 2). Our results indicate that macro-level indicators of availability of educational allowances are not related to weaker relationship between maternal unemployment and adolescent wellbeing (Model 1). However, associations between maternal inactivity or absence and adolescent wellbeing are weaker in countries where adolescents can count on financial support for participation in education. For instance, while adolescents with inactive mothers have wellbeing lower by 0.16 scores as compared to adolescent with employed mothers when the macro-level availability of educational allowances is at the mean level, one standard deviation increase in macro-level availability of educational allowances reduces this gap by 0.14 scores. The negative relationship between maternal absence and wellbeing is almost halved when the macro-level availability of educational allowances increases by one standard deviation. Regarding paternal unemployment, we observe quite strong mitigation effects (Model 2). While adolescents with unemployed fathers have wellbeing lower by 0.51 scores as compared to adolescent with employed fathers when the macrolevel availability of educational allowances is at the mean level, one standard deviation increase in macro-level availability of educational allowances reduces this gap by 0.27 scores. We also observe the moderating role of educational policy with respect to parental inactivity or absence, as the crosslevel interactions suggest reductions in otherwise negative associations by 0.14 and 0.08, respectively.

**Table 2.** Life satisfaction among adolescents according to parental status and the moderating role of the macro-level coverage of educational allowances.

	Model 1		Model 2		Model 3		Model 4	
	X = Mothe	r's	X = Father	's	X = Mothe	r's	X = Father	's
	labour ma	rket status	labour ma	rket status	labour market status		labour market statu	
	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE
Parental labour market status								
Unemployed	-0.46***	(0.07)	-0.51***	(80.0)	-0.49***	(0.07)	-0.48***	(0.09)
Inactive	-0.16***	(0.03)	-0.21***	(0.04)	-0.15***	(0.03)	-0.23***	(0.04)
Absent	-0.31***	(0.05)	-0.41***	(0.03)	-0.30***	(0.05)	-0.42***	(0.03)
Coverage of educational allowances	-0.01	(0.07)	-0.00	(0.07)	-0.07	(80.0)	-0.07	(0.07)
Generosity of educational allowances					0.09*	(0.05)	0.10**	(0.05)
Parental employment status # Coverage of	educational a	Illowances						
Unemployed # coverage	0.06	(80.0)	0.27***	(0.10)	0.03	(0.10)	0.17	(0.11)
Inactive # coverage	0.14***	(0.03)	0.14***	(0.04)	0.13***	(0.04)	0.15***	(0.05)
Absent # coverage	0.15***	(0.05)	0.08***	(0.03)	0.12**	(0.06)	0.09***	(0.03)
Parental employment status # Generosity o	f educational	allowances						
Unemployed # generosity					0.11	(0.07)	0.19**	(0.09)
Inactive # generosity					0.04	(0.03)	0.02	(0.05)
Absent # generosity					0.09	(0.05)	-0.02	(0.03)
Control variables								
Age	-0.08***	(0.00)	-0.07***	(0.00)	-0.08***	(0.00)	-0.07***	(0.00)
Women	0.08***	(0.02)	0.08***	(0.02)	0.08***	(0.02)	0.08***	(0.02)
Chronic	-0.54***	(0.02)	-0.53***	(0.02)	-0.58***	(0.03)	-0.56***	(0.03)
Parental immigrant status	-0.12***	(0.03)	-0.11***	(0.03)	-0.14***	(0.03)	-0.13***	(0.03)
Parental education (ref. elementary)								
Lower secondary	0.18***	(0.04)	0.17***	(0.04)	0.18***	(0.04)	0.17***	(0.04)
Upper secondary	0.58***	(0.04)	0.53***	(0.04)	0.56***	(0.04)	0.51***	(0.04)
Postsecondary	0.60***	(0.05)	0.58***	(0.05)	0.57***	(0.05)	0.55***	(0.05)
Tertiary	0.77***	(0.04)	0.73***	(0.04)	0.74***	(0.04)	0.70***	(0.04)
Wave: 2018	0.17***	(0.04)	0.17***	(0.04)	0.17***	(0.05)	0.17***	(0.05)
Unemployment rate	-0.12**	(0.06)	-0.11*	(0.05)	-0.05	(0.06)	-0.05	(0.06)
Gini coefficient	-0.10**	(0.04)	-0.10**	(0.04)	-0.07	(0.05)	-0.08	(0.05)

Share of services	-0.05	(0.06)	-0.05	(0.06)	-0.11*	(0.06)	-0.11*	(0.06)
Unemployment benefit coverage					0.07	(0.07)	0.06	(0.07)
Unemployment benefit generosity					0.05	(0.06)	0.04	(0.06)
Constant	8.78***	(0.11)	8.83***	(0.11)	8.80***	(0.11)	8.85***	(0.11)
St. Dev. (country)	0.38***	(0.05)	0.36***	(0.05)	0.33***	(0.05)	0.32***	(0.05)
St. Dev. (unemployed)	0.37***	(0.06)	0.50***	(0.07)	0.37***	(0.06)	0.48***	(0.07)
St. Dev. (inactive)	0.16***	(0.04)	0.17***	(0.04)	0.14***	(0.04)	0.17***	(0.05)
St. Dev. (absent)	0.13***	(0.09)	0.12***	(0.03)	0.13**	(0.10)	0.11***	(0.03)
St. Dev. (country-year)	0.15***	(0.03)	0.15***	(0.03)	0.15***	(0.03)	0.16***	(0.03)
St. Dev. (residual)	1.68***	(0.01)	1.67***	(0.01)	1.68***	(0.01)	1.68***	(0.01)
N	45992		45992		40608		40608	

Source: EU-SILC Wellbeing Modules 2013 and 2018.

Models 3 and 4 in Table 2 show additionally to what degree our results reflect the generosity of educational allowances, and whether they are robust when we control for coverage and generosity of out-of-work benefits that are available to adults. We can observe three interesting patterns. First, while the degree of coverage of educational allowances is not related to wellbeing of adolescents with employed parents, the generosity measures shows some positive associations, although they are not very strong (0.09-0.10 scores). Second, after controlling for generosity of educational allowances, their coverage turns out to be less strongly related to life satisfaction among adolescents, suggesting that both these policy dimensions play an important role. Finally, the interactions with maternal unemployment remain similar in this model specification, but the associations with paternal unemployment change in a way indicating that both coverage and generosity of allowances matter when it comes to mitigating father's unemployment.

We carried out a range of additional analyses to check the robustness of the results. First, given the cross-sectional nature of the key explanatory variable, we tested whether lagging parental employment status affects our results. To this end, we derived the retrospective measures of parental employment status and used them instead of contemporaneous measures. The methodological details of this step as well as the results are presented in the Online Supplement in Table S1. This analysis confirmed that our conclusions regarding the associations between parental unemployment and adolescent wellbeing remain unchanged, but the interactions between maternal unemployment and educational allowances turned out to be weak and not statistically significant. Note that this analysis excluded Nordic countries because retrospective information on parental labour market status was not available in those countries.

In further sensitivity analyses, we considered the fact that our measure of coverage of educational allowances may be measured with some error. Using errors-in-variables models (Wooldridge 2010), we showed that the measurement error might attenuate our estimates, as the effects of interactions between parental status and policy indicators are somewhat larger than in our main analysis (Table S2 in the Online Supplement).

Finally, our analyses exclude individuals who live without their parents, because when young adults live independently, it is not possible to observe the labour market status of their parents. This step is also relevant from the theoretical perspective. As young people establish their own households, financial mechanisms behind the intergenerational crossover effects no longer hold. The mechanisms related to deterioration of parent-child relations after parental job loss also may not apply, because when young adults move out of parental home, joint interactions become less common. Hence, the effects of parental unemployment may be weak or non-existent for non-resident adolescents.

However, the literature on leaving parental home recognizes that this process often takes many steps, and often involves the stage where adolescents live temporarily away, for instance in a student dormitory (Nilsson and Strandh 1999) but still remain members of parental household. During such stage adolescents may continue to receive financial support from parents, and the frequency of interactions between parents and children might be relatively more frequent. Hence, this in-between stage might be quite relevant for assessment of intergenerational crossover effects (Kalmijn and Liefbroer 2011). We estimated Heckman selection models in order to examine (1) whether the probability of living temporarily outside of parental home is associated with parental unemployment and (2) how correction for sample selection changes the estimates. Our results in Table S3 in the Online Supplement show that correcting for the potential selection bias renders estimates that go in the same direction as reported in our main analysis. The effects are stronger and statistically significant both for maternal and paternal unemployment as well as for the interactions between parental unemployment and educational policies.

#### Discussion

Negative effects of parental unemployment on the wellbeing of children and youth have long raised concerns (Andersen 2021; Brand and Thomas 2014; Nikolova and Nikolaev 2021; Powdthavee and Vernoit 2013). As the pandemic has simultaneously triggered increases in employment uncertainty among parents, and posed threats to wellbeing and mental health among adolescents (Cowie and Myers 2021; Patrick et al. 2020), advancing knowledge on how to buffer families against such changes has become even more urgent. The variation in the European institutional settings that play a protective function for families calls for comparative studies (Lindemann and Gangl 2020). Our study contributes to the literature by bringing comparative evidence on how policies may moderate the associations between parental unemployment and adolescent wellbeing. Building on the theoretical insights from the Capability Approach (Sen 2006), we examine the wellbeing of adolescents across countries with different educational policies.

Our results indicate that, on average, both maternal and paternal unemployment are negatively associated with adolescent wellbeing in Europe. However, we also find that there is scope for mitigating such negative effect through policies that support adolescents' participation in education and foster adolescent autonomy reduce the intergenerational crossover effects. Receiving educational allowances is related to relatively weaker reductions in wellbeing among adolescents with unemployed parents. These interactions are statistically significant in case of paternal unemployment, but less consistently so in case of maternal unemployment. Furthermore, when

adolescents live in a country with a high level of coverage of educational allowances, the negative association between paternal unemployment and adolescent wellbeing is weaker.

The extent to which policies can mitigate the effect of parental unemployment require some further comments in relation to parental gender. On the one hand, our findings suggest that public resources thought to foster adolescents autonomy compensate less for maternal than for paternal unemployment. On the other hand, some of our sensitivity analyses suggest that the associations with maternal and paternal unemployment are both statistically significant and somewhat stronger than it appears from our main analyses. If we consider the fact that adolescents, who receive educational allowances are less likely to live with their parents, and they also benefit more from such support in terms of wellbeing, the overall effects of the interactions between parental unemployment and receiving educational allowances are even stronger. The same applies to the estimates of the interactions between parental unemployment and the coverage of educational allowances. All in all, our findings call for more in-depth, longitudinal investigations on how the process of leaving parental home alters the relationship between parental resources and adolescents' wellbeing, and how policies increasing youth economic and residential autonomy might benefit the youngest generations.

In addition to examining the associations between parental unemployment and adolescent wellbeing, we also provide evidence on the wellbeing among adolescents, whose parents are economically inactive or who were absent from the household. Both situations refer to the experience of growing up in a family deprived from the benefits offered by parental income from paid work. In both cases there are potentially negative effects on children's wellbeing related to a more difficult household economic situation. However, distinguishing between inactivity and parental absence and their consequences lead to interesting comparisons. Parental economic inactivity may be driven by permanent disability, a decision to give up work or business, or involvement in domestic tasks and care responsibilities. Thus, it reflects situations when parents have to some degree accepted the fact that they are not involved in paid work or got discouraged from searching for it. Families with absent parents may reflect more substantial and permanent scarcity of resources, although they may also mean less exposure to harmful interactions related to unemployment that may otherwise affect wellbeing of family members. Of course, we need to keep in mind that parents who are absent from the household due to prior separation, may still contribute financially to raising children and might still have regular meetings with their children (even if less frequent as compared to parents who are present in the household). Generally, the associations between parental economic inactivity a well as parental absence and adolescent wellbeing operate in the same direction and interact similarly with policies, as in case of parental unemployment.

However, these associations are not always statistically significant, which may be to some degree related to a heterogeneity of reasons why parent are economically inactive or absent in the households. Future research should follow up on the insights from our study and examine the benefits from educational policies for more specific categories of families, such as adolescents with parents who suffered from some debilitating illness or adolescents with divorced parents.

Our study has limitations. Unemployment can be short-term or long-term, for some parents it may be a recurring experience whereas for others just a single episode. There is a growing body of research suggesting that these different patterns of how unemployment fits into the whole parental labour market career trajectory may have diverging repercussions for the wellbeing of the unemployed and their family members (Blom and Perelli-Harris 2020; Cheng et al. 2020; Sleskova et al. 2006). Our study also cannot take into account all the aspects of parental economic uncertainty or insecurity that typically precedes a job loss and may be relevant for wellbeing. However, while our data give us the advantage for international comparisons, due to their cross-sectional nature, it is not possible to scrutinize simultaneously the longitudinal aspects. Our study focuses more on the international comparative dimensions than on the processual dimension. Additionally, while our analysis incorporates different forms of institutionalised support of which families benefit, we cannot consider multiple forms of informal support, such as material and non-material transfers from relatives. These transfers may intensify when parental resources get more restricted, and the degree of this compensatory responses within families may vary across cultures and contexts.

Notwithstanding these limitations, our paper makes a number of important contributions. The solid evidence on the existing relationships between parental unemployment and the wellbeing of children, calls for a better assessment of the societal costs of unemployment. The variation in these relationships across countries with diverse educational policies strongly points at the need of designing multidimensional policy measures to alleviate the negative effects of parental unemployment. The margin of action of labour market policies can be augmented with thoughtful educational policies addressing the youth. We explore the role of the educational policies at two levels: individual- and country-level, and we show that both levels are relevant for understanding the role of the educational policies for adolescent wellbeing. Like we did for educational policies, future research shall include the interaction of policies in other life course relevant domains for youth wellbeing, such as housing policies. More generally, our empirical evidence urges the need to move from a fragmented and compartmentalized welfare action to holistic welfare policies targeting the life course as a complex process with multiple interactions across life domains and individuals (Bernardi, Huinink and Settersten 2019).

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### Annex

**Table A1. Descriptive statistics** 

		/a
Variable	Mean or %	(Std. Dev.)
Life satisfaction	7.7	(1.80)
Age	20.2	(2.26)
Women	48%	
Chronic illness	12%	
Parental immigrant background	14%	
Parental elementary education	5%	
Parental lower secondary education	13%	
Parental upper secondary education	44%	
Parental postsecondary education	5%	
Parental tertiary education	33%	
Mother employed	67%	
Mother unemployed	8%	
Mother inactive	21%	
Mother absent	4%	
Father employed	66%	
Father unemployed	6%	
Father inactive	8%	
Father absent	20%	
Educational allowances	12%	

Source: EU-SILC Wellbeing Modules 2013 and 2018.

Table A2. Distribution of maternal and paternal labour market status within countries.

		Maternal stat	us, %		Paternal status, %				
						Unemploye			
	Employed	Unemployed	Inactive	Absent	Employed	d	Inactive	Absent	
AT	77	4	16	4	69	3	7	22	
BE	64	5	23	8	57	4	9	31	
BG	74	12	9	6	64	11	6	19	
CH	73	1	22	3	75	1	5	19	
CY	64	12	22	2	68	11	6	15	
CZ	82	5	10	3	73	3	3	21	
DE	77	3	15	4	71	2	8	20	
DK	86	5	5	5	68	2	5	25	
EE	80	5	12	2	67	4	6	22	
EL	50	11	36	3	63	11	13	13	
ES	55	18	23	4	61	12	7	20	
FI	85	4	6	5	72	3	9	17	
FR	70	6	16	8	65	3	6	26	
HR	59	18	18	4	56	11	16	17	
HU	70	8	18	4	58	6	10	26	
IE	52	9	36	4	55	9	9	27	
IS	77	1	18	3	80	1	1	18	
IT	59	6	33	3	68	4	10	18	
LT	78	9	10	3	63	5	7	25	
LU	64	3	30	4	61	2	15	23	
LV	74	10	10	6	48	4	6	42	
MT	43	0	55	3	72	1	11	15	
NL	76	2	18	4	80	1	5	14	
NO	78	2	13	7	71	1	6	22	
PL	71	8	18	2	67	5	9	19	
PT	67	14	16	3	61	10	7	22	
RO	67	1	29	4	77	1	9	12	
RS	56	24	15	5	59	21	6	14	
SE	81	4	9	6	72	3	5	21	
SI	78	9	8	4	67	6	6	20	
SK	79	9	10	2	70	5	6	19	
UK	71	1	25	3	58	2	9	30	
Total	67	8	21	4	66	6	8	20	

Source: EU-SILC Wellbeing Modules 2013 and 2018

**Table A3.** Distribution of country-level covariates, country-level means.

Country	Unemp- loyment rate	Gini coefficient	Share of services	Coverage of educational	Generosity of educational	Coverage of out-of-work	Generosity of out-of-work	Financial aid for students
				allowances	allowances	benefits	benefits	
AT	5.2	30.1	5.0	10.3	0.4	63.6	115.8	15.6
BE	7.3	27.5	6.3	0.9	n.a.	90.6	111.8	16.4
BG	9.3	38.1	4.7	4.9	-0.4	77.0	33.3	17.5
CH	4.6	32.0	6.6	8.3	n.a.	72.6	59.4	9.9
CY	11.5	33.3	6.6	12.6	0.1	61.0	33.9	11.3
CZ	5.7	25.7	5.0	5.6	0.3	77.0	36.7	12.1
DE	4.5	14.9	5.8	12.3	0.6	59.0	222.1	27.6
DK	6.9	28.2	6.7	49.8	0.7	85.4	60.9	95.2
EE	8.1	31.8	5.0	16.8	0.5	54.6	40.5	19.1
EL	22.4	35.0	5.5	0.6	0.1	38.1	27.0	1.0
ES	20.9	35.0	6.1	17.2	0.4	78.0	49.5	27.5
FI	8.1	27.2	5.8	38.7	0.5	67.6	154.7	87.3
FR	9.4	32.4	6.0	17.0	0.4	68.5	99.6	31.2
HR	13.6	31.4	5.6	9.2	n.a.	75.5	21.0	4.7
HU	8.7	30.7	5.1	15.3	0.7	68.7	20.5	39.3
IE	10.7	32.2	6.0	13.2	0.4	55.5	126.9	43.0
IS	6.0	26.8	6.8	9.0	0.6	81.0	193.0	n.a.
IT	11.0	35.6	5.8	5.6	0.1	72.9	42.6	10.9
LT	11.6	35.7	5.2	10.2	0.5	84.5	24.4	16.6
LU	5.4	34.4	7.3	29.8	1.0	83.6	46.1	67.2
LV	12.9	35.3	5.9	22.0	0.0	67.4	27.1	6.3
MT	4.6	29.3	7.1	87.4	0.5	44.8	42.9	94.8
NL	5.4	28.0	6.5	43.7	0.7	73.6	66.8	39.8
NO	3.6	26.3	6.0	78.1	0.5	69.5	60.6	52.3
PL	8.6	32.0	4.4	6.6	0.4	71.0	19.7	23.1
PT	11.8	34.8	5.8	11.3	0.7	75.0	42.9	19.9

RO	6.1	36.3	3.1	2.3	0.0	44.3	41.2	32.7	
RS	18.1	37.8	4.9	4.5	n.a.	n.a.	9.0	n.a.	
SE	7.4	28.2	6.8	86.8	0.7	68.2	62.8	75.2	
SI	7.8	14.1	5.7	49.2	0.3	84.5	36.8	24.4	
SK	11.6	25.0	4.9	2.7	0.3	62.4	12.2	12.4	
UK	5.6	34.1	6.7	10.6	0.6	50.7	57.7	20.6	

Source: Unemployment rate and Gini coefficient World Bank; Share of services in the economy and Coverage of educational allowances: own estimates based on EUSILC microdata 2013 and 2018; Generosity of educational allowances: The Student Support and Fees Dataset (SSFD), SPIN database. Coverage of out-of-work benefits and Generosity of out-of-work benefits: OECD. Financial aid for students: Eurydice "National Student Fee and Support Systems in European Higher Education" report series, own compilation.