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Young adults' labour market transitions and intergenerational support in Germany

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Research has shown that parents provide considerable support to their children; however, we know little about the influence of young adults' employment experiences on the support they receive from their parents. We draw on data from the German Family Panel pairfam for birth cohorts 1981–1983 and 1991–1993 and use a first difference panel estimator with asymmetric effects to examine the extent to which young adults' employment transitions affect material, emotional, and instrumental support from parents. We find stark differences across types of support: parental material support changes in response to transitions in and out of employment, especially when to and from education. Other types of support seem less contingent on labour market transitions. Instrumental support only increases for transitions from education to employment and from employment to NEET. The latter effect is mainly driven by women entering parental leave. We do not find strong evidence of differences between transitions to standard and non-standard work. The association between employment transitions and intergenerational material support flows suggests that families act as safety nets, raising concerns about those whose families are unable to help.

Introduction

The transition to adulthood has undergone several changes over the last few decades, shifting needs and capacities to support across generations and households. The 'second demographic transition' brought educational expansion as well as changes in family formation and fertility (van de Kaa, 2001). In the course of flexibilization, young adults face challenges when entering the labour market, including not being in education, employment, or training (NEET) or work based on temporary contracts (McGinnity, Mertens and Gundert, 2005; Barbieri, 2009; Passaretta and Wolbers, 2019). Consequently, the path to adulthood has elongated: more time in education and difficulties in getting established in secure labour market positions have translated in youth increasingly relying on parental support (Swartz *et al.*, 2011).

Whereas intergenerational support is a bidirectional transfer process, in which parents support their children during childhood and early adulthood, and children support their parents when parents get older, intergenerational financial transfers are mainly downward, from parents to young adult children (Albertini, Kohli and Vogel, 2007; Albertini and Kohli, 2013). Parents may help their adult children in several ways, such as monetary or material transfers (Steinbach *et al.*, 2020), instrumental support, that is, help with different tasks (Schenk, Dykstra and Maas, 2010; Deindl and Brandt, 2011; Steinbach *et al.*, 2020), as well as emotional support in terms of talking about own worries and getting advice (Fingerman *et al.*, 2009; Hämäläinen *et al.*, 2020).

An impressive amount of research looks at various determinants of downward transfers at different points in the life course (Fingerman, Huo and Birditt, 2020). A less-researched topic is the influence of young adults' labour market transitions on the support they receive from their parents. This is surprising given research highlighting how support from parents declines when children grow older (Hartnett *et al.*, 2013). The negative age gradient can be related to life course circumstances, among which children's labour market transitions are expected to play a role. As getting a job is a major step towards gaining independence from parents, young adults' labour market transitions are likely to affect the degree of support they receive from their parents.

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This study focuses on the effect of young adults' labour market transitions on parental support in Germany, which represents an average case in terms of financial and instrumental support from parents to adult children (Deindl and Brandt, 2011; Brandt and Deindl, 2013; Isengard, König and Szydlik, 2018). Germany lies between Northern and Southern Europe with regard to family obligations and transfers (Albertini and Kohli, 2013) and has a medium level of public early childcare provision, as well as of public child-related income transfers (Saraceno and Keck, 2010). The German labour market is characterized by comparatively low unemployment but high temporary employment rates among young people in the course of partial labour market deregulation (Gebel and Giesecke, 2016). Welfare provision to the unemployed is generous in comparative perspective, although it deteriorated during labour market reforms of the early 2000s (Eichhorst, Grienberger-Zingerle and Konle-Seidl, 2010).

We make several contributions to the literature. First, we improve our understanding of intergenerational support by looking at multiple dimensions of support: material, emotional, and instrumental support. In line with some previous studies (Fingerman *et al.*, 2009; Swartz *et al.*, 2011; Fingerman *et al.*, 2015; Isengard, König and Szydlik, 2018), we analyse these types of support separately, which allows us to detect potential trade-offs or cumulative effects, and reach a stronger in-depth understanding of parents' reactions to young people's labour market transitions. Our measures of transitions and support from the children's perspective, as well as having information on all (step) parents separately, also represent a major improvement over previous studies, which predominantly used only one composite measure for parents.

Second, we fill a gap in our understanding of the effect of labour market transitions on intergenerational support by analysing the effect of different labour market transitions. We not only investigate bidirectional transitions between non-employment and employment, but also look at different types of non-employment and employment. In particular, among the forms of non-employment, we pay attention to the role of education enrolment, as the transition from education to work is a central life course event (Buchmann and Kriesi, 2011) and returning to education is quite frequent due to non-standardized education careers (Jacob and Weiss, 2010). For employment, we distinguish different forms of non-standard work from standard work. Next to part-time and self-employed work, we focus on the role of temporary contracts, which have received strong attention in scientific debates on employment transitions of youth (Passaretta and Wolbers, 2019).

Third, we extend the theoretical understanding of different processes shaping intergenerational transfers. Our analyses are grounded in existing theories, pointing to three major factors—children's needs, parental resources, and parental beliefs—and we shed new light on their relative importance.

Fourth, studying the heterogeneity of transitions and support dimensions allows us to test for observable implications of different underlying mechanisms from our theoretical model. This is supplemented by analyses on the gender-specific effects of transitions on transfers. Furthermore, in additional analyses, we directly test for some of the underlying mechanisms by analysing the mediating role of income and well-being.

Fifth, previous research mainly relies on cross-sectional data, and only a few longitudinal studies in the United States investigate the effects of employment transitions on intergenenerational relations and downward transfers (Swartz, McLaughlin and Mortimer, 2017; Hammersmith, 2019); we fill this gap by using longitudinal data from the German Family Panel (pairfam) (Brüderl *et al.*, 2020). We apply a first difference (FD) panel estimator with asymmetric effects (Allison, 2019), which eliminates time-constant unobserved heterogeneity and offers insights into how different directions of labour market transitions coincide with changes in parental support.

Theoretical background and hypotheses

Our general theoretical framework relies on two theoretical models explaining intergenerational support. The multidimensional intergenerational support model views support decisions as the result of parental resources, children's needs, and family context (Fingerman *et al.*, 2015). Similarly, the informal care model maintains that the provision of support starts with someone in need of care, and the extent to which caregivers provide support relates to general and normative beliefs, constraints in resources, as well as (family) contextual factors (Broese van Groenou and De Boer, 2016). Here, we synthesize the key components of both conceptual frameworks and apply them to transfers from parents to adult children, starting from the child's needs and accounting for parents' resources and beliefs to provide support.

(I) *Children's needs*. Children's needs are defined net of the resources children own and can use to cover their needs. Contingency theory suggests that intergenerational transfers are contingent on circumstances of need, particularly on recent crises or events (Eggebeen and Davey, 1998). Accordingly, parents act as safety nets as they respond to life course events and the related

problematic life circumstances fostering support (Swartz *et al.*, 2011). Next to health issues and family formation events, children's transitions to employment and employment loss are influential factors determining their needs (Leopold and Schneider, 2011).

(II) *Parents' resources*. Parents provide support depending on their resources. They may give financial support depending on their economic position (Schenk, Dykstra and Maas, 2010; Isengard, König and Szydlik, 2018), instrumental support depending on their time availability, and emotional support depending on their emotional capacity to offer advice and openness to talk about the worries of their children.

(III) *Parents' beliefs*. General beliefs in terms of feelings of responsibility, due to altruism and role expectations, as well as normative beliefs, based on norms of solidarity and reciprocity, determine parental willingness to support children (Broese van Groenou and De Boer, 2016). Similarly, age norms (Swartz *et al.*, 2011; Hartnett *et al.*, 2013) are relevant for support.

We apply this general theoretical framework to derive hypotheses on the effects of young people's employment transitions on various types of support from parents (The effect of employment transitions on support section) and the role of the type of employment (The role of different types of employment section).

The effect of employment transitions on support

We argue that children's employment transitions affect especially children's needs and parental beliefs. In contrast, we assume that parents' resources are not affected by children's employment transitions but, methodologically, we consider them as confounders, that is, as inducing a non-causal association between labour market transitions and intergenerational transfers (the Analytical strategy: first difference estimator with asymmetric effects section).

Children's labour force status is one of the major determinants of their personal financial resources, which is expected to influence their needs of *material support* from parents (Swartz *et al.*, 2011; Brandt and Deindl, 2013). In Germany, public secondary education is free of charge; tuition fees for regular students in tertiary education varied across federal states but were usually not more than 1,000 Euro per year during our period of investigation, and abolished again in the period 2010–2014 (Hüther and Krücken, 2014). Students in Germany can only work marginal h and apprentices receive on average a low remuneration, ranging from 666 Euro to 854 Euro in the period of our analysis from 2009 to 2016 (Beicht, 2019). In Germany both students and apprentices from low-income families qualify for study loans and unemployed or inactive young adults can rely on unemployment benefits and basic income support for the reduction in earning capacity and family support (parental leave benefits and child allowances); however, we assume the financial resources of young students, apprentices, and NEET to be worse, and their financial needs to be higher, compared to their employed counterparts. Groh-Samberg and Voges (2014) empirically support this theoretical assumption by showing that in Germany equivalized net incomes of 15–30 year old youth in education or NEET were similar, whereas their employed counterparts reached 80 per cent higher incomes: fixed effect panel regressions results showed that being in vocational training, university education, as well as being unemployed or not working, increase poverty. As labour market transitions have immediate and direct impact on one's financial situation, children's needs are expected to immediately decline when they transition from education or NEET to a job.

Next to changes in needs, parents' general beliefs in terms of feelings of responsibility, due to altruism, role expectations, and normative beliefs based on norms of solidarity, may change in reaction to children's employment transitions. Parents' general and normative beliefs to provide material support to their children may decline as children transition to employment, indicating independence and success (Swartz *et al.*, 2011; Warner and Houle, 2018; Hammersmith, 2019). This should particularly apply to the transition from education to work, which represents a key marker in the transition to adulthood (Buchmann and Kriesi, 2011) and induces a significant change in attaining adult roles when leaving education (Swartz *et al.*, 2011). In contrast, young NEET have already left their students' role and additional labour market transitions, including gaining employment, should induce weaker parents' reactions based on their general and normative beliefs. These theoretical arguments lead us to our first hypothesis:

> H1a: Transitions from education or NEET to employment decrease material support from parents. The negative effect on material support is stronger for transitions from education to employment than for transitions from NEET to employment.

Children's needs for *emotional support* depend on the circumstances they are facing, particularly their level of mental health and subjective well-being. Various theories highlight the influence of labour force status on mental health and subjective well-being and relate it

to the role of economic and psychosocial rewards of employment and the control individuals have over their life (Voßemer and Eunicke, 2015). Being employed versus unemployed has positive effects on youths' cognitive (i.e. life satisfaction) and affective (i.e. negative affect, such as feeling depressed) subjective well-being, as well as their freedom to decide for themselves how to live their lives (Högberg *et al.*, 2019; Täht *et al.*, 2020). Studies suggest that young NEET suffer from similar low levels of subjective well-being as unemployed young adults in employment-centred welfare regimes such as Germany (Jongbloed and Giret, 2022). Overall, theoretical arguments and previous empirical evidence would lead us to expect that transitions from NEET to employment reduce emotional support by parents.

In contrast, young adults who participate in education or unpaid care work show similar levels of subjective well-being as employed people (Jongbloed and Giret, 2022). However, similar to the case of material support, parents' general, and normative beliefs to provide emotional support to their children may especially decline when children transition from education to employment, indicating independence and success (Swartz *et al.*, 2011; Warner and Houle, 2018; Hammersmith, 2019). Parents' responsiveness to education-to-work transitions may induce a decrease in the provision of emotional support, even if children's need of emotional support is expected not to change for transitions from education to work. Hence, we postulate

> H1b: Transitions from education or NEET to employment decrease emotional support from parents.

Employment transitions may have opposite effects on *instrumental support*. Children's needs for instrumental support depend on their time and energy. For a small group of high income earners, getting a job increases financial resources, allowing to pay for professional household help and decreasing the needs for instrumental support from their parents. However, we expect the increasing need for instrumental support to dominate, as transitioning from education or NEET to employment decreases time and energy available for household chores because of the hours and effort spent at work.

Parents' general and normative beliefs to provide instrumental support to their children may also respond to children's employment transitions. Parents may believe that children need specific instrumental support and assist their children with household help when children start employment. We expect that

> H1c: Transitions from education or NEET to employment increase instrumental support from parents.

Following similar theoretical arguments, the expectations formulated in H1a to H1c can be reversed for the transitions from employment to NEET or education. Losing a job reduces children's available resources and increases their needs of material support (Swartz *et al.*, 2011). The detrimental effects of non-employment increase the need of emotional support from parents. Furthermore, losing a job may reduce the need for instrumental support, as children have more time for housework. Parents' general and normative beliefs may also adjust in the opposite way as for the transitions from education or NEET to employment, leading to a decrease in the provision of material and emotional support as their children gain employment, indicating independence and success, and an increase in the provision of instrumental support as their children have less time and energy for household chores.

However, getting and losing a job may carry asymmetric effects. Although transitions from employment to education or NEET may increase children's needs, parents may be less willing to increase their support based on their general and normative beliefs. According to a normative perspective on life course transitions and parental support, parents may react negatively towards children's setbacks in terms of non-normative life course transitions such as employment losses (Liefbroer and Billari, 2010; Kalmijn and De Graaf, 2012; Hammersmith, 2019). Children may also be reluctant to ask for parental support in case of setbacks in their employment career. In terms of financial support, they may be able to compensate job losses better with their savings if they previously worked. Hence, we expect

> H2: For transitions from employment to education or NEET, effects are reversed compared to transitions from education or NEET to employment (see H1a–H1c): material and emotional support from parents increase but instrumental support decreases. However, effects are smaller in absolute terms compared to transitions from education or NEET to employment.

The role of different types of employment

The effect of transitioning from non-employment to employment may vary depending on the type of employment. Sociological research differentiating between standard employment and various types of non-standard employment (Kalleberg, 2000) shows that young people are disproportionally affected by non-standard employment (Barbieri, 2009; Hipp, Bernhardt and Allmendinger, 2015). Following previous research (Kalleberg, 2000), we define standard employment as full-time permanent work. We contrast

it with full-time temporary employment, part-time work, and self-employment.

We assume that children's need of material support decreases more strongly for transitions from education or NEET to full-time permanent work than for transitions to non-standard work because full-time permanent work usually generates the highest financial returns. With the exception of compensating wage differential theory (Abowd and Ashenfelter, 1981), theoretical predictions and empirical research point to a wage premium for permanent contracts compared to temporary contracts with predefined limited duration (Gebel, 2010). Part-time work pays less because of the shorter working time. Although in Germany self-employed earn on average about the same monthly net income as dependent employees (Bonin, Krause Pilatus and Rinne, 2020), large heterogeneity exists within this group, with many self-employed, particularly solo self-employed, earning low wages and suffering from unstable incomes. Transitions to full-time permanent work should also resemble parents' belief in employment career success most closely.

We assume that children's need of emotional support decreases the strongest for transitions to full-time permanent work than for transitions to non-standard work because non-standard work is more often associated with mental health issues and lower subjective well-being. While previous research found similar increases in life satisfaction for transitions from unemployment to temporary or permanent work (Gebel and Voßemer, 2014), there is empirical evidence for lower well-being for several groups when working fewer hours in Germany (Schröder, 2018). Moreover, Binder (2017) found for Germany that self-employment negatively impacts life satisfaction, especially if transitions occur from unemployment to self-employment.

Based on the above arguments, we postulate

> H3: Transitions from education or NEET to standard employment decrease material and emotional parental support more strongly than transitions from education or NEET to non-standard employment.

The prediction is less clear-cut for standard versus non-standard employment when it comes to instrumental support. There is empirical evidence that temporary jobs and self-employment require more efforts in terms of overtime work (Engellandt and Riphahn, 2005; Binder, 2017), which may contribute to challenges in fulfilling household duties. This may translate into stronger needs of instrumental support. In contrast, part-time work allows more time to do housework due to shorter working hours at work. Thus, we expect

> H4: Transitions from education or NEET to full-time temporary employment and self-employment increase instrumental parental support the most; transitions to part-time employment increase instrumental parental support the least.

Method

Data and analytical sample

We draw on longitudinal data from the 'Panel Analysis of Intimate Relationships and Family Dynamics' (pairfam v11.0) (Brüderl *et al.*, 2020), which has been conducted annually since 2008/09. Pairfam is based on a nationally representative random sample from three birth cohorts (Huinink *et al.*, 2011). Given our interest in parental transfers to young adults, we restrict our analyses to respondents of cohorts 1981–1983 and 1991–1993 who were age 18–35 and had at least one living parent.

We limit our analyses to waves 2 (W2 2009/10), 4 (W4 2011/12), 6 (W6 2013/14), and 8 (W8 2015/16), in which pairfam collected information on intergenerational transfers. In order to apply the first difference estimator (the Analytical strategy: first difference estimator with asymmetric effects section), we need at least two consecutive biennial waves (W2 + W4, W4 + W6, or W6 + W8) per person. We define one 'case' for the first difference panel design as one respondent being observed at two consecutive biennial waves. Accordingly, a case is distinct from a person-year observation because one case is constructed based on two person-years. For example, person *i* observed at W2 and W4, that is, at two person-years, represents one case. Since we observe up to four person-years for an individual, one person can contribute up to three cases. For example, person *i* observed at W2, W4, W6, and W8 contributes three cases (W2 + W4, W4 + W6, and W6 + W8). This yielded a baseline sample of 10,054 cases over 4,738 respondents with 14,792 person-years. We discarded 1,455 (=14.5 per cent) of those cases due to missing values on any variable in the main analyses, yielding an analytical sample of 8,599 cases over 4,199 respondents with 12,798 person-year observations.[1] Table 1 reports descriptive statistics for our analytical sample at the person-year level.

Dependent and independent variables

We account for the multidimensionality of intergenerational transfers by looking at material, emotional, and instrumental support. We create a continuous measure of intensity for each dimension to capture the more nuanced differences in the degree of support. We start from a battery of questions, each having the same frequency answer scale ranging from 1 (never) to 5 (very

Table 1 Descriptive statistics on variables at the person-year level

Variable	Mean	Std. Dev.	Min	Max
Parental support				
Material	2.284	1.013	1	5
Emotional	2.718	0.844	1	5
Instrumental	1.823	1.059	1	5
Labour force status				
3-categorical				
Employed	0.486	0.500	0	1
NEET	0.109	0.312	0	1
Education	0.405	0.491	0	1
Multi-categorical				
Full-time employed, perm	0.285	0.452	0	1
Full-time employed, temp	0.076	0.265	0	1
Part-time employed	0.094	0.292	0	1
Self-employed	0.031	0.173	0	1
NEET	0.109	0.312	0	1
Education	0.405	0.491	0	1
Control variables				
Age	25.659	5.182	18	35
Living with parents	0.386	0.487	0	1
Marital status				
Single	0.357	0.479	0	1
Living apart together	0.225	0.418	0	1
Cohabiting	0.185	0.388	0	1
Married	0.209	0.407	0	1
Divorced/widowed	0.024	0.153	0	1
Number of children	0.409	0.809	0	6
Mother dead	0.026	0.158	0	1
Father dead	0.081	0.273	0	1
Parents are a couple	0.692	0.462	0	1
Step father exists	0.155	0.362	0	1
Step mother exists	0.155	0.362	0	1
Partner employment status				
No partner	0.381	0.486	0	1
Employed	0.393	0.488	0	1
NEET	0.064	0.245	0	1
Education	0.162	0.368	0	1
Period				
Wave 2	0.169	0.375	0	1
Wave 4	0.307	0.461	0	1
Wave 6	0.291	0.454	0	1
Wave 8	0.233	0.423	0	1

Notes: N: 12,798 person-years (8,599 cases, 4,199 respondents).

often). Questions were asked separately about mothers and fathers who were still alive; if the respondent was not in contact with a parent, whose death was not reported, we code the support items with the lowest value of the frequency scale ('never'). In the Robustness to the inclusion of stepparents' support into the support

indices section, we check the robustness of our findings with regard to the inclusion of additional information on support by stepparents.

Two questions asked about *material support* in terms of the frequency of receiving gifts and financial support from mother/father in the past 12 months.[2] Two questions addressed *emotional support* in terms of the frequency of receiving advice from the mother/father and of talking to the mother/father about own worries in the past 12 months. One question addressed *instrumental support* in terms of frequency of receiving household help in the past 12 months. For each of those three support forms, we calculate a continuous intensity measure as the mean of the non-missing values of the answer scales for each question for each parent. These mean indices can take any value on the continuous scale from 1 to 5.

Our independent variables of interest are labour market transition indicators based on information on the labour force status at two consecutive biennial waves. We define full-time employment, part-time employment, marginal employment, self-employment, and other forms of employment as 'employment', students, apprentices, and young peopled doing civilian/military service as in 'education',[3] and all other states—that is, homemaker, unemployed, parental leave, early retired—as 'not being in education, employment or training (NEET)' (the Intergenerational support and transitions to employment, NEET, and education section). Table 2 provides descriptive statistics on the biennial transitions based on the labour force status variable with three categories.

In the Differentiation by type of employment section, we test H3 distinguishing between full-time permanent employment, full-time temporary employment, part-time employment, and self-employment. Temporary employment is based on contracts with limited duration, whereas permanent employment is based on contracts with unlimited duration. Part-time work is a self-defined category, which also includes marginal employment forms ('mini'/'midi'-jobs, '1-Euro-jobs'). We do not differentiate by the type of employment for the reversed transition out of employment, because we do not have a hypothesis on that. Table 3 provides descriptive statistics on the biennial transitions based on the labour force status variable with three categories.

Analytical strategy: FD estimator with asymmetric effects

We analyse the effect of employment transitions on transfers using a FD estimator with asymmetric effects for each of the three outcome variables (Allison, 2019). Individuals $i = 1,\ldots, N$ are repeatedly observed at up to four biennial waves $t = 1,\ldots, 4$ at which the transfer measures y_{it} were available. The FD estimator eliminates any unobserved time-constant individual heterogeneity by first differencing the data (Brüderl and Ludwig, 2015):

$$\Delta\ y_{it} = \beta'\ D_{it}^{trans} + \gamma'\ \Delta\ X_{it} + \ \Delta\ u_{it}$$

where Δ represents the individual-level difference of a variable measured at t minus the same variable measured at $t-1$. Δy_{it} represents the change in transfer measures. D_{it}^{trans} is a set of binary transition indicators, which equal 1 for a specific change in the labour force status and 0 otherwise. Δu_{it} represents the change in unobserved time-varying individual heterogeneity. The FD estimator is estimated as a pooled ordinary least square estimator on the first-differenced equation with panel-robust standard errors to account for potential heteroscedasticity and serial correlation in Δu_{it} (Brüderl and Ludwig, 2015). Estimating a linear model is the obvious choice for our continuous intensity measures (Breen, Karlson and Holm, 2018).

For unbiasedness, the FD estimator only rests on the assumption that there are no unobserved time-varying confounders with respect to the effect of employment

Table 2 Descriptive statistics on labour force status transitions at the case level, 3-categorical labour force status variable

		t		
		Employed	**NEET**	**Education**
t–1	**Employed**	3,223	359	265
		37.48%	4.17%	3.08%
	NEET	426	406	109
		4.95%	4.72%	1.27%
	Education	1,010	204	2,597
		11.75%	2.37%	30.20%

Notes: N: 8,599 cases.

Table 3 Descriptive statistics on transitions from NEET and education to employment, differentiated by type of employment

Transition indicators	*N*	%
NEET to employment	*426*	*4.95%*
NEET to Full-time perm	106	1.23%
NEET to Full-time temp	59	0.68%
NEET to Part-time	246	2.85%
NEET to Self-employment	15	0.17%
Education to employment	*1,010*	*11.75%*
Education to Full-time perm	473	5.50%
Education to Full-time temp	340	3.95%
Education to Part-time	161	1.87%
Education to Self-employment	36	0.42%

Notes: *N*: 8,599 cases.

transitions on transfers. To make this assumption more plausible, we control for a set of first-differenced time-varying variables ΔX_{it}expected to act as confounders, that is, variables that affect both employment transitions and transfers. We control for changes in the age of the respondent to account for general ageing and life course effects (Hartnett *et al.*, 2013). Theoretically, this variable should account for general declining children's need if they grow older and parental beliefs on age norms (Swartz *et al.*, 2011; Hartnett *et al.*, 2013). Age is also a determinant of employment transitions. First-differenced period dummies account for general period effects that affect employment transitions and support.[4] We add binary indicators for leaving and returning to the parental home. These variables can affect employment transitions via changes in regional labour market conditions and also affect parental support as they influence geographical proximity and household sharing. Living together under one roof facilitates parental instrumental support but is expected to increase parental beliefs in terms of parental feelings of responsibility. We account for changes in young adults' relationship status, distinguishing among being single (reference group), living apart together, cohabiting, being married, and being divorced or widowed. If a partner is present, we account for changes in partner's labour force status by distinguishing partners who are employed, in education, or non-employed. Additionally, we include changes in the number of children. Changes in the relationship status, partners' labour force status, and childbirth are expected to change young adults' need and resources but also influence their employment transitions.

We include a first-differenced binary variable indicating whether the parents are a couple or not as well as two first-differenced binary variables indicating whether there is a stepfather or stepmother, and account for mother's or father's death. The measures on parental marital and living status capture parental resources. Additionally, Pairfam data contains variables that could be used as time-varying measures of parental resources. However, as such variables are only available for a small subset of respondents, we only include them in sensitivity analyses.

We do not control for changes in time-varying mediating variables to avoid overcontrol bias (Elwert and Winship, 2014). Yet, some of the included control variables, such as changes in marital status, number of children, partners' employment status, and returning to/leaving from parental home, may have a double character as a confounder and mediator, which we investigate in sensitivity analyses. Furthermore, we conduct additional analyses on the role of various mediators. Furthermore, we add interaction effects of labour market transitions with gender.

Based on theoretical considerations and previous literature (see the Discussion section), we believe causal effects mostly go from employment to support, and not the reverse. However, the possibility remains that our results may be biased due to reversed causality.

Results

Intergenerational support and transitions to employment, NEET, and education

Table 4 shows the estimated average effects of transitions to employment, NEET, and education on each of the three outcome variables, providing tests of H1a–c and H2. On average, transitioning from NEET to employment reduces material support by 0.027 points, while the opposite transition increases material support by 0.030 points. As the estimated effects are small in size given the outcome range from 1 to 5, results contradict our expectations.

However, in line with H1a, for individuals who changed from education to employment, the intensity of material support declines by 0.290 points. This equals to a reduction in material support by about 12.7 per cent (0.290/2.284*100) relative to the average level of material support young people receive in our analytical sample (Mean = 2.284, see Table 1). When measured in standard deviations (SD) of material support (SD = 1.013, see Table 1), the effect is equivalent to a reduction of approximately 0.29 SD (0.290/1.013). The effect is statistically significant ($P < 0.001$).

The opposite transition, from employment to education, is associated with an increase in material support by 0.192 points ($P = 0.002$), which supports H2 that material support from parents increases. However, results do not support the expectation in H2 that effects are smaller in absolute terms compared to transitions

Table 4 FD regression for transitions between NEET, employment, and education

	Material support	Emotional support	Instrumental support
	Coeff. (s.e.)	Coeff. (s.e.)	Coeff. (s.e.)
Transition indicators			
NEET to Employment	–0.027	–0.049	–0.079
	(0.042)	(0.039)	(0.057)
Employment to NEET	0.030	0.064	0.195**
	(0.051)	(0.047)	(0.063)
Education to Employment	–0.290***	0.027	0.052
	(0.033)	(0.025)	(0.044)
Employment to Education	0.192**	–0.008	–0.054
	(0.061)	(0.047)	(0.079)
Education to NEET	–0.077	0.086	0.034
	(0.070)	(0.061)	(0.081)
NEET to Education	0.048	0.085	–0.143
	(0.084)	(0.075)	(0.134)
Time-varying controls			
Age	–0.081***	–0.044***	–0.032*
	(0.010)	(0.009)	(0.014)
Leave parental home	0.102**	0.040	–0.114*
	(0.032)	(0.027)	(0.050)
Return to parental home	–0.084	0.032	0.019
	(0.102)	(0.085)	(0.130)
Marital status (Ref. Single)			
Living apart together	–0.040	–0.045+	–0.065
	(0.028)	(0.024)	(0.040)
Cohabiting	–0.110**	–0.117***	–0.036
	(0.036)	(0.031)	(0.049)
Married	–0.079	–0.099*	0.138+
	(0.052)	(0.047)	(0.072)
Divorced/widowed	0.245**	0.297***	0.205+
	(0.086)	(0.089)	(0.117)
Number of children	0.078*	–0.037	0.068
	(0.031)	(0.028)	(0.041)
Mother dead	0.380**	0.038	–0.046
	(0.137)	(0.154)	(0.148)
Father dead	0.248*	0.510***	0.136
	(0.097)	(0.095)	(0.147)
Parents are a couple	0.219**	0.152*	0.035
	(0.071)	(0.076)	(0.108)
Step father exists	0.021	0.067	–0.055
	(0.050)	(0.044)	(0.062)
Step mother exists	–0.016	–0.056	–0.129+
	(0.062)	(0.049)	(0.073)
Partner employment status (Ref. Employed)			
NEET	0.021	-0.016	0.018
	(0.036)	(0.034)	(0.049)

Table 4. Continued

	Material support	Emotional support	Instrumental support
	Coeff. (s.e.)	Coeff. (s.e.)	Coeff. (s.e.)
Education	0.059*	0.020	0.037
	(0.029)	(0.025)	(0.041)
Period (Ref. Wave 2 and 4)			
Wave 6	0.008	–0.005	–0.025
	(0.027)	(0.023)	(0.036)
Wave 8	0.049	0.054	0.050
	(0.046)	(0.040)	(0.061)

Notes: N: 8,599 cases. +$P < 0.10$, *$P < 0.05$, **$P < 0.01$, ***$P < 0.001$. All time-varying controls are measured as first-differenced variables, with the exception of leaving/retuning parental home (which are already transition indicators).

from education or NEET to employment. The effect is smaller in absolute terms compared to transition from education to employment, but the difference in absolute effect sizes is small (0.192 vs. 0.290) and statistically insignificant ($P = 0.151$, test of equality of coefficients).

We did not formulate expectations on transitions between NEET and education but included these transition indicators in order to represent all possible transitions. For material support, we find a positive coefficient (0.048) for transitions from NEET to education, which is small given the outcome scale. Transitions from education to NEET reduce material support by 0.077 points, which is also very small and just one quarter of the effect size of transitions from education to employment. Thus, parents also reduce their material support in case of unsuccessful school-to-work transitions but to a lower extent than in case of successful school-to-work transitions ($P = 0.005$, statistical test of equality of coefficients).

For emotional support, all transition indicators show very small effects. Education-to-NEET transitions show the largest effect in absolute terms (0.086, $P = 0.287$), which just equals a 3.1 per cent (0.086/2.718*100) decline in emotional support relative to its average level, or a decline of 0.10 SD (0.086/0.844), indicating no change in support for changing employment status, against H1b and H2.

Against H1c, instrumental support decreases by 0.079 points in case of NEET-to-employment transitions; however, in line with H1c, it increases by 0.052 points when transitioning from education to employment. Both effect sizes are very small relative to the average level of instrumental support (4.3 per cent, 2.9 per cent) and its standard deviation (0.07 SD, 0.05 SD). Against H2, the intensity of instrumental support increases by 0.195 points when respondents move from employment to NEET. Effect size is considerable, 10.7 per cent relative to average instrumental support, or 0.18 SD. The effect is statistically significant ($P = 0.002$). Employment-to-education transitions reveal just a small negative effect (–0.054 points) on instrumental support. Transitions between NEET and education show small to modest effects on instrumental support.

Effects of control variables are not particularly of interest given our research questions but may give further indication of the substantive significance of the effect sizes. For example, the strongest effect we find, that is, the negative effect of education-to-employment transitions on material support, is similar in absolute size to the effect of divorce/widowhood but larger than effects of cohabitation, marriage, childbirth, and leaving from/returning to parental home. However, effect sizes of control variables must be very carefully interpreted as they do not represent total effects (Keele, Stevenson and Elwert, 2020).

Differentiation by type of employment

Table 5 reports results of analyses of the effect of becoming employed, differentiating between different types of employment; specifically, full-time permanent, full-time temporary, part-time, and self-employment. We focus on the newly differentiated transition indicators and do not comment on the effects of other transition indicators we already described above.

For transitions from NEET to dependent employment material and emotional support tend to show the strongest decrease in case of transitions from NEET to full-time permanent employment. This is in line with H3 but differences in effect sizes are small. Against H3 and H4, transitions from NEET to self-employment considerably reduce material, emotional, and instrumental support. However, as indicated by the relatively large standard errors, the range of plausible estimates is rather large for transitions to self-employment, due to having only 15 transitions from NEET to self-employment.

Results show that for transitions from education to any type of employment material support substantially decreases. Point estimates are larger for transitions to full-time permanent work (–0.332) than for transitions to full-time temporary work (–0.252) and part-time work (–0.224). Similarly to transitions from NEET to dependent employment, the order of effects is in line with H3, but the differences in effect sizes are not large. Moreover, contrary to H3, we find the largest decline in material support for self-employment (–0.403), which must be very carefully interpreted as there are only 38 transitions from education to self-employment. Pairwise tests of equality of coefficients reveal that effect differences between all types of transitions from education to the various types of employment are not statistically significant. The intensities of emotional and instrumental support show no substantial change for transitions from education to any type of employment, giving no support for our expectations on emotional (H3) and instrumental support (H4).

Sensitivity and supplementary analyses

Robustness to the exclusion of potentially endogenous control variables

Some of the control variables in our analyses may act both as confounders and mediators: marital status, number of children, partners' employment status, and leaving/returning to the parental home. In the Analytical strategy: first difference estimator with asymmetric effects section we argued why these variables are confounders, as justification for adding them as controls. However, theoretical arguments and empirical studies also suggest an impact of employment status on transitions to cohabitation, marriage, parenthood (Baron and Rapp, 2019), partners' employment (Verbakel and De Graaf, 2009), and leaving/returning to the parental home (Berngruber, 2015, 2021).

Table S1 shows results from sensitivity analyses excluding the potentially endogenous time-varying control variables marital status, number of children, partners' employment status, and leaving/returning to the parental home (M2) and compare it to our previous model specification in Table 2 and 3 (replicated in M1). Excluding the problematic controls induces only marginal changes in effect sizes, not altering our conclusions. The only exception is the effect of Employment-to-NEET transitions, which slightly decreases from 0.252 to 0.195.

Robustness to the inclusion of additional control variables on parental resources

We conduct robustness checks using additional time-varying variables on parental resources available for a small subset of respondents. We add controls for changes in the share of parents needing care, based on questions to the children asking whether mother/father needed regular help within the last 12 months. This variable could be seen as an indicator of parents' resources of giving emotional and instrumental support, if we assume that parents who need more care may be less able to give support. This information is only available when the respondent was in contact with the respective parent. Furthermore, we add time-varying controls for the share of employed and of retired parents, as well as the mean net monthly equivalized household income of parents (in 1,000 Euro).[5] These variables are only available for the very small subset of respondents whose parents participated in pairfam for at least two biennial waves.[6]

M1 in Table S2 reproduces the model of Table 4 for the small subsample of respondents with non-missing information on the additional control variables for parental resources. Not surprisingly, some differences in effect sizes occur, as the sample in Table S2 is a non-random subsample of just 12.7 per cent of the sample in Table 4. However, our key interest is in the comparison of M1 and M2 in Table S2. Effect sizes remain almost identical when including the additional time-varying controls on parental resources.

Robustness to the inclusion of stepparents' support into the support indices

Pairfam respondents are also asked information on support by stepparents, with the same set of questions as for parental support; accordingly, we applied the same coding as in case of parents and generated a mean score on support from up to four (step-)parents. If the respondent was not in contact with a stepparent, we coded the support items with the lowest value of the frequency scale ('never'). M2 in Table S3 presents results when combining information on support from parents and stepparents. M1 in Table S3 replicates the analysis on parental support from Table 4 for the subsample of respondents with non-missing information on support by stepparents. Comparing effect sizes across models reveals almost identical findings.

Amount of material support

Pairfam gathers information on the overall amount of larger gifts in cash and in kind as well as the financial support received from mother and father. The amount of material support is grouped in the answer categories. We took the midpoint of the intervals and calculated the average of mother's and father's support. The mean amount of material support is 793.86 Euro (SD = 1529.65) in the analytical sample. Table S4 shows results for the amount of material support in M2, and a re-analysis of the frequency of material support as in Table 4 for the subsample of respondents

Table 5 FD regression for transitions between NEET, different types of employment and education

	Material support	Emotional support	Instrumental support
	Coeff. (s.e.)	Coeff. (s.e.)	Coeff. (s.e.)
Transition indicators			
NEET to Full-time perm	−0.049	−0.141+	−0.160
	(0.087)	(0.079)	(0.113)
NEET to Full-time temp	0.036	−0.129	0.102
	(0.108)	(0.100)	(0.166)
NEET to Part-time	−0.016	0.020	−0.056
	(0.052)	(0.051)	(0.069)
NEET to Self-employment	−0.288	−0.212	−0.590*
	(0.265)	(0.132)	(0.242)
Education to Full-time perm	−0.332***	−0.005	0.004
	(0.046)	(0.034)	(0.061)
Education to Full-time temp	−0.252***	0.052	0.091
	(0.054)	(0.040)	(0.073)
Education to Part-time	−0.224**	0.088	0.108
	(0.075)	(0.060)	(0.097)
Education to Self-employment	−0.403*	−0.071	0.056
	(0.174)	(0.103)	(0.264)
Employment to NEET	0.030	0.064	0.195**
	(0.051)	(0.047)	(0.063)
Employment to Education	0.192**	−0.008	−0.054
	(0.061)	(0.047)	(0.079)
Education to NEET	−0.077	0.086	0.034
	(0.071)	(0.061)	(0.081)
NEET to Education	0.048	0.085	−0.143
	(0.084)	(0.075)	(0.134)
Time-varying controls	YES	YES	YES
N	*8,599*	*8,599*	*8,599*

Notes: +$P < 0.10$, *$P < 0.05$, **$P < 0.01$, ***$P < 0.001$. Controls as in Table 4.

with non-missing amounts of material support in M1. Similar patterns emerge. The number of cases decreases to 8,071 in S4 due to more missing values on the amount of material support than the frequency of support. Transitions between education and employment have similar effects on the frequency and amount of material support. Education-to-employment transitions reduce material support by 260.50 Euro, which is equal to a 32.8 per cent (=260.50/793.86*100) decline relative to the average and 0.17 SD (=260.50/1529.65) decline. A negative effect of similar magnitude is found for employment-to-education transitions. Differences between M1 and M2 occur with regard to employment-to-NEET transition that have a minimal positive effects on the frequency but a considerable negative effect of −310.62 Euro on the amount.

Underlying mechanisms

Pairfam allows us to test mechanisms for the effect of employment transitions on parental support, including the mediating role of children's individual net income and subjective well-being. Net income is measured after taxes and social security payments and includes overtime but no vacation payments; for self-employed, it is an estimate of the monthly profit after taxes. Subjective well-being is measured by life satisfaction (0–10 scale) and depressiveness. For depressiveness, we used five items measuring negative moods ('My mood is melancholy', 'I am depressed', 'I am sad', 'I am in desperation', 'My mood is gloomy') and five items measuring positive moods ('I am happy', 'I feel good', 'I feel secure', 'I am calm and composed', 'I enjoy life') from the German version of the 'State-Trait-Depression

Scales' (STDS Form Y-2; Spaderna, Schmukle and Krohne, 2002), each having four-point intensity scale ranging from 'almost never' (1) to 'almost always' (4). We reversed the scale for the positive moods items and computed the total sum, which ranges from 10 to 40.

M1 in Table S5 replicates the analyses in Table 4 for the subsample of respondents with non-missing data for the mediators. Additionally controlling for the mediators (M2 in S5) decreases effect sizes of education-to-employment transitions on material support by around one third compared to the total effects estimated in M1. Other effect sizes do not change much. One exception is that, in the analysis of material support, the effect for transitions between employment and NEET changes sign and becomes stronger after controlling for the mediators. Overall, the three mediators do not explain much of our effects, indicating other mechanisms are at work than just changes in parents' transfers because children experience changes in income, depressive mood or life satisfaction due to employment transitions. An interesting side finding is that mediators have the expected direct effect on outcomes: an increase in income reduces particularly material support and an increase in depression reduces especially emotional and instrumental support. The higher the life satisfaction of a respondent, the lower is any parental support.

However, results of this conventional mediation analysis must be interpreted with great caution as it additionally imposes the sequential ignorability assumption (Imai *et al.*, 2011). Not only the treatment assignment but also the observed mediators after conditioning on controls and the treatment must be ignorable. While we condition on some time-varying confounders and eliminate fixed effects, our results are biased by unobserved time-varying confounders and if one mediator acts as a confounder for the other mediator.

The moderating role of gender

The effects of labour market transitions may differ by gender as young men enter better jobs (Smyth, 2005), which may lower support needs. Furthermore, parents' gender-specific beliefs about supporting children may result in differential impacts by gender. In line with gendered expectations associating masculine identity with a breadwinner role and women identity with a caretaking role (Demantas and Myers, 2015; Swartz, McLaughlin and Mortimer, 2017). Sassler, Ciambrone and Benway (2008) found parents to be mostly concerned with their sons' abilities as providers and their daughters' dating and social life.

Table S6 shows the results from models with gender-specific transition indicators. We use the transition indicators from Table 5 to account for compositional differences between men and women in terms of experiences of (non-)standard employment. In addition, we differentiate between transitions from employment to parental leave and other transitions out of employment.

For men, material support tends to decline more strongly in case of transitions to non-standard work than standard work, in line with H3. For women, we find a reversed pattern for transitions from education to employment. Effects of other transitions on material support are very small. The only exceptions are an increase in material support for transitions from employment to education for both genders and a decline in material support for women's transition from employment to education. Like in the joint analysis on emotional support, almost all transition indicators show very small effects. The only exceptions are increases in emotional support for men who transition from employment to parental leave and decreases in emotional support for men transitioning from NEET to full-time permanent, as well as for women transitioning from NEET to self-employment.

For instrumental support, results suggest that the increase in instrumental support found in Table 4 for transitions from employment to NEET was solely due to women transitioning from employment to parental leave. Effect sizes for most other transitions are rather small and the few small scale effects that are visible do not show any systematic gender-specific pattern.

Discussion

Changing labour market dynamics in the last few decades have contributed to increasing youth's transitions in and out of employment, and in and out of jobs with different levels of security. Drawing on data from the German Family Panel pairfam, we investigated how such transitions affect the material, emotional, and instrumental support parents provide to their children. A major finding is that the effects of young people's labour market transitions on support from parents differ according to the type of support. This reassures our empirical strategy to look separately at different support dimensions instead of merging them in one index. Most effects were negligible in size, and only a limited set of transitions affected specific support dimensions, although with rather modest effect sizes. Parents adapt their intensity of support to children's employment transitions but these life course transitions do not completely reset their support, suggesting that change in parental support is a gradual process affected by other factors.

We found pronounced effects only for material support, confirming our hypothesis about a reduction in material support when young people transition to employment from education, as well an increase in

material support when they transition from employment to education. Although the latter effect is smaller than the former in absolute terms, the difference in effect sizes is small, against our expectation of asymmetric effects. Transitions between employment and NEET in both directions do not affect material support, suggesting that transitions between the education and labour market systems are of greater relevance for support than transitions within the labour market. Reconnecting this finding to our theoretical model, this may indicate that parents adapt their support not only based on changing children's resources and needs; instead, parents' beliefs and norms about the type of transitions seem to play an important role.

Against our expectations, emotional support seemed less contingent on labour market transitions, revealing intergenerational closeness, irrespectively of important changes in employment status. This may reflect findings from human development research, which highlights parents are invested in their children throughout the life course, as well as parental ambivalence towards children (Pillemer and Suitor 1991, 2002).

Although effect sizes were small, findings on instrumental support confirmed our hypothesis of an increase in support for transitions from education, but not from NEET to employment, again suggesting the greater relevance of transitions between education and labour market. Contrary to our expectations, instrumental support considerably increased for transitions from employment to NEET, which is mainly driven by women entering parental leave. This increase is only partly explained by changes in marital status, the number of children, partner's employment transitions, and leaving or returning to the parental home.

We also tested different mediating mechanisms for the effect of employment transitions on parental support. Results showed the expected direct effects of net income, depressive symptoms, and life satisfaction on parental transfers, but the mediating variables did not explain much of the effects of employment transitions on parental support. While our measures mainly refer to children's situation in terms of their resources and needs, other mechanisms related to the parents' side, including their norms and beliefs, may be responsible for the few strong effects we found.

We found only weak evidence for differences between standard employment and various types of non-standard employment for parental support. This is an important discovery. While policies of labour market deregulation changed the nature of work for young people, this did not translate into changes in the intergenerational support regime. Parents adapt their support to children's labour market transitions, particularly when children move between education and employment, but do not differentiate whether children secure a standard employment relationship or engage in non-standard work. Reconnecting this finding to our theoretical model, parents perceive changes in labour force status more broadly and do not take the specific needs of the specific employment relationships into account. Parental norms and beliefs about general transitions, particularly from education to employment, seem to matter more.

While our study is not without limitations, it also offers several potential avenues for extensions in future studies. First, we argued that a change in employment status causes a change in transfers. We believe that the relation between employment and support mostly works from employment to support and less often in the reversed way; as employment transitions are often determined by external institutional and structural circumstances (e.g. school-to-work transition regime or business cycle) or other live course events (e.g. family formation), changes in parental support should have only limited impact on children's labour market transitions. Furthermore, extensive evidence from previous studies demonstrates that parental support is provided in response to major life events (Eggebeen and Davey, 1998; Swartz *et al.*, 2011); however, we are not aware of extensive previous literature showing that youth transition in the labour market according to the support they get from their parent. Nevertheless, we acknowledge that our results may be still subject to bias due to reversed causality.

Second, while pairfam data provide unique longitudinal information on parental support, data are only available biennially and for four waves, limiting our observation period. Accordingly, we investigated the contemporaneous effects of employment transitions on support, but not the medium and long-term changes in support that may happen afterwards. Future research may expand the observation window if appropriate data become available, which would provide insight on longer-term effects.

Third, we focussed on three forms of support: material, emotional, and instrumental. Parents, however, may also provide cultural and social capital. Yet, cultural and social capital are most likely to be relevant in the reversed causal process, that is, they are more likely to affect (rather than to be affected by) youth labour market transitions. Future research could investigate such effects.

Finally, our study is limited in its external validity to the case of Germany. As labour market transitions and intergenerational transfers are socially embedded in the cultural, institutional and structural context, one could expect differences in effects in other countries. Given panel data availability, a cross-country comparative approach to studying such effects in a longitudinal perspective would be a promising avenue for future research.

Our results have implications for how labour market processes may affect parental support over the life course as young adults transition across different employment and non-employment states. Given the unequal access to jobs, findings that employment transitions are associated with intergenerational material support flows suggest that families act as safety nets, possibly contributing to the reproduction of social inequalities. This raises concerns about those whose families are unable to help, which draws policy attention to the need to expand the welfare state to avoid further inequalities.

Notes

1 As a robustness check, we replicated all analyses based on a sample with imputed data. Results using multiple imputation by chained equations (Stata 17.0) confirm our conclusions, with a few minor differences in effect sizes. Results are available on request.
2 Pairfam also provides some information on the amount of parental support that we analyse in the Amount of material support section.
3 This includes also students who report marginal and part-time work or self-employment besides studying, whereas full-time dependent workers that are enrolled in education are coded as being employed.
4 We include first-differenced period dummies for wave 6 and 8 but not for wave 2 and 4 because one period dummy is lost due the first differencing and another period dummy is excluded because of the strong multicollinearity between the first-differenced age variable and the first-differenced period dummies.
5 We divided the household income by the square root of the household size to calculate the equivalized household income.
6 The very low response rate in parents' questionnaires was a reason to further restrict the survey to parents with grandchildren in W8, which further reduced the sample size Brüderl *et al.* (2020).

Supplementary Data

Supplementary data are available at *ESR* online.

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