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Does Parental Unemployment Affect the Quality of their Children's First Job?

Abstract

In this paper the relationship between parental unemployment at time of children's labor market entrance on the quality of their children's first job is analyzed. Using data from the German Socio-Economic Panel (SOEP) for the years 1991-2012 the quality of the first job in terms of wage, permanent position and full-time employment is examined. The results show a negative correlation between fathers' unemployment at the time of children's labor market entrance and their children's first wage, while no signficant relation can be found for unemployment or labor market inactivity of mothers.

JEL Classification: J31, J62, J64, J65

Keywords: Parental unemployment; quality of first job

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1 Introduction

A smooth and successful school-to-work transition is of utmost importance for long term labor market outcomes (Gregg, 2001). It has been shown that parental background is of particular importance (e.g. Gregg, Macmillan, and Nasim, 2012; Corak and Heisz, 1999; Chadwick and Solon, 2002) and that especially socially disadvantaged children experience slow transitions into their first job (Gregg and Machin, 2000; Machin and Manning, 1999). This paper is the first to examine the correlation of parental unemployment at time of children's labor market entry on the quality of the children's first job.

Economic literature provides strong evidence for parental influence on children. A concretion of several family characteristics reveals that parents strongly affect children's achievements and well-being (e.g. Dustmann, 2004; Couch and Dunn, 1997; Kind and Haisken-DeNew, 2012). Especially the correlation between socio-economic characteristics of parents and children's academic effort is shown to be important (Davis-Kean, 2005). Following Chevalier (2004) parental education has a strong impact on children's education and thereby an indirect effect on children's income. Furthermore, parental income strongly affects subsequent labor market income of children (e.g. Behrman and Taubman, 1990; Björklund and Jäntti, 1997; Österberg, 2000), which is due to e.g. differences in parents' investment in their children's human capital (Blau, 1999).

O'Neill and Sweetman (1998) show that the probability to become unemployed is twice as high for a son whose father was unemployed 20 years ago compared to a son whose father has no unemployment experience. Other studies have shown that the reason why parents become unemployed highly matters. To become unemployed because of plant closure triggers an exogenous shock to household income (Oreopoulos, Page, and Stevens, 2008; Bratberg, Nilsen, and Vaage, 2008), which results in lower future labor market income of children.

In contrast to previous studies, this study analyzes the immediate link between parental unemployment at the time of children's labor market entry and children's first wage. Doing this, it provides new insights into the consequences of parental unemployment. Following Marcenaro-Gutierrez and Vignoles (2010), it is hypothesized that an adolescent with high education and sufficient financial support of parents is much more likely to take up an adequate first job. Consequently children who enter the labor market when their parents are unemployed, are argued to receive less financial support because of lower household income. This is argued to fundamentally affect the incentives of those children when deciding on which job offer to accept. While parental unemployment likely leads to a decrease in their children's reservation wages, it also impedes parent's opportunities to help their children as they lose access to their active labor market networks. Thus, the overall relationship between parental unemployment and their children's first wages is unclear a priori and an empirical evaluation is needed.

Using data from German Socio-economic Panel Study (SOEP) for the years 1991 to 2012, children between 17 and 29 years of age who enter the labor market for the first time are observed. The SOEP is the dataset of first choice as it links information on the children to the information of both parents (who are respondents of the SOEP themselves). The use of self-answered questions from parents reduces the probability of measurement error and gives rich information on parental background. Furthermore, the SOEP allows controlling for the specific reason why the parent entered unemployment. Following previous studies (such as e.g. Kassenboehmer and Haisken-DeNew, 2009) it is argued that examining the effect of parental unemployment due to company closure can be argued to be exogenous for the child. Thus, it may allow identifying a causal correlation between parental unemployment and job quality of their children's first employment.

The results show a negative correlation between paternal unemployment (due to company closure) at the time of children's labor market entry and the quality of

children's first job. However, there exists no significant correlation between maternal unemployment and children's first wage. These findings highlight the importance of father's labor market status for their adolescent children. Father's unemployment at the time when the children enter the labor market is associated with their children accepting lower wages than children of fathers who are in employment. Interestingly, these negative relation cannot be identified between paternal unemployment and other job quality measures such as the likelihood to work on a permanent contract or the likelihood to work full-time.

The negative correlation is likely due to children's dissatisfaction with household income, that consequently results in accepting a low paid job in order to compensate the lower household income due to paternal unemployment.

2   Data

Data from the German Socio-Economic Panel of the years 1991 through 2012 is used in the empirical analysis.[1] The SOEP is one of the longest running household panel surveys with very comprehensive information. It is designed as a longitudinal survey with sub-samples for several population groups and is a representative survey for the entire population of Germany (Wagner, Frick, and Schupp, 2007). The survey data is useful for analyzing the behavior of individuals and households as well as for questions of economic and social science. The SOEP holds several features that make it especially attractive for the present analysis. First, the information about observed adolescents can be combined with information on their parents by personal identification numbers. Detailed information on parental employment status is directly reported by parents themselves and is therefore less likely to be subject of measure-

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[1] The data used in this paper was extracted using the Add-On Package PanelWhiz for Stata. PanelWhiz (http://www.PanelWhiz.eu) was written by Dr. John P. Haisken-DeNew (john@PanelWhiz.eu). See (Haisken-DeNew and Hahn, 2010) for details. The PanelWhiz generated DO file to retrieve the data used here is available upon request. Any data or computational errors in this paper are the authors'.

ment error. Second, the longitudinal nature of data ensures a sufficient amount of observations of adolescents who enter the labor market for the first time and for whom information on the parents are available.

In the empirical analysis the quality of the children's first job is analyzed. The take up of the first job is identified by a question in the SOEP that asks for a change in employment status. Here, the answer possibility "I have taken up employment for the first time in life" is treated as the indicator for the take-up of the first job. Additional first labor market entries can be identified by using the information on "Year of birth" and "Age at first job" from the SOEP biography questionnaire.

The quality of the first job is measured in three dimensions - i.e. gross hourly wage, permanent contract and full-time position. As the first quality indicator the logarithm of gross hourly wage, as a fundamental outcome variable in studies on German labor market (Gebel, 2009), is examined as a measure of job quality. Here, the upper and lower 1% of the wage distribution are excluded from the analysis. The wage is self-reported by the children. Being employed with a permanent contract serves as the second job quality indicator in the analysis. Here it is argued, that being employed with a permanent contract reflects a better job quality than a temporary contract. The third job quality indicator is being employed in a full-time position. Here, full-time positions are defined as jobs where young individuals work more than 37.5 hours a week. It is argued that full-time positions reflect a higher job quality than part-time positions.

The variable of interest is the identifier of unemployment of the parent. Thus, a dummy variable is included in the analysis that is equal to one if the parent reports to be unemployed or to receive unemployment benefits in the considered year. Furthermore, additional control variables are included in the regressions that indicate whether the parent is out of the labor force. Here, the dummy variable is equal to one if the parent is permanent inactive or temporary inactive. Therefore, the parent being in employment serves as a reference group.

In the second step of the analysis it is explicitly controlled for the reason of parental unemployment. One might be concerned that parents either voluntarily enter unemployment or inherit unobservable characteristics to their children that make them and their children more likely to experience difficulties in the labor market. Previous studies (e.g. Kassenboehmer and Haisken-DeNew, 2009) have argued that examining entries into unemployment due to company closure, leads to the estimation of causal effects. Following their argumentation unemployment due to firm closure can be argued to be an exogenous event to the single worker. On the contrary, own resignation, dismissal, mutual agreements, the completion of a temporary job or apprenticeship, reaching the retirement age, suspension or closure of a self-owned business are treated as endogenous (thus voluntary) exits of employment into unemployment. Here, father's entry into unemployment due to company closure is argued to be exogenous to the child.

Individual characteristics like gender, age, marital status, migration background, living with parents and living in East Germany are included in the equation. Education is subdivided in low education (ISCED 0-2), medium education (ISCED 3-4) and high education (ISCED 5-7)[2]. The occupation groups (ISCO-coding) are aggregated at highest level from 0 to 9.[3] In order to account for macroeconomic conditions yearly regional unemployment rates[4] and year dummies are included in the analysis. In order to account for parental background, control variables for years of education of the parent are included. Finally, it is controlled for the size of the firm where the first job is taken up. The variable "firm size" is split in three dummy variables: Working in a small firm (0-20 employees), medium firm (20-200 employees) or large firm (>200 employees).

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[2]CESifo Group Munich (2014): "International standard classification of education"

[3](0) Armed Forces, (1) Legislators, Senior Officials and Managers, (2) Professionals, (3) Technicians and Associate Professionals, (4) Clerks, (5) Service Workers and Shop and Market Sales Workers, (6) Skilled Agricultural and Fishery Workers, (7) Craft and Related Trades Workers, (8) Plant and Machine Operators and Assemblers, (9) Elementary Occupations.

[4]Extracted from Destatis (2014): "Unemployed, unemployment, reported employment: Federal countries, years"

The sample includes adolescents from 16 to 29 years who enter the labor market between 1991 and 2012. The observation begins at 16 years as the largest part of adolescents has finished the 9 or 10-years of compulsory education by that age.[5] While the survey begins at age of 17, information is also available for 16-years old individuals from personal biography questionnaires (Frick and Groh-Samberg, 2007). The upper limit is 29 years by reason that only a few persons enter the labor market for the first time after the age of 30 years. The sample period begins after German reunification due to strong changes on the labor market at that time.[6]

The SOEP data includes 4,339 children for whom the wage in the first job can be identified and for whom the number of hours worked is available. For 3,079 of them parental labor market status at the moment they start their first job can be observed. After conditioning on the set of control variables, 2,382 children remain in the dataset. When the likelihood of working on a permanent contract is analyzed, the SOEP data includes 3,783 children for whom the information whether they work on a permanent or temporary contract is included. For 2,678 children, parental labor force status is known. After conditioning on the set of observables, 2,051 children remain in the dataset. Descriptive statistics are shown in table 1.

3   Empirical Strategy

The relation between parental unemployment at time of children's first labor market entry and children's first wage is estimated by ordinary least squares. Separate regressions are run for the different job quality indicators. Using wage as the job quality indicator, the logarithm of gross hourly wage is specified as the dependent variable. Applying the characteristics of being employed with a permanent contract and being employed in a full-time position, dummy variables are chosen as the de-

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[5]Bundesinstitut fuer Berufsbildung (2010): "(Berufs-)Schulpflicht in Deutschland" article written by Andreas Vossenkuhl.

[6]Bundeszentrale fuer politische Bildung (2010): "Die Entwicklung der Arbeitslosigkeit in Deutschland" article written by Melanie Booth.

Table 1: Descriptive Statistics

	Mean	Std.Dev.	Min.	Max.
Hourly wage	4.71	(3.17)	0.91	18.8
Permanent contract (d)	0.22	(0.41)	0	1
Full-time position (d)	0.77	(0.42)	0	1
Both parents in UE (d)	0.01	(0.09)	0	1
Father in UE (d)	0.07	(0.25)	0	1
Mother in UE (d)	0.06	(0.23)	0	1
Both parents OLF (d)	0.03	(0.17)	0	1
Father OLF (d)	0.07	(0.25)	0	1
Mother OLF (d)	0.25	(0.43)	0	1
Male (d)	0.54	(0.50)	0	1
Age	20.29	(2.41)	17	29
Married (d)	0.02	(0.12)	0	1
Immigrant (d)	0.07	(0.26)	0	1
Living with at least one parent (d)	0.89	(0.31)	0	1
East Germany (d)	0.18	(0.38)	0	1
Low education (d)	0.58	(0.49)	0	1
Med. education (d)	0.36	(0.48)	0	1
High education (d)	0.06	(0.24)	0	1
Armed forces (d)	0.00	(0.05)	0	1
Manager (d)	0.00	(0.07)	0	1
Professionals (d)	0.06	(0.25)	0	1
Clerks (d)	0.15	(0.35)	0	1
Service (d)	0.17	(0.37)	0	1
Agricultural workers (d)	0.02	(0.13)	0	1
Crafts (d)	0.28	(0.45)	0	1
Plant and machine operators (d)	0.03	(0.18)	0	1
Elementary occupations (d)	0.05	(0.21)	0	1
Self-employed (d)	0.01	(0.08)	0	1
UE rate	9.63	(3.98)	4	22
Years of education (mother)	11.07	(2.11)	7	18
Years of education (father)	11.62	(2.43)	7	18
Small firmsize (d)	0.35	(0.48)	0	1
Med. firmsize (d)	0.29	(0.45)	0	1
Large firmsize (d)	0.37	(0.48)	0	1
N	2382			

Note: Authors' calculations based on SOEP (1991-2012).

pendent variables and linear probability models are estimated. In a first step, the variable of interest is the parent's labor market status at the time of children's labor market entry. Here, the parent being in unemployment (irrespective of the reason for entry) is the variable of interest. Then in a second step, it is controlled for the reason for parental entry into unemployment. Here, the variable that controls for parental unemployment is split up into exogenous and endogenous unemployment.

The estimation equation for the quality of the first job is written as:

$$
\begin{aligned}
Job\ Quality_i = & \\
& \alpha + Both\ parents\ in\ UE_i'\beta + Father\ in\ UE_i'\gamma + Mother\ in\ UE_i'\delta + \\
& Both\ parents\ OLF_i'\vartheta + Father\ OLF_i'\sigma + Mother\ OLF_i'\iota + SC_i'\varphi + \epsilon_i, \\
& \forall i = 1,\ldots,N.
\end{aligned}
\tag{1}
$$

where $Job\ Quality_i$ reflects one of the three job quality indicators for individual i, α the constant and SC_i is a matrix including all control variables at time of labor market entry of adolescent i. The variables $Both\ parents\ in\ UE$[7], $Father\ in\ UE$, $Mother\ in\ UE$, $Both\ parents\ OLF$, $Father\ OLF$ and $Mother\ OLF$ cover all distinct stages of father's and mother's labor market status such that the reference group is both parents in employment. In the error term ϵ_i, random and unobserved influences which impact the dependent variable but not the independent variables are conjoint. By use of the "White heteroskedastic consistent estimator" the standard errors are corrected (Winship and Radbill, 1994).

The characteristics of the first job can only be observed for those adolescents where the entry into the first job is observed. Therefore individuals are not included in the analysis, who do not find a first job during the sample period or who drop out of the dataset for all kinds of different reasons (e.g. stop answering the questionnaire or move to a different household and cannot be followed by the data providers). This leads to a selected sample and biased results if the selection into the sample is correlated with e.g parental labor market status. A Heckman-Selection model could control for the selection mechanism and thereby derive unbiased estimates. However, a Heckman-Selection model relies on a reliable exclusion restriction - i.e. a variable that affects the selection into the sample but not the quality of the first job. Due to

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[7]In order to obtain the control group "both parents in employment", the variable "both parents in unemployment" is included in the model. Point estimates of this variable have to be interpreted with care. There is only a low number of children where both parents are in unemployment. Robustness checks show that the point estimate of the coefficient of this variable is very unstable

a lack of such a variable, the following estimation is based on ordinary least square estimations. Therefore, the results have to be interpreted separately for the subgroup of the population. Most likely, this subgroup is affected the strongest as they are likely to have strong ties to their parents.

4 Results

The results of the analysis are presented in two stages. In a first step, the relation between parental unemployment at time of children's labor market entry (irrespective of the reason for parental unemployment) and quality of first job is estimated. In a second step, it is controlled for the specific reason why the parent entered unemployment. Here, the relationship between parental unemployment due to plant closure (argued to be exogenous) at time of children's labor market entry and the three job quality indicators are examined.

Table 2 presents the estimation output of the analyzed relation between parental unemployment (irrespective of the reason) at time of children's labor market entry and the quality indicators of first job.

Table 2: Parental UE

	(1)	(2)	(3)	(4)	(5)	(6)
	Ln(Wage)	Ln(Wage)	P(Perm. contr.)	P(Perm. contr.)	P(Full-time)	P(Full-time)
Both parents in UE (d)	0.341**	0.159	-0.010	-0.033	0.185**	0.123
	(0.145)	(0.178)	(0.136)	(0.113)	(0.085)	(0.079)
Father in UE (d)	-0.183*	-0.137**	-0.053	-0.036	0.025	0.012
	(0.090)	(0.050)	(0.046)	(0.048)	(0.056)	(0.047)
Mother in UE (d)	-0.054	0.029	0.020	0.038	-0.016	-0.006
	(0.067)	(0.039)	(0.088)	(0.054)	(0.065)	(0.061)
Both parents OLF (d)	0.197	0.110	0.389***	0.325***	-0.028	0.028
	(0.214)	(0.089)	(0.128)	(0.095)	(0.137)	(0.074)
Father OLF (d)	-0.153*	-0.208***	-0.144***	-0.173***	0.022	0.006
	(0.079)	(0.064)	(0.030)	(0.039)	(0.031)	(0.041)
Mother OLF (d)	0.017	-0.024	-0.009	-0.052*	0.010	0.000
	(0.046)	(0.038)	(0.026)	(0.029)	(0.028)	(0.031)
Constant	1.381***	1.108***	0.226***	0.633***	0.774***	1.094***
	(0.040)	(0.173)	(0.013)	(0.132)	(0.024)	(0.128)
SC	No	Yes	No	Yes	No	Yes
N	2382	2382	2051	2051	2382	2382
R^2	0.008	0.369	0.016	0.149	0.002	0.153

Note: SOEP (1991-2012). *** p<0.01; ** p<0.5; * p<0.1. Standard errors clustered on the state level in parentheses. UE = unemployment; OLF = out of labor force; SC = Standard Controls. Full table in the appendix (4).

Column (1) shows the estimated relation between logarithmic gross hourly wage and parental employment status, whereas column (2) displays the same variables

plus control variables illustrated in section 2. Both parents in unemployment (compared to both parents in employment) has a positive relationship to children's first hourly wage. The statistically significant coefficient in column (1) vanishes, however, when additional control variables are included. A statistically significant negative correlation between the father being in unemployment at time of children's labor market entry and first hourly wage can be found. In comparison to both parents in employment, children's hourly wage decreases by roughly 14% in case of paternal unemployment. The coefficient of "Mother in UE" indicates the relationship between maternal unemployment at time of children's labor market entry and first hourly wage. Here, no statistically significant correlation between maternal unemployment and children's first wage can be identified. Therefore, the results of the first step suggest that children of father's in unemployment earn significantly less than children where both fathers are in employment.

Another labor market status is being out of the labor force (OLF). Again, column (1) and (2) show that the father being out of the labor force is associated with a statistically significant lower wage in the first job of the child compared to a child whose father is in employment. Here, the point estimates suggest that paternal labor market inactivity indicates a 21% lower wage. Once more, the analysis of mother's labor market status does not show a statistically significant correlation with the quality of the first job of the child.

Summarizing, column (1) and (2) of table 2 suggest that the father being in employment during the school-to-work-transition is of great importance to the child. Both, unemployment and labor market inactivity are associated with 14-21% lower wages in the first job of the children. This suggests that children of unemployed father are more likely to take up jobs of worse quality in terms of wages. When focusing on wage as the indicator for job quality, mother's labor market status appears to be irrelevant.

Specification (3) and (4) display the results for the likelihood of taking up a first job

with a permanent contract. Parental unemployment appears to have no statistically significant correlation with the likelihood of taking up a first job with a permanent contract. While both parents being out of the labor force tends to result in a higher likelihood of being employed with a permanent contract, only the mother being out of the labor force is associated with a lower probability of employment with a permanent contract. Furthermore, the father being out of the labor force, points to a lower share of children who take up jobs with permanent contracts. This shows that children suffer in more than one quality measure and that father's labor market inactivity indicates a severe drop in their children's job quality.

Column (5) and (6) show the results of the empirical analysis for the third job quality indicator. Here, being employed with a full-time job (i.e. more than 37.5 hours per week) is the applied quality measure. None of the coefficients of parental labor market status show to be statistically significant from zero. Therefore, the negative wage correlation of paternal unemployment from column (1) and (2) are not compensated by higher likelihoods of entering full-time positions.

Table 3 shows the empirical results for the differentiation between exogenous and endogenous reasons for parental unemployment. Simultaneous (exogenous or endogenous) unemployment of both parents is a very rare case. As a consequence the variables of both parents being unemployed is deleted in the estimations of Table 3. The same procedure counts for the variable that reflects the status of both parents out of labor force.

When estimating the effect of unemployment due to company closure, a causal correlation is aimed to be identified, which corresponds to the study of Winkelmann and Winkelmann (1998). Thus, in column (1) and (2) of table 3 the relation between parental unemployment and the entry-wage of their children is displayed, but no causal correlation can be measured. The previously found negative relationship of father's unemployment and children's entry wage is confirmed by the negative coefficient, but it is statistically insignificant. The weak statistical properties are due to the

Table 3: Parental UE (Exogenous vs. Endogenous)

	(1)	(2)	(3)	(4)	(5)	(6)
	Ln(Wage)	Ln(Wage)	P(Perm. contr.)	P(Perm. contr.)	P(Full-time)	P(Full-time)
Father exogenous UE (d)	-0.226	-0.155	-0.173	-0.115	0.090	0.173
	(0.271)	(0.232)	(0.106)	(0.098)	(0.109)	(0.136)
Mother exogenous UE (d)	-0.187	-0.101	-0.048	-0.174	0.205***	0.127
	(0.292)	(0.208)	(0.131)	(0.131)	(0.034)	(0.083)
Father endogenous UE (d)	-0.154	-0.124	-0.127***	-0.080	-0.035	-0.031
	(0.159)	(0.093)	(0.038)	(0.056)	(0.127)	(0.094)
Mother endogenous UE (d)	0.366**	0.171*	0.468**	0.378**	-0.272	-0.230
	(0.129)	(0.094)	(0.175)	(0.141)	(0.242)	(0.233)
Father OLF (d)	-0.062	-0.154***	0.029	-0.032	0.013	0.020
	(0.056)	(0.045)	(0.066)	(0.034)	(0.079)	(0.055)
Mother OLF (d)	0.024	-0.018	0.021	-0.024	0.005	-0.007
	(0.047)	(0.034)	(0.028)	(0.030)	(0.026)	(0.032)
Constant	1.378***	1.128***	0.220***	0.633***	0.775***	1.106***
	(0.039)	(0.158)	(0.012)	(0.149)	(0.025)	(0.129)
SC	No	Yes	No	Yes	No	Yes
N	2156	2156	1858	1858	2156	2156
R^2	0.006	0.363	0.017	0.145	0.006	0.157

Note: SOEP (1991-2012). *** $p<0.01$; ** $p<0.5$; * $p<0.1$. Standard errors clustered on the state level in parentheses. UE = unemployment; OLF = out of labor force; SC = Standard Controls. Full table in the appendix (5).

low number of cases where the father is unemployed due to company closure. However, the sign and size of the point estimate is very much in line with the coefficient reported in table 2 (Table 2 (2) -0.137 ; Table 3 (2) exogenous: -0.155). Therefore it is concluded that father's unemployment at the time of children's labor market entry indicates lower gross hourly wages in their children's first job. The non-significant point estimate for maternal unemployment in table 2 results from opposing correlations of maternal exogenous and endogenous unemployment. While the mother in unemployment due to plant closure statistically insignificantly decreases first wages, endogenous maternal unemployment increases first wages. The point estimates of father or mother being out of labor force as well as all control variables are robust.

When the likelihood of working on a permanent contract is examined (column (3) and (4)) previous results are confirmed. Paternal unemployment reduces (but not statistically significantly) the likelihood of working on a permanent contract. Interestingly, maternal endogenous unemployment increases the chances to work on a permanent contract. Thus, children of mothers who voluntarily enter unemployment (by e.g. own dismissal) earn more and are more likely to work on a permanent contract than children whose mothers are in employment.

No statistically significant results can be found for the likelihood of working in a full-time job.

5   Conclusion

This study analyzes the relationship between parental unemployment at their children's labor market entry and the quality of their children's first jobs. Using data from the German Socio-Economic Panel for the years 1991-2012 three dimensions of job quality - i.e. wage, working on a permanent contract and working full-time - are examined. The analysis allows for different correlations of father's or mother's unemployment and labor market inactivity. By controlling for the reason for entry into unemployment, the analysis tries to identify the causal correlation of parents' unemployment during their children's school-to-work transition.

The results indicate that the labor market status of the mother appears to be less important than father's employment status. It is found that children of mothers who voluntarily enter unemployment appear to earn more and are more likely to work on a permanent contract, than children of employed mothers. Strong negative correlations can be found for paternal involuntary unemployment at the time of their children's labor market entry. Here, the results suggest that children's first wage is about 14% lower if their father experiences unemployment compared to continuous employment of the father.

Socially disadvantaged children suffer at labor market entry and following previous studies, this is likely to indicate long lasting negative consequences for future careers of the children. Thus, policy action at the very beginning of labor market careers is argued to be a promising tool to compensate children for father's unemployment and to avoid long lasting labor market consequences.

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A   Appendix

Table 4: Parental UE (extended)

	Ln(Wage)	Ln(Wage)	P(Perm. contr.)	P(Perm. contr.)	P(Full-time)	P(Full-time)
Both parents in UE (d)	0.341**	0.159	-0.010	-0.033	0.185**	0.123
	(0.145)	(0.178)	(0.136)	(0.113)	(0.085)	(0.079)
Father in UE (d)	-0.183*	-0.137**	-0.053	-0.036	0.025	0.012
	(0.090)	(0.050)	(0.046)	(0.048)	(0.056)	(0.047)
Mother in UE (d)	-0.054	0.029	0.020	0.038	-0.016	-0.006
	(0.067)	(0.039)	(0.088)	(0.054)	(0.065)	(0.061)
Both parents OLF (d)	0.197	0.110	0.389***	0.325***	-0.028	0.028
	(0.214)	(0.089)	(0.128)	(0.095)	(0.137)	(0.074)
Father OLF (d)	-0.153*	-0.208***	-0.144***	-0.173***	0.022	0.006
	(0.079)	(0.064)	(0.030)	(0.039)	(0.031)	(0.041)
Mother OLF (d)	0.017	-0.024	-0.009	-0.052*	0.010	0.000
	(0.046)	(0.038)	(0.026)	(0.029)	(0.028)	(0.031)
Male (d)		0.083***		0.057		-0.027
		(0.024)		(0.037)		(0.024)
Age		0.098***		0.003		0.054***
		(0.010)		(0.025)		(0.016)
Squared age		-0.003***		0.001		-0.004***
		(0.001)		(0.002)		(0.001)
Married (d)		0.016		0.103		-0.122
		(0.084)		(0.089)		(0.085)
Immigrant(d)		-0.083**		-0.072		-0.015
		(0.030)		(0.051)		(0.059)
Living with min. one parent (d)		-0.032		-0.024		-0.045
		(0.055)		(0.051)		(0.047)
East Germany (d)		-0.133*		0.055		0.136**
		(0.063)		(0.045)		(0.061)
Unemployment Rate		-0.024***		-0.009**		-0.007
		(0.004)		(0.004)		(0.006)
Years of education (mother)		-0.008		-0.010		-0.002
		(0.008)		(0.008)		(0.005)
Years of education (father)		-0.011		0.003		-0.009**
		(0.006)		(0.008)		(0.003)
Small firmsize (d)		-0.084***		0.005		0.011
		(0.020)		(0.023)		(0.027)
Large firmsize (d)		0.142***		-0.034		-0.031
		(0.031)		(0.026)		(0.030)
Constant	1.381***	1.108***	0.226***	0.633***	0.774***	1.094***
	(0.040)	(0.173)	(0.013)	(0.132)	(0.024)	(0.128)
SC	No	Yes	No	Yes	No	Yes
N	2382	2382	2051	2051	2382	2382
R^2	0.008	0.369	0.016	0.149	0.002	0.153

Note: SOEP (1991-2012). *** p<0.01; ** p<0.5; * p<0.1. Standard errors clustered on the state level in parentheses. UE = unemployment; OLF = out of labor force.

Table 5: Parental UE (Exogenous vs. Endogenous; extended)

	Ln(Wage)	Ln(Wage)	P(Perm. contr.)	P(Perm. contr.)	P(Full-time)	P(Full-time)
Father exogenous UE (d)	-0.226	-0.155	-0.173	-0.115	0.090	0.173
	(0.271)	(0.232)	(0.106)	(0.098)	(0.109)	(0.136)
Mother exogenous UE (d)	-0.187	-0.101	-0.048	-0.174	0.205***	0.127
	(0.292)	(0.208)	(0.134)	(0.131)	(0.034)	(0.083)
Father endogenous UE (d)	-0.154	-0.124	-0.127***	-0.080	-0.035	-0.031
	(0.159)	(0.093)	(0.038)	(0.056)	(0.127)	(0.094)
Mother endogenous UE (d)	0.366**	0.171*	0.468**	0.378**	-0.272	-0.230
	(0.129)	(0.094)	(0.175)	(0.141)	(0.242)	(0.233)
Father OLF (d)	-0.062	-0.154***	0.029	-0.032	0.013	0.020
	(0.056)	(0.045)	(0.066)	(0.034)	(0.079)	(0.055)
Mother OLF (d)	0.024	-0.018	0.021	-0.024	0.005	-0.007
	(0.047)	(0.034)	(0.028)	(0.030)	(0.026)	(0.032)
Male (d)		0.087***		0.052		-0.031
		(0.023)		(0.039)		(0.024)
Age		0.098***		-0.000		0.058***
		(0.010)		(0.025)		(0.015)
Squared age		-0.004***		0.001		-0.004***
		(0.001)		(0.002)		(0.001)
Married (d)		-0.018		0.116		-0.105
		(0.080)		(0.101)		(0.085)
Immigrant(d)		-0.112***		-0.063		-0.026
		(0.029)		(0.060)		(0.062)
Living with min. one parent (d)		-0.031		-0.031		-0.041
		(0.060)		(0.066)		(0.054)
East Germany (d)		-0.120*		0.069		0.140**
		(0.057)		(0.049)		(0.064)
Unemployment Rate		-0.026***		-0.011***		-0.009
		(0.004)		(0.004)		(0.006)
Years of education (mother)		-0.010		-0.010		-0.003
		(0.009)		(0.009)		(0.006)
Years of education (father)		-0.008		0.004		-0.010**
		(0.007)		(0.009)		(0.004)
Small firmsize (d)		-0.083***		0.015		0.002
		(0.021)		(0.021)		(0.029)
Large firmsize (d)		0.156***		-0.017		-0.040
		(0.035)		(0.027)		(0.027)
Constant	1.378***	1.128***	0.220***	0.633***	0.775***	1.106***
	(0.039)	(0.158)	(0.012)	(0.149)	(0.025)	(0.129)
SC	No	Yes	No	Yes	No	Yes
N	2156	2156	1858	1858	2156	2156
R²	0.006	0.363	0.017	0.145	0.006	0.157

Note: SOEP (1991-2012). *** p<0.01; ** p<0.5; * p<0.1. Standard errors clustered on the state level in parentheses. UE = unemployment; OLF = out of labor force.