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Effects of participating in skill training and workfare on employment entries for lone mothers receiving means-tested benefits in Germany

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Abstract

This paper investigates employment effects of further vocational training, short classroom training, as well as One-Euro-Jobs for lone mothers receiving Unemployment Benefit II (UB II) in Germany. Lone mothers receiving UB II participate in these active labor market programs at very high rates. As soon as their youngest child is aged three or above, their program entry rates are as high as for childless singles. This paper examines whether lone mothers can actually profit from participating in these programs, given low levels of childcare provision. The empirical analyses are based on administrative data. A timing-of-events approach is used to control for possible selectivity in program entries. Separate models are estimated for entries into minor employment, regular contributory employment in general, and regular contributory employment connected to a complete exit from benefit receipt. Findings are that lone mothers profit especially strongly from participating in vocational training programs in terms of entering regular contributory employment in general as well as regular contributory employment connected to a complete exit from benefit receipt. Presumably, they can particularly benefit from updating their job skills after interrupting their employment for some time to care for their children. Effects of short classroom training programs are somewhat smaller, and One-Euro-Jobs have small positive effects for some, but not all, groups of lone mothers.

Zusammenfassung

Diese Studie beschäftigt sich mit Wirkungen der Förderung der beruflichen Weiterbildung, schulischen Trainingsmaßnahmen sowie Ein-Euro-Jobs bei alleinerziehenden Arbeitslosengeld-II- (ALG-II-)Bezieherinnen. Die Eintrittsraten von alleinerziehenden ALG-II-Bezieherinnen in diese Maßnahmen sind sehr hoch. Für Alleinerziehende mit einem jüngsten Kind im Alter von mindestens drei Jahren sind die Maßnahmeeintrittsraten vergleichbar mit denen der kinderlosen alleinstehenden Frauen. Diese Studie untersucht inwiefern Alleinerziehende tatsächlich von solchen Maßnahmeteilnahmen profitieren können. Denkbar wäre, dass positive Effekte aufgrund der geringen Verfügbarkeit von Kinderbetreuungsplätzen ausbleiben könnten. Die empirischen Analysen basieren auf administrativen Daten. Es wird ein Timing-of-Events Ansatz angewendet um für mögliche Selektivität bei den Programmzugängen zu kontrollieren. Für Eintritte in Minijobs, reguläre sozialversicherungspflichtige Beschäftigung im Allgemeinen, sowie reguläre sozialversicherungspflichtige Beschäftigung verbunden mit einer Beendigung des ALG-II-Bezugs werden jeweils separate Modelle geschätzt. Die Ergebnisse zeigen, dass Alleinerziehende besonders von der Förderung der beruflichen Weiterbildung profitieren können im Sinne höherer Eintrittsraten in reguläre sozialversicherungspflichtige Beschäftigung im Allgemeinen, wie auch reguläre sozialversicherungspflichtige Beschäftigung ver-

bunden mit einer Beendigung des ALG-II-Bezugs. Möglicherweise können sie besonders von einer Erneuerung ihrer beruflichen Kenntnisse nach längeren Kinderbetreuungsphasen profitieren. Effekte von schulischen Trainingsmaßnahmen sind etwas geringer, und Ein-Euro-Jobs haben bei einigen, jedoch nicht allen Gruppen von Alleinerziehenden positive Beschäftigungseffekte.

JEL classification: J12; J68; I38

Keywords: lone mothers, active labor market programs, timing of events, Germany

1 Introduction

As in many countries, lone mothers' economic situation is often quite difficult in Germany. In 2010, the net equivalised household income was below 60% of the German median for 37% of those living in lone parent[1] households (Statistisches Bundesamt 2013). The strategy chosen by policy makers and employment offices to improve lone parents' economic situation appears to be to strongly encourage their participation in active labor market programs such as workfare and training in order to improve their employment chances (Zabel 2012). However, the question is whether lone mothers can actually benefit from these program participations in terms of better employment chances given low rates of childcare provision, particularly in western Germany (Statistische Ämter des Bundes und der Länder 2012). Thus, this study investigates employment effects of training and workfare participations for lone mothers, compared to childless single women as well as mothers with a partner.

A major welfare benefit reform took place in Germany in 2005 (Eichhorst/ Grienberger-Zingerle/Konle-Seidl 2010). One of the goals of the reform was to integrate groups experiencing significant employment obstacles into the labor market, such as persons with childcare responsibilities. Lone mothers of children aged three or above have since been strongly targeted by assignments to employment programs, participating in many types of programs as frequently as childless single women (Zabel 2012). Efforts to increase lone parents' employment rates are not unique to Germany. In countries such as the United States, the United Kingdom, Norway, the Netherlands, or France, employment expectations for lone parents have increased in recent decades as well (Giddings/Dingeldey/Ulbricht 2004; Gregg/Harkness/Smith 2009; Knijn/Martin/Millar 2007; Rønsen/Skarðhamar 2009). Pathways chosen to encourage lone parents' employment have ranged from setting stricter time limits for benefit receipt, to providing financial support for childcare. The results provided in the present paper can give insight as to whether the specific approach chosen in Germany, that is, assignments to training and workfare programs, can actually provide benefits for lone mothers in terms of raising their chances of finding employment.

To study the effects of workfare and training program participations on taking up employment, this study makes use of large-scale administrative data. The sample chosen is an inflow sample into means-tested benefit receipt without employment. A timing-of-events approach was employed in order to control for possible selectivity in labor market program entries. Thus, sample members' entries into their first labor market program and their entries into employment are modeled simultaneously. The empirical analyses examine effects of workfare, short classroom training programs, as well as longer further vocational training programs on entries into minor non-

[1] In 2009, 90% of lone parents were lone mothers in Germany (Statistisches Bundesamt 2010).

contributory employment, employment with social insurance contributions in general, as well as socially insured employment with an income high enough to exit benefit receipt. Effects of program participations for lone mothers with children of different ages are compared to those of childless single women as well as mothers with a partner. Further comparisons are drawn between eastern and western Germany.

The paper is structured as follows. The next section discusses the labor market reform and lone mothers' socio-economic situation in Germany and reviews the international literature on labor market program effects for lone mothers. The third section presents the research questions, and the fourth section discusses the data and method of analysis. The empirical results are presented in section five. The final section provides a summary of the main findings.

2 Institutional background and previous research

2.1 Family policies, maternal employment, and lone mothers' economic situation in eastern and western Germany

The degree of institutional support for maternal employment differed strongly in the former East and West Germany. Policies introduced in the former West Germany tend to support the male breadwinner model of the family. For instance, income-splitting for taxation benefits married couples with very unequal incomes. Health insurance free of additional costs was made available for non-employed married women or men via their spouse's employment. On the other hand, there was very little support for dual earner families in West Germany. Childcare for children aged under three was hardly available at all, and kindergartens for children aged 3-5 as well as schools only ran for half the day. In the former East Germany, the institutional framework more strongly favored dual earner families. Childcare was provided at high rates even for very young children. Full-time employment was generally expected of both men and women irrespective of family status. Part-time employment was an option mainly only for older workers prior to the transition into retirement (Rosenfeld/Trappe/Gornick 2004).

Most former West German policies, such as income-splitting for taxation and the provision of health insurance for non-employed spouses of the employed, now apply to the unified Germany. However, large differences remain in the provision of childcare for children aged under three as well as regarding full-time kindergarten care for 3-5 year olds. Although childcare provision rates have increased across the last decade, still only 22% of children aged under three attended childcare in western Germany in 2012, compared to 49% in eastern Germany (Statistische Ämter des Bundes und der Länder 2012). In 2007, during the study period for the present study, childcare rates for children aged 0-2 were yet lower, at 10% in western Germany and 41% in eastern Germany (Statistische Ämter des Bundes und der Länder 2008). In 2012 30% of children aged 3-6 attended kindergarten on a full-day basis in western Germany, compared to 68% in eastern Germany (Statistische Ämter des Bundes und der Länder 2012). During the study period, in 2007, this was the case

for 17% of kindergarten-age children in western Germany and 60% in eastern Germany (Statistische Ämter des Bundes und der Länder 2008).

The degree of institutional support for maternal employment appears to be strongly interrelated with societal attitudes towards maternal employment. Even today, attitudes towards maternal employment still diverge between eastern and western Germany. Scheuer/Dittmann (2007) show that in 2006, 53% of western German respondents to a Eurobarometer survey favored traditional gender roles for the division of labor in the household, compared to only 20% of eastern Germans.

The lower level of childcare provision and the more traditional attitudes towards maternal employment in western Germany are reflected in lower rates of full-time employment among mothers than in eastern Germany. Overall maternal employment rates were quite similar in eastern Germany (63%) and western Germany (60%) in 2011. However, among the employed, only 25% were working full-time in western Germany, compared to 55% in eastern Germany (Keller/Haustein 2012).

Perhaps somewhat surprisingly, while overall maternal employment has increased, full-time employment has actually been decreasing for mothers in Germany across the last decades. This development seems to be driven by those with lower level of qualifications (Konietzka/Kreyenfeld 2010). Such decreases in mothers' full-time employment have been observed for both western and eastern Germany. While Hanel/Riphahn (2011) argue that there is thus a convergence in employment patterns between eastern and western Germany, Kreyenfeld/Geisler (2006) emphasize that differences in maternal employment are still very large between the two German regions.

While low levels of full-time employment seem to be the norm for western German mothers with a partner, full-time employment rates are somewhat higher for lone mothers in western Germany. Perhaps this is because there has been less institutional support for non-employed or part-time employed lone mothers. Lone mothers neither profit from income splitting, nor do they have access to free health insurance via an employed partner. In the long run, this institutional setting might also have led to diverging normative expectations regarding maternal employment for lone and partnered mothers in western Germany. In western Germany in 2009, 22% of employed mothers with a partner were working full-time, compared to 38% of employed lone mothers (Statistisches Bundesamt 2010). Overall employment rates in western Germany were at 62% for lone mothers compared to 57% for mothers with a partner. In eastern Germany, on the other hand, overall employment rates were actually higher for partnered (63%) than for lone mothers (54%), and among the employed, lone mothers only had slightly higher full-time employment rates (56%) than mothers with a partner (54%). For Germany as a whole, maternal employment rates quite closely reflect those in western Germany due to its larger population size. The overall employment rate for mothers with a partner was 58% in 2009, and 60% for lone mothers. Of the employed, 42% of lone mothers and 27% of partnered mothers were working full-time (Statistisches Bundesamt 2010).

Despite their higher overall full-time employment rates, households headed by lone parents (who are lone mothers in 90% of the cases (Statistisches Bundesamt 2010)) more often depend on means-tested transfer payments than do two-parent households. The most important type of means-tested transfer payment in Germany is Unemployment Benefit II (UB II). UB II is not only paid to the unemployed, but also as an income supplement to those with low earnings. The reform introducing UB II is discussed in the next section. In 2011, 40% of lone-parent households, but only 8% of two-parent households received UB II (Statistik der Bundesagentur für Arbeit 2011). Among the unemployed, lone mothers receiving UB II take up employment at higher rates than mothers with a partner, but are slower to leave UB II receipt (Lietzmann 2011; Lietzmann 2009). A likely explanation is that non-employed mothers in two-parent households exit benefit receipt when their partner takes up employment. Also, when mothers in two-parent households take up a low-income job, the additional income combined with their partner's income appears often to be sufficient for the household to exit benefit receipt. Lone mothers, by contrast, cannot rely on a partner to augment the household income, and their income alone is often not high enough to exit benefit receipt completely upon taking up employment.

2.2 The Hartz IV reforms in Germany

As recipients of means-tested benefits, many lone mothers are affected by recent employment and welfare benefit reforms. Like in many European countries, recent reforms in Germany have aimed at increasing labor market participation rates among groups with significant employment obstacles. Since the Hartz IV reform in 2005, the long-term unemployed as well as previous welfare benefit recipients are now at the focus of activation policies (Eichhorst/Grienberger-Zingerle/Konle-Seidl 2010). The reform in 2005 combined the former unemployment assistance[2], of which the majority of recipients were long-term unemployed persons, and the former welfare benefit to form the new means-tested Unemployment Benefit II (UB II). Parents with childcare responsibilities receiving UB II are expected to be available for employment as soon as their youngest child is three years old, given that adequate childcare is available (Sozialgesetzbuch Zweites Buch (SGB II) 2011).

For the period prior to the Hartz IV reform in 2005, Adema/Gray/Kahl (2003) report that lone parents of one child receiving welfare benefits were in practice usually not expected to be available for employment until their child reached school age. Those with two or more children generally did not have to be available for employment until their youngest child was ten years old.

After the reform in 2005, however, more emphasis was put on activation policies for non-employed benefit recipients, including parents with childcare responsibilities.

[2] The former unemployment assistance was available to persons who had run out of their unemployment insurance benefit or had not contributed to unemployment insurance long enough to be eligible for unemployment insurance payments. The receipt of unemployment assistance was subject to a means-test.

Previous research has shown that as soon as their youngest child is aged three or above, lone mothers' entry rates into workfare, classroom training, and further vocational training programs are indeed as high as for childless single women. Married or cohabiting mothers, especially in western Germany, are much less frequently assigned to these programs (Zabel 2012). Thus, it seems that lone mothers are expected to contribute to improving their family's economic situation to a far greater degree than married or cohabiting mothers in households receiving means-tested benefits.

Since the 1990s, activity requirements have become stricter for lone parents receiving means-tested benefits or income support in many countries such as the United States, the Netherlands, Norway, France, and the United Kingdom (Giddings/ Dingeldey/Ulbricht 2004; Kennedy 2010; Knijn/Martin/Millar 2007; Rønsen/ Skarðhamar 2009). The recent reforms in Germany seem to be following along this pathway. Lewis (2006; 2001) has described this policy shift towards increased work expectations for lone parents as a reorientation in the direction of an adult worker model of the family. While policies previously tended to assume that people with care obligations were not available for employment, universal labor market participation is now encouraged.

2.3 Types of active labor market programs

Given lone mothers' oftentimes difficult economic situation, it is understandable that efforts are being made to improve their employment opportunities. However, it is an open question whether labor market programs, and especially which types of labor market programs, can actually contribute to better employment prospects for lone parents.

This study investigates effects of workfare, classroom training, and further vocational training programs on employment outcomes. These three program types are quite different from each other in their goals and content. In the following, a short description of each of these program types is given.

Workfare programs were initially the most frequent type of program available to recipients of the means-tested Unemployment Benefit II (UB II) in Germany, at approximately 640,000 – 700,000 program entries each year between 2006 and 2008 (Statistik der Bundesagentur für Arbeit 2010). After the end of the observation period for this study, the size of the program was however strongly reduced. In 2011, only about 50% as many persons participated in workfare programs as in 2008 (Statistik der Bundesagentur für Arbeit 2012). Workfare programs for UB II recipients are known as 'One-Euro-Jobs', since participants receive 1 – 2 Euros per hour worked in addition to their welfare benefit (Hohmeyer/Wolff 2012). One-Euro-Jobs are intended to accustom people who have not been employed for a very long time to a regular work schedule. Thus, the work performed is usually quite low skill. One-Euro-Jobs can also be used to test benefits recipients' willingness or availability for work. Benefit recipients who are assigned to a One-Euro-Job but do not participate

can be sanctioned by temporary benefit cuts. One-Euro-Jobs usually run for about 6 months. Legal regulations stipulate that One-Euro-Jobs must be of public utility and may not replace regular jobs. Thus, they are usually situated in the public or nonprofit sector.

Classroom training programs run for a duration of a few days up to 12 weeks. The content of classroom training programs comprises skill training courses, aptitude tests, work tests, and application training courses (Kopf 2012). The goal of classroom training programs is generally to increase participants' marketable skills. However, as in the case of One-Euro-Jobs, they may also be used to test their willingness or availability for work, and benefit recipients can be sanctioned for non-attendance. There were between 260,000 and 300,000 program entries each year in 2006 – 2008 (Statistik der Bundesagentur für Arbeit 2010).

Further vocational training programs are organized somewhat differently than classroom training programs. Benefit recipients receive a voucher that they can use to enroll in a course offered by a certified provider (Bernhard et al. 2009; Kruppe 2009). This opens the possibility for UB II recipients to participate in a wide range of externally organized programs. Vocational training programs have a median duration of approximately 3 months, and are thus longer than classroom training programs. Further vocational training is a much smaller program than classroom training or One-Euro-Jobs. There were only 100,000 – 180,000 program entries a year between 2006 and 2008 for UB II recipients (Statistik der Bundesagentur für Arbeit 2010).

2.4 Review of international research on effects of activation policies for lone parents

Policy reforms altering conditions for benefit receipt for lone parents have taken place in many countries in recent years. The success of activation policies is never clear from the start, and a wide evaluation literature looks into impacts of such policies for unemployed persons in general. For lone parents, the impact of activation policies may be even less clear due to oftentimes low levels of childcare availability. In the following, an overview is given of international empirical evaluation studies of activation policies for lone parents.

In the UK, an initially voluntary work counseling program became available in 1998 for lone parents receiving welfare benefits, called the New Deal for Lone Parents (NDLP) (Dolton/Smith 2011). At about the same time, in 1999, the Working Families' Tax Credit (WFTC) was introduced, which increased financial work incentives for low income parents (Dilnot/McCrae 2000; Rake 2001). It also encompassed relatively high levels of financial support for childcare costs. Evaluation studies have generally found positive joint effects of these reforms on lone mothers' employment rates

and work hours (Blundell/Brewer/Francesconi 2008; Francesconi/van der Klaauw 2007; Gregg/Harkness/Smith 2009)[3].

In 2003, an activation program was introduced in Norway called the 'Action Plan to Combat Poverty', giving welfare benefit recipients access to active labor market programs previously reserved for unemployment benefit recipients (Rønsen/ Skarðhamar 2009). In its emphasis on activation programs and extension of these programs to welfare benefit recipients, the reform in Norway is very similar to the reform that later took place in Germany in 2005, and which is studied in the present paper. Rønsen and Skarðhamar (2009) study the impact of participating in the Action Plan to Combat Poverty for various subgroups of welfare benefit recipients, but do not differentiate by program type. They find no significant effects for single parents[4].

In the United States, the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA), passed in 1996, limited the maximum duration that lone parents can receive welfare benefits to 5 years across their lifetime (Giddings/ Dingeldey/Ulbricht 2004). Financial work incentives were raised as well in the 1990s by reforms of the Earned Income Tax Credit (EITC) (Lower-Basch/Greenberg 2009). Meyer and Sullivan (2008) find that this led to higher incomes for all but the bottom decile of lone parent families[5]. Lower-Basch and Greenberg (2009) summarize a large number of studies showing that single mothers' employment rate strongly increased across the second half of the 1990s, which may in part however also be related to the strong economic growth in this time period.

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3 Blundell et al. (2008) use data from the first 12 waves of the British Household Panel Survey (BHPS), referring to the years 1991 – 2002. They employ a difference-in-difference approach, comparing changes in work hours after WFTC was introduced between lone mothers and childless single women. Francesconi and van der Klaauw (2007) likewise use data from the BHPS for the years 1991 – 2001, and use a difference-in-difference-in-difference approach adapted to panel data. They compare lone mothers to childless single women, investigating effects of the WFTC reform on the proportion of lone mothers working 16 or more hours a week, and the proportion working 30 or more hours a week. Gregg et al. (2009) analyze data from the Labour Force Survey Panel for the years 1993-2003. They use a difference-in-difference approach, comparing lone mothers both to childless singles as well as to mothers with a partner. The authors investigate effects of the WFTC reform on transitions from non-employment to employment, on employment exits, partnership transitions, fertility, and also mothers' and children's well-being.

4 Rønsen/Skarðhamar (2009) use large-scale administrative data and as a method of analysis combine propensity score matching and survival analysis. Their dependent variable is thus the transition into employment. The authors follow participants from the time they enter a program at any time after the reform in March 2003 until they enter employment or until the time of censoring in December 2004.

5 The authors use data from the Consumer Expenditure Interview Survey for the years 1993 – 2003. They use household equivalence scales to adjust income measures, and study changes in mean incomes for each decile of single mother families between the periods 1993-95 and 1997-2000, as well as between the periods 1993-95 and 2001-2003.

Training and work-first programs have a long history in the United States as well. The initial evaluation of California's Greater Avenues to Independence (GAIN) program, initiated in 1986, was very influential for the design of later programs across the United States. It indicated greater employment effects for work-first programs than for skill training courses. However, a reevaluation by Hotz et al. (2006) finds that local heterogeneity in labor market conditions may have been largely responsible for the initial findings. They show that skill training courses were actually more effective in the long run in increasing employment rates[6].

Altogether, the findings for the UK and the US indicate positive effects of financial work incentives in the form of tax credits on lone mothers' employment rates. For the US, there also seems to be some evidence of positive effects of training programs on lone mothers' employment. Findings for Norway on activation programs, as a general category, by contrast showed no effects for lone mothers.

While tax credits have played an important role in efforts to increase lone parents' employment rates in the US and the UK, this is not the case in Germany. As described earlier, active labor market programs, such as training and workfare programs, are the most important measures employed to encourage benefit recipients' labor market integration. Thus, it will be interesting to see whether skill training positively influences lone mothers' employment chances in present-day Germany as it appears to have done in the US, and whether there are differences for lone mothers of children of different ages. Furthermore, it will be interesting to see whether effects differ between various types of labor market programs, which might be one reason why no overall effects were found for Norway.

2.5 Review of research on effects of activation programs in Germany

In Germany, since the employment and welfare policy reform in 2005, much emphasis has been put on assigning recipients of the means-tested UB II to active labor market programs, as described above. Very few program evaluation studies focus specifically on lone mothers though. An exception is a study by Wolff and Jozwiak (2007), who present results for lone mothers in their evaluation of short-term training programs, and find positive employment effects for lone mothers as for other subgroups of women. Furthermore, they find that lone mothers are the only group whose probability of being without benefit receipt is raised by program participation.

Hohmeyer (2012) finds interesting differences between women and men in general with respect to effects of One-Euro-Job participation. At the end of the observation period of 28 months, stronger positive employment effects are found for women than for men.

[6] Hotz/Imbens/Klerman (2006) reevaluate experimental data, studying outcomes over a time period of 9 years.

Achatz et al. (2012) study effects of One-Euro-Jobs, short classroom training, as well as firm-based training programs for young adults aged 18 – 30. They find positive significant effects of classroom training programs for single women, but not for mothers with a partner. Conversely, positive significant effects of One-Euro-Jobs are found for mothers with a partner, but not for single women. For all groups, firm-based training programs have by far the strongest positive effects.

Bernhard/Kruppe (2013) analyze effects of further vocational training programs for a number of subgroups of UB II recipients, including women with children, though not specifically lone mothers. They generally find positive long-term employment effects of further vocational training programs for all subgroups studied. The positive effect for women with children is however not significant.

Huber et al. (2010) evaluate the effects of One-Euro-Jobs, short training, as well as further vocational training for UB II recipients, differentiating by various subgroups including lone parents. They do not find any significant effects for lone parents for any of these programs on employment or benefit receipt. However, since their evaluation study is based on survey data and not administrative data as in the case of many other studies, the sample size used is comparatively small, especially for the subgroup of lone parents. The observation period of 9 months after program start is also comparatively short.

Most other evaluation studies for further vocational training programs refer to the period before the introduction of UB II in 2005 and study effects for unemployment insurance and assistance recipients, not welfare benefit recipients (Bernhard et al. 2009), and generally do not differentiate by family status. Studies for eastern Germany for the early 2000s find almost no positive employment effects of further vocational training programs, which is attributed to the difficult overall labor market situation (Biewen et al. 2007; Hujer/Thomsen/Zeiss 2006). For the 1990s, positive long-run effects are however found for eastern Germany (Lechner/Miquel/Wunsch 2007). Studies for western Germany generally find positive long-run effects of further vocational training programs (Biewen et al. 2006; Fitzenberger/Osikominu/Völter 2008; Lechner/Miquel/Wunsch 2011).

Altogether then, as of yet, very little research has investigated effects of labor market program participations for lone mothers in Germany. While findings on program effects have been reported for a number of different subgroups of UB II recipients, studies have seldom focused specifically on lone mothers.

One reason why there has not yet been much research focusing specifically on effects of labor market programs for lone mothers may be that awareness for lone mothers' oftentimes difficult economic situation has only very recently increased in Germany. Furthermore, often sample sizes in survey data, and sometimes even in administrative data, are not large enough to estimate effects for the subgroup of lone mothers. Using administrative data and a comparatively long inflow window, the present study attempts to contribute to filling this gap.

3 Theoretical considerations and research questions

This section develops hypotheses for the empirical analyses on effects of participating in further vocational training, short classroom training, as well as One-Euro-Jobs on employment entries. In the empirical analyses, lone mothers will be compared to childless singles and mothers with a partner.

For the duration of a program itself, benefit recipients tend to concentrate on participating and reduce their job search efforts, resulting in lower job entry rates (Rønsen/ Skarðhamar 2009). This is commonly referred to as a lock-in effect. A first hypothesis is that for One-Euro-Jobs as well as further vocational training programs, lock-in effects will occur for all population groups. This is by contrast not expected for classroom training programs due to their oftentimes short duration (Hypothesis 1).

A further mechanism by which training programs such as further vocational training can affect participants' chances of employment is by increasing their level of qualification (Calmfors 1994). Mothers participating in further vocational training have to a greater proportion been without a regular job for over two years than childless singles (Table A.4). According to theories of human capital appreciation and depreciation (Mincer/Ofek 1982), they should thus have experienced a greater degree of skill loss as well as missed more opportunities to invest in their skills. Many studies have indeed shown mothers' employment breaks to be related to wage penalties (e.g Budig/England 2001; Gangl/Ziefle 2009), although differences in human capital are only one of several factors found to be responsible for this.

For the unemployed in general, loss of human capital during unemployment can also lead to lower exit rates out of unemployment (Pissarides 1992). There are however a number of further explanations for negative duration dependence. Besides skill depreciation, these include selectivity, stigma effects, and discouragement (Biewen/Steffes 2010; Van den Berg/Van Ours 1994). To the extent that lower employment entry rates for the long-term unemployed are related to skill depreciation, skill training should be able to contribute to improving their reemployment chances. This should apply to unemployed mothers with childcare-related employment breaks as well. For improving their chances of reemployment, mothers might even be able to more strongly profit from skill training than other long-term unemployed persons. Since many mothers were not actually searching for a job for most of their employment break, they are less likely to have become discouraged. For lone mothers, the need to economically support their family is likely to be additionally motivating. A high level of motivation can be an important pre-condition for skill training to be effective.

Skill training can improve unemployed persons' reemployment chances via other mechanisms as well. Even if an unemployed person has not actually experienced skill depreciation, employers may be prejudiced and believe this to be the case. Taking part in skill training courses can thus help to disperse employers' reservations.

Labor market conditions may also have changed during long spells of unemployment, making it necessary to acquire skills for a new occupational field.

For all these reasons, given their longer employment breaks (Table A.4), a further hypothesis is that positive employment effects of further vocational training will be stronger for mothers than for childless singles, with the exception of mothers of children aged 3-5 in western Germany (Hypothesis 2). The reason for this exception is that most kindergartens only offer part-time care in western Germany. In 2007, during the study period, only 17% of kindergarten-age children had access to full-day care in western Germany, compared to 60% in eastern Germany (Statistische Ämter des Bundes und der Länder 2008). Thus, even if mothers of kindergarten-age children in western Germany can manage a further vocational training course for a few hours a day, work hours in regular employment, especially when high levels of flexibility or shift work is required, will be difficult to coordinate with kindergarten opening hours.

Short classroom training programs may also contribute to improving participants' level of qualification, albeit to a somewhat lesser degree than further vocational training programs, due to their shorter duration. Nevertheless, for similar reasons as in the case of further vocational training programs, positive employment effects of short classroom training programs should be expected to be stronger for mothers than childless singles, with the exception of mothers of kindergarten-age children in western Germany (Hypothesis 3).

One-Euro-Jobs, on the other hand, cannot be expected to contribute much to enhancing participants' more advanced job-specific skills, as they usually only involve quite basic tasks. One-Euro-Jobs might however increase job search efforts by limiting leisure time and thereby the value of benefit receipt (Calmfors 1994). Long-term unemployed persons may also have become discouraged, and have lower levels of self-esteem than the employed (Paul/Moser 2006; Tiggemann/Winefield 1984). Obtaining recognition for their work in One-Euro-Jobs from their coworkers and employers may therefore raise participants' self-esteem (Wolff/Hohmeyer 2011), although mixed empirical results on the impact of active labor market programs on participants' psychological well-being have been found (Breidahl/Clement 2010; Wulfgramm 2011). To the extent that One-Euro-Jobs do serve to raise participants' self-esteem, their enhanced self-esteem can have a positive effect on their chances of reemployment (Waters/Moore 2002).

For lone mothers of young children receiving UB II, the most important employment obstacle is unlikely to be discouragement though, but rather lack of childcare. In fact, lone mothers appear to be disproportionately employment-oriented. Almost three times as many non-employed lone mothers as mothers with a partner in Germany were actively searching for a job in 2009 (Statistisches Bundesamt 2010). For those with very young children, lack of childcare is an important constraint, however. Formal childcare was available for only 10% of children aged 0-2 in western Germa-

ny in 2007, compared to 41% in eastern Germany (Statistische Ämter des Bundes und der Länder 2008). Therefore, many western German lone mothers only resume their job search when their children reach kindergarten age. Since the main reason for their prior employment gap is unlikely to be discouragement or lack of motivation, One-Euro-Jobs do not appear to be a policy tool that is well suited to their situation. Accordingly, the next hypothesis is that there will be no positive effects of One-Euro-Job participation for lone mothers of kindergarten-age children in western Germany (Hypothesis 4).

In analyzing effects of labor market programs, this study differentiates between effects on entries into minor employment without social insurance contributions, effects on entries into unsubsidized contributory employment in general, and effects on entries into unsubsidized contributory employment involving simultaneous exits from benefit receipt. In Germany, jobs paying up to 450€ a month are freed from social insurance contributions and are known as minor employment[7]. One research question for the empirical analyses is whether program effects on entries into minor employment are stronger than effects on entries into regular employment for mothers. Minor employment jobs are usually short part-time jobs that are more compatible with childcare, and thus may be more readily available to mothers.

Means-tested unemployment benefits are not only paid to those who are without a job, but are also paid as an income supplement to people earning an income that is too low to cover the basic needs of their household. This study looks into program effects on entries into unsubsidized contributory employment in general, but also investigates effects on entries into unsubsidized contributory employment involving simultaneous exits from benefit receipt. A simultaneous exit from benefit receipt is taken to indicate that the income obtained in the new job is high enough to exit benefit receipt completely. Since many lone parents can only work part-time, only few will be able to take up jobs that lead to exiting benefit receipt completely. Thus, it is unclear whether lone mothers' program participations can increase their entry rates into jobs allowing them to exit benefit receipt completely.

A further hypothesis is therefore that for each type of active labor market program, for lone mothers, positive effects on entry rates into minor employment will be strongest, and into unsubsidized contributory employment combined with a complete exit from benefit receipt will be weakest (Hypothesis 5).

4 Data and method

The data used for the analyses is large-scale administrative data. The data on unemployment, job search, program participation, and benefit receipt originates from employment offices, while data on contributory employment stem from notifications sent by employers to health and pension insurance funds. Data from these sources

[7] During the study period, the income threshold was 400€.

is made available for scientific analysis as the Integrated Employment Biography[8] data set and the Unemployment Benefit II History data set. The time period covered by the analyses runs from 1 October 2005 to 31 December 2008.[9]

The sample consists of all lone mothers, mothers with a partner, and childless single women who at any time during the period from 1 October 2005 to 31 December 2007 entered into the state of receiving UB II and not being employed and who are not incapable of working due to a disability or similar reasons. The sample is further limited to those aged under 50 in order to obtain a comparable age range for mothers and childless women.

The method of analysis used is a timing-of-events approach (Abbring/van den Berg 2003a). Each sample member can have several spells of receiving UB II and not being employed. All spells are included in the analyses that follow a period of at least a month during which the person was not in the risk state, that is, where the person was employed or was not receiving UB II. The end of the observation period is the 31st of December 2008.

The duration modeled here is the time since entry into UB II receipt without employment, and the unit of measurement is days. The three different employment outcomes analyzed here are entries into minor non-contributory employment, entries into unsubsidized employment with social insurance contributions, and entries into unsubsidized contributory employment combined with a complete exit from UB II receipt. Entries into employment are considered to be combined with a complete exit from benefit receipt if both events occur within a 31-day window.

When estimating the parameters of the determinants of the transition rate into contributory employment, spells are censored if the person enters minor employment or exits benefit receipt before taking up contributory employment. Processes of entering minor employment are censored if the person either enters contributory employment or exits UB II receipt before taking up minor employment. For parameter estimates of the transition rate into contributory employment combined with an exit from benefit receipt, the spells are censored if there is a prior entry into minor employment, a prior exit from benefit receipt that is not combined with contributory employment, or a prior entry into contributory employment that is not combined with an exit from benefit receipt. Thus, the entries into the different types of employment are modeled as competing risks. However, correlation between the unobserved heterogeneity terms in the equations for the different employment entries was not con-

8 Dorner et al. (2010) provide a description of a 2% public use sample of this data set. The analyses in this study are based on a sample drawn from the complete data set.

9 The data excludes the districts in which UB II is administered by local authorities alone. Due to data collection problems, no systematic information was available from these districts. 13% of unemployed UB II recipients were clients of job centers in these districts between the years 2007 and 2010 (Statistics Department of the German Public Employment Service 2012).

trolled for. As explained below, three equations were estimated simultaneously to control for selectivity in entering active labor market programs. When attempting to estimate greater numbers of equations simultaneously in order to include controls for correlations with the unobserved heterogeneity terms of more than one employment entry type, the estimation procedure became extremely slow and often did not converge.

Labor market program entries are modeled as entries into the first program in a spell. When estimating transitions into a given type of program, spells are censored if the person enters any other type of program first, or if they enter minor employment, contributory employment, or exit benefit receipt before beginning a program.

Entries into a given program type are modeled simultaneously with entries into any other type of program, as well as with entries into a given type of employment. This allows controlling for selectivity in entering programs. If for instance a person is especially motivated to find a job, they may both be more likely to participate in a program and to actually find a job. Estimating simultaneous equations provides a possibility to control for such selectivity. All models are estimated using the statistical software package aML (Lillard/Panis 2003).

The models estimated for entries into One-Euro-Jobs and entries into regular contributory employment are shown as an example below. In order to control for participation in other program types, an equation for entries into any program other than One-Euro-Jobs was estimated simultaneously as well. Thus, program effects are effects compared to a situation where the individual participates in no program at all.

$$\ln \mathrm{h}_{\mathrm{ij}}^{\mathrm{E}}(\mathrm{t}) = \mathrm{y}^{\mathrm{E}}(\mathrm{t}) + \sum_{k=l}^{l} \beta_k^E x_{ijk}(t) + \varepsilon_i^E$$

$$\ln \mathrm{h}_{\mathrm{ij}}^{\mathrm{A}}(\mathrm{t}) = \mathrm{y}^{\mathrm{A}}(\mathrm{t}) + \sum_{k=1}^{l} \beta_k^A x_{ijk}(t) + \varepsilon_i^A$$

$$\ln \mathrm{h}_{\mathrm{ij}}^{\mathrm{R}}(\mathrm{t}) = \mathrm{y}^{\mathrm{R}}(\mathrm{t}) + \sum_{k=1}^{l} \beta_k^R x_{ijk}(t) + \sum_{k=l+1}^{m} \beta_k^R E_{ijk}(t) + \sum_{k=m+1}^{n} \beta_k^R A_{ijk}(t) + \varepsilon_i^R$$

$\rho_{\varepsilon^E \varepsilon^A}$

$\rho_{\varepsilon^E \varepsilon^R}$

$\rho_{\varepsilon^A \varepsilon^R}$

The log transition rate into One-Euro-Jobs is given by $lnh_{ij}^{E}(t)$, the log transition rate into any program other than One-Euro-Jobs by $lnh_{ij}^{A}(t)$, and the log transition rate into regular contributory employment by $lnh_{ij}^{R}(t)$. The duration since the start of the spell is given by *t*, and the effect of this duration is given by the baseline *y(t)*. The log baseline is specified as piece-wise linear, with separate gradients estimated for

0-91, 92-183, 184-365, 366-548 and over 548 days after the start of the spell. The models include a set of control variables $x_{ijk}(t)$. In the model for transitions into regular contributory employment, variables for the duration since the start of a One-Euro-Job $E_{ijk}(t)$, as well as for the duration since the start of any other program $A_{ijk}(t)$, are included in order to estimate effects of program participation. The person-specific error term in each equation is given by ϵ_i. Correlations between the error terms in each equation are estimated as well. For instance, $\rho_{\epsilon_E \epsilon_R}$ gives the correlation between the error term in the equation for entries into One-Euro-Jobs and the equation for entries into regular contributory employment. The index *i* is person-specific, and the index j is specific to a spell. Each person can have several spells during which they are at risk. Abbring/van den Berg (2003b) show that multi-spell data facilitate the identification of the model.

The above set of models is for the example of transitions into One-Euro-Jobs and into unsubsidized contributory employment. Parallel sets of models were estimated for every combination of transitions into One-Euro-Jobs, vocational training programs, and classroom training programs on the one hand, and transitions into minor employment, regular contributory employment, and regular contributory employment combined with a complete exit from benefit receipt on the other hand. Separate models were estimated for lone mothers with children of different ages, mothers with a partner and children of different ages, and childless single women.

Time-constant as well as time-varying control variables are included in the models. Time-constant variables are the duration since the last unsubsidized contributory job, occupation in the last job, income in the last job, duration since the previous labor market program, type of previous labor market program, and the cumulative previous duration of UB II receipt. Time-varying variables include the individuals' own age, the current time period, number of children, marital status, level of education, nationality, whether a person is disabled, health impairments that are relevant for job placements, district-level childcare enrollment rates, the district-level unemployment rate, district-level proportion of the unemployed receiving UB II, district-level population density, district-level GDP per capita, district-level percentage of the population that is economically active, and district-level percentages of the economically active that are working in different sectors. In order to include the time-varying variables, the episodes are split whenever the values of the time-varying variables change. Thus, to include age as a time-varying variable, the episodes are split when individuals turn 18, 25, 30, 35, 40, or 45. The split points for the calendar time variable are 1 April 2006, 1 October 2006, 1 April 2007, 1 October 2007, and 1 April 2008. Episodes are also split whenever the number of children in the household changes, the person's marital status changes, their level of education changes, or their nationality, disability, or health status changes. To account for changes in regional indicators, episodes are split every three months to update the information for these indicators. Descriptive statistics for selected covariates are shown in Tables A.1 and A.2.

As can be seen in Tables A.1 and A.2, important differences between lone mothers, mothers with a partner, and childless singles exist with respect to several important characteristics. For instance, a lower proportion of lone mothers and childless singles in the sample of UB II recipients is without an educational degree than is the case for mothers with a partner, particularly in western Germany. Also, a higher proportion of mothers with a partner than lone mothers or childless singles are not German citizens. These differences may have to do with the partner's characteristics. It is likely that spouses' levels of education are correlated, and also that the partners of women who are not German citizens are also not German citizens. Presumably, women with better educated partners are less likely to be UB II recipients, since wages for better educated men are usually high enough to keep their families from depending on UB II. The employment chances of men who are German citizens are also likely to be higher than for men who are not German citizens, who may face employment difficulties due to language difficulties, differences in qualification, or due to discrimination. This might be part of the explanation for the comparatively high proportion of mothers with a partner in the UB II sample who have low levels of education and are not German citizens. Among childless single women and lone mothers, higher proportions of the sample are better educated and are German citizens than among mothers with a partner. Possibly, childless singles are often in a transitory phase between education and employment, or between two jobs. Since they cannot rely on support from a partner during these transitory phases, even those with higher levels of education or those who are German citizens are more likely to depend on UB II. Lone mothers, on the other hand, may generally have difficulties finding employment that is compatible with childcare, even among those with higher levels of education or with German citizenship.

As described above, entries into active labor market programs and into employment were estimated simultaneously. Since the focus of this paper is on effects of active labor market programs on entering employment, only these results will be discussed. In this paper, models for entering into active labor market programs were estimated simultaneously for the sole purpose of controlling for unobserved heterogeneity that influences both processes. Factors influencing program entries can also be of interest in their own right. A previous paper (Zabel 2012) therefore focused on processes of program entries, highlighting comparisons of program entry rates between lone mothers and other population groups.

5 Results

5.1 Descriptive results

Before discussing the results of the timing-of-events estimates of the program effects in the next section, this section reviews the descriptive statistics in Figures 1-12 to give an impression of the overall probability of entering each of the three forms of employment for the different population groups.

The curves in Figures 1-12 are reversed pseudo-survival curves. They show the probability of having entered a specific type of employment by each point in time after the start of the spell, given that a person did not first take up a different type of employment or exit UB II receipt without employment. Thus, Figures 1-4, for instance, show probabilities of entering minor employment, given that a person does not first leave the risk group by entering regular contributory employment or exiting benefit receipt without employment.

As can be seen in Figures 1-2, probabilities of entering minor employment are higher for lone mothers than for childless single women, especially in western Germany. The probability of entering minor employment does not differ very strongly by the age of the youngest child. After two years, the probability of having entered minor employment is between 42% and 46% for lone mothers in western Germany, and between 36% and 41% in eastern Germany. Figures 3-4 show that for mothers with a partner, probabilities of having entered minor employment are more similar to those of childless single women, which are at about 35% after two years both in eastern and western Germany.

Figures 5-8 show that probabilities of entering regular contributory employment depend more strongly on the age of the youngest child. In western Germany, the probability of having entered regular contributory employment after two years is 30% for lone mothers with a youngest child aged 3-5, while it is 44% for lone mothers with a youngest child aged 10-17, and 51% for childless singles. In eastern Germany, the probability of having entered regular contributory employment after two years is 33% for lone mothers with a youngest child aged 3-5, 39% for lone mothers with a youngest child aged 10-17, and 48% for childless singles. Probabilities of entering regular contributory employment are substantially lower for western German mothers with a partner, at 18% for those with a youngest child aged 3-5, and 29% for those with a youngest child aged 10-17 after two years. In eastern Germany, the probability of having entered regular contributory employment for mothers with a partner and a youngest child aged 3-5 is 28%, and is 34% for those with a youngest child aged 10-17 after two years.

The probability of entering a regular contributory job that is combined with a complete exit from benefit receipt is quite a bit lower for all population groups studied here (Figures 9-12). In western Germany, the probability of having entered a regular contributory job and simultaneously exited benefit receipt by two years after the start of the spell is 10% for lone mothers with a youngest child aged 3-5, 15% for those with a youngest child aged 10-17, and 30% for childless singles. In eastern Germany, the corresponding probabilities are 9% for lone mothers with a youngest child aged 3-5, 13% for those with a youngest child aged 10-17, and 28% for childless singles. For mothers with a partner, probabilities of entering a regular contributory job and simultaneously exiting benefit receipt are even lower. For western German mothers with a partner, the probability of having entered a regular contributory job and simultaneously exited benefit receipt by two years after the start of the spell is

5% for those with a youngest child aged 3-5, and 8% for those with a youngest child aged 10-17. In eastern Germany, the corresponding probabilities are 11% and 13%.

Altogether then, probabilities of entering each of the different types of employment differ quite strongly from one another. While probabilities of having entered minor employment are particularly high especially for lone mothers even with young children, at around 40% after two years, the probability of having entered a contributory job connected to an exit from benefit receipt is no higher than 15% after two years for any of the groups with children studied here.

Thus, the estimated effects of the labor market programs on entering each of the different types of employment must be interpreted against the background of the diverging overall probabilities of taking up minor employment, regular contributory employment, or regular contributory employment connected to a complete exit from benefit receipt.

5.2 Results of the timing-of-events estimates

Tables 1 - 6[10] show the estimated effects of further vocational training programs, classroom training programs, as well as One-Euro-Jobs on transitions into employment[11] for western and eastern Germany[12]. Initial negative effects, known as lock-in effects, can be found for the duration that people participate in vocational training programs and One-Euro-Jobs. During program participation, people tend to reduce their job search efforts and concentrate on taking part in the program. Classroom training programs, on the other hand, are shorter than the other two program types, and lock-in effects rarely occur. The findings on lock-in effects thus correspond to the expectations expressed in Hypothesis 1.

After short-term negative lock-in effects, positive employment effects on contributory employment, as well as contributory employment combined with a simultaneous exit from benefit receipt, emerge for further vocational training programs. Further vocational training programs have even stronger positive effects on entries into contributory employment, as well as contributory employment combined with an exit from benefit receipt, for lone and partnered mothers than for childless single women (Tables 1 and 2). For instance, entry rates into contributory employment are raised by a

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[10] The effects shown in tables 1 – 6 are relative entry rates. Thus, values over 1 indicate positive effects, and values below 1 indicate negative effects.

[11] When estimating several equations simultaneously, it sometimes occurs that convergence is not achieved for the estimation. While the great majority of models presented here did converge, in a few cases, no convergence was achieved. This is indicated by bars in the results table.

[12] Table A.3 shows the distribution of spell lengths after program start. It can be seen here that approximately 50% of spells last for over 6 months after program start, and about 25% last for over a year after the start of programs. Very few however last for over two years after programs start. Thus, program effects for the time of over 12 months after program start indicated in Tables 1-6 can be interpreted to refer to the time of 1 – 2 years after program start.

factor of 2.39 (=139%) for lone mothers with a youngest child aged 3-5 in western Germany 12 months after they started taking part in the program, compared to 30% for childless single women (Table 1).

On the other hand though, no significantly positive effects of further vocational training on minor employment are found for any of the groups studied here. For minor employment, mostly only initial negative lock-in effects of further vocational training are found. An explanation may be that a higher level of qualification is not necessary for obtaining most minor employment jobs, leaving the chances of entering such jobs unaltered by vocational training.

Thus, altogether, Hypothesis 2 is partially supported. Effects of further vocational training on contributory employment in general as well as combined with simultaneous exits from benefit receipt are indeed greater for almost all subgroups of lone and partnered mothers than for childless singles. This indicates that mothers, who have often interrupted their employment for longer periods of time, can particularly benefit from updating their job skills in terms of improving their employment chances. However, a further expectation expressed in Hypothesis 2 was that mothers of kindergarten-age children in western Germany would not profit as strongly. Due to a shortage of full-day childcare, they might not be able to take up regular employment despite having improved their qualifications. The results however show that even for mothers of kindergarten-age children in western Germany, vocational training has stronger employment effects than for childless singles. Possibly, they have access to informal care provided by friends or relatives, enabling them to take up regular employment despite short kindergarten opening hours. The applied estimation method should rule out that the program effects themselves merely reflect unobserved differences between program participants and non-participants in access to childcare. Nonetheless, it is still possible that, among program participants, the strength of the program effect varies according to their observed as well as unobserved characteristics, such as access to informal childcare.

In western Germany, significantly positive effects on contributory employment are also found for short classroom training programs for all groups (Table 3). These effects are stronger for lone mothers and mothers with a partner than for childless singles, supporting Hypothesis 3. In contrast to the expectation expressed in Hypothesis 3, mothers with a youngest child aged 3-5 are no exception. Almost no significantly positive effects are found for any of the groups on entries into contributory employment combined with a complete exit from benefit receipt. Significantly positive effects of short classroom training on minor employment are however found for all groups. These effects are stronger for mothers with a partner, but not for lone mothers, than for childless singles.

In contrast to the expectation expressed in Hypothesis 3, employment effects of classroom training programs are generally not significant for mothers in eastern Germany (Table 4). This may be related to the difficult overall labor market situation

in eastern Germany. Perhaps there is not always a demand in local labor markets for the skills conveyed in classroom training programs, which cannot be chosen as flexibly by participants as in the case of further vocational training programs. The reason why effects on contributory employment are greater for childless singles may be that it is easier for them to relocate to regions with a greater demand for their acquired skills.

Thus, altogether, partial support for Hypothesis 3 is found for western Germany, but not for eastern Germany.

While positive significant effects of One-Euro-Job participation on entries into contributory employment are found for most groups, this is not the case for lone mothers of children aged 3-5 in western Germany (Table 5), supporting Hypothesis 4. One-Euro-Jobs are intended to accustom people with very little employment experience to a regular job schedule, and to motivate them to search for a regular job. For lone mothers with young children in western Germany, however, lack of motivation is not likely to be the reason they have been without employment for some time. It is more likely that their employment interruption is related to difficulties organizing childcare. In any case, the results indicate that lone mothers do not require One-Euro-Jobs as a stimulus to reenter employment when their children start kindergarten. It is likely that they are already quite motivated to do so on their own.

In contrast to western Germany, effects of participating in One-Euro-Jobs in eastern Germany are quite weak for mothers with a partner, and never become significant for those with a youngest child aged 6-9 (Table 6). In eastern Germany, mothers with a partner generally tend to be more employment-oriented than their counterparts in western Germany. For instance, the overall full-time employment rate for mothers with a partner was 54% in eastern Germany in 2009, compared to 22% in western Germany (Statistisches Bundesamt, 2010). Given a higher level of employment orientation, eastern German mothers with a partner may be less in need of motivation via One-Euro-Job participation.

There are almost no positive effects of One-Euro-Jobs on entering minor employment. Mostly, negative lock-in effects are found. The negative effects continue up until 6-12 months after starting a One-Euro-Job in western Germany and even until over 12 months for some groups in eastern Germany (Tables 5 – 6). An explanation may be that people tend to participate in several One-Euro-Jobs sequentially. Perhaps they see the option to obtain a second One-Euro-Job as an alternative to taking up a minor employment job, and therefore reduce their search efforts for minor employment jobs.

Hypothesis 5 had stated that, for lone mothers, positive effects of all three programs on entering minor employment would be greatest, followed by effects on entering contributory employment in general, and that effects on entering contributory employment combined with a complete exit from benefit receipt would be weakest. The

reason for these expectations was that short working hours in minor employment may be most compatible with childcare. Contributory part-time jobs should also be more compatible with childcare than contributory full-time jobs which are more likely to allow a complete exit from benefit receipt. The expectation was that, even if they improve their qualifications, many lone mothers may only be able to take up minor employment, or perhaps contributory part-time employment where the income is not high enough to allow a complete exit from benefit receipt.

Altogether, Hypothesis 5 is not supported. The results for entries into further vocational training, summarized above, indicate stronger effects on entries into contributory employment, as well as contributory employment combined with a complete exit from benefit receipt, than on entries into minor employment. For classroom training programs, hardly any significant effects on entries into contributory employment combined with a complete exit from benefit receipt are found, and differences between effects on minor employment and contributory employment vary in direction. For One-Euro-Jobs, there are also almost no positive effects on entries into minor employment, while significantly positive effects on entries into contributory employment are found. Thus, it seems that at least some lone mothers have access to sufficient childcare, perhaps informal childcare provided by friends or relatives, to take up contributory employment. It does not seem to be the case that the potential for increasing lone mothers' employment is restricted to minor employment jobs.

As discussed above, initial negative lock-in effects are found for further vocational training as well as One-Euro-Jobs. To get an impression of whether the subsequent positive employment effects can compensate for the initial lock-in effects, cumulative employment probabilities were calculated for the example of individuals with median values of the ordinal covariates and modal values for the categorical covariates included in the models. This also serves to gain an impression of what the relative transition rates shown in Tables 1 – 6 imply in terms of absolute probabilities of entering employment. Thus, Tables 7 – 9 show differences in overall probabilities of having entered employment for those who participated in a program and those that did not participate in a program by 12 and 18 months after program start. Programs were assumed to start 6 months after the beginning of a benefit spell without employment, since this was approximately the median program starting time for all three programs. The results of the simulation for instance show that, for western German lone mothers with a youngest child aged 3-5, the probability of entering regular contributory employment between month 6 and month 18 of the spell (corresponding to a duration of 12 months after program start), is raised by 5 percentage points by participating in further vocational training (Table 7). The probability of entering regular contributory employment within 18 months after program start is raised by 10 percentage points by participating in further vocational training.

It may also be of some interest to take a look at the correlation of unobserved heterogeneity in program entries and entries into employment. As can be seen in Tables 1 and 2, the correlation of unobserved heterogeneity between entries into further

vocational training and entries into each of the three types of employment is significantly positive in the majority of cases in both eastern and western Germany. This indicates that participants in vocational training programs have unobserved characteristics, possibly a high level of motivation or access to informal childcare, that are also beneficial for obtaining employment. It was important to control for this correlation of unobserved heterogeneity in order to obtain program effects that are net of the influence of such unobserved characteristics. The correlation of unobserved heterogeneity in entering classroom training and regular contributory employment (ρ_{CR}) is likewise mostly positive, if not always significant. The correlation of unobserved heterogeneity in entering One-Euro-Jobs and regular employment (ρ_{ER}), on the other hand, is generally non-significant or even negative. It seems that participants in One-Euro-Jobs do not have unobserved characteristics, like high levels of motivation, that are positively associated with better employment chances, in contrast to those participating in training programs. The only exception is western German lone mothers of young children aged 3-5 for whom a significantly positive correlation is found. This may be due to the importance of having access to informal childcare in western Germany, which is unobserved.

The correlation of unobserved heterogeneity in entering minor employment and entering vocational training programs or One-Euro-Jobs is generally positive. Unobserved characteristics that influence both entries into minor employment and either of these two programs may be a high level of motivation. In the case of One-Euro-Jobs, it may also be a preference for short working hours. The correlation of unobserved heterogeneity in entering minor employment and entering classroom training programs, on the other hand, is generally non-significant, and in the case of childless singles and lone mothers in western Germany even negative. Perhaps the goal of some classroom training programs is to motivate people to also accept lower-qualified minor employment jobs. Possibly, if people already show interest in doing so, they are not assigned to classroom training programs. This may offset any positive correlation of unobserved motivational aspects, and even outweigh it in the case of childless singles and lone mothers in western Germany.

6 Conclusion

The aim of this study was to investigate whether lone mothers can profit from participating in training and workfare programs. Lone mothers receiving means-tested unemployment benefits in Germany are assigned to these programs at quite high rates. Their program entry rates are as high as for childless single women, and in western Germany also substantially higher than for mothers with a partner (Zabel 2012). However, the question studied here is whether their program participations actually lead to better employment chances. If they do not have access to childcare that is extensive and flexible enough to allow them to take up a regular job, participating in training and workfare programs need not necessarily be beneficial for lone mothers.

The empirical analyses show that lone mothers can indeed benefit from participating in active labor market programs. Effects of taking part in further vocational training programs are stronger for lone mothers than for childless singles and are also stronger than the effects of the other two program types studied here. Even lone mothers with young children aged 3-5 appear to gain substantially from taking part in these programs in terms of obtaining a contributory job. Further vocational training programs are also the only of the three programs to consistently increase the chances of finding a job with an income high enough to exit benefit receipt completely. Thus, it seems that at least some lone mothers have access to sufficient formal or informal childcare to be able to substantially benefit from taking part in vocational training programs.

For lone mothers and mothers with a partner, effects of further vocational training on regular contributory employment are stronger than for childless singles. A reason may be that the allocation of mothers to further vocational training programs is less selective than in the case of childless singles. Among childless singles, a disproportionate amount of participants have only experienced short employment breaks. Perhaps they are less in need of updating their job skills, and for this reason, further vocational training programs are less effective for them than for mothers.

For lone mothers, as for most other groups, effects of short classroom training programs are smaller than for vocational training programs, but are in several cases nevertheless significant. Due to their comparatively short duration, classroom training programs do not seem to inhibit job search in the first months after program start. While in western Germany, effects on regular contributory employment are larger for mothers than for singles, in eastern Germany, employment effects of classroom training programs are actually larger for childless singles than for mothers. It is difficult to explain why exactly this may be the case. Possibly, there is not always a demand for the skills conveyed in classroom training programs, which cannot be chosen as flexibly by participants as in the case of further vocational training programs, in local labor markets in eastern Germany. For childless singles, it may be easier to relocate to an area with a higher demand for their acquired skills than for mothers with stronger local family ties.

One-Euro-Jobs improve the employment chances of some groups of lone mothers and mothers with a partner, as well as for childless singles. In western Germany, they do not however improve the employment chances of lone mothers with young children aged 3-5. One-Euro-Jobs are intended to accustom people with very little employment experience to a regular job schedule and to motivate them to search for a regular job. However, for lone mothers with young children in western Germany, lack of childcare is likely to be the reason they have been unemployed for some time rather than lack of motivation or discouragement. Thus, One-Euro-Jobs may not be very well suited to the situation of lone mothers with young children in western Germany.

While lone mothers' participation rates in further vocational training programs are quite high compared to mothers with a partner and childless singles, in absolute terms, further vocational training is quite a small scale program. Lone mothers' probability of taking part in further vocational training programs within two years of being unemployed and receiving UB II is 5%, both in western and eastern Germany, compared to 10% and 15% for One-Euro-Jobs in western and eastern Germany, respectively (Zabel 2012). Since further vocational training programs appear to be quite beneficial for improving participants' employment chances, a recommendation for future policy developments might be to increase the total number of slots for these programs. There are however risks to increasing the size of programs. If a higher number of slots becomes available, it is possible that case managers may take less care in assigning benefit recipients to the program, such that benefit recipients who are unlikely to profit might increasingly take part. However, given the low current number of participants in further vocational training, it does seem plausible that there is still some scope for increasing the program size without risking losses to effectiveness. If the total number of slots is indeed increased for further vocational training programs, lone mothers should retain a proportionately high level of access to this program, since it appears to be particularly beneficial for them. Perhaps participation by mothers with a partner could be further encouraged. Mothers with a partner also benefit quite strongly from further vocational training, but especially in western Germany, their participation rates are quite low.

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Figures and Tables

Figure 1

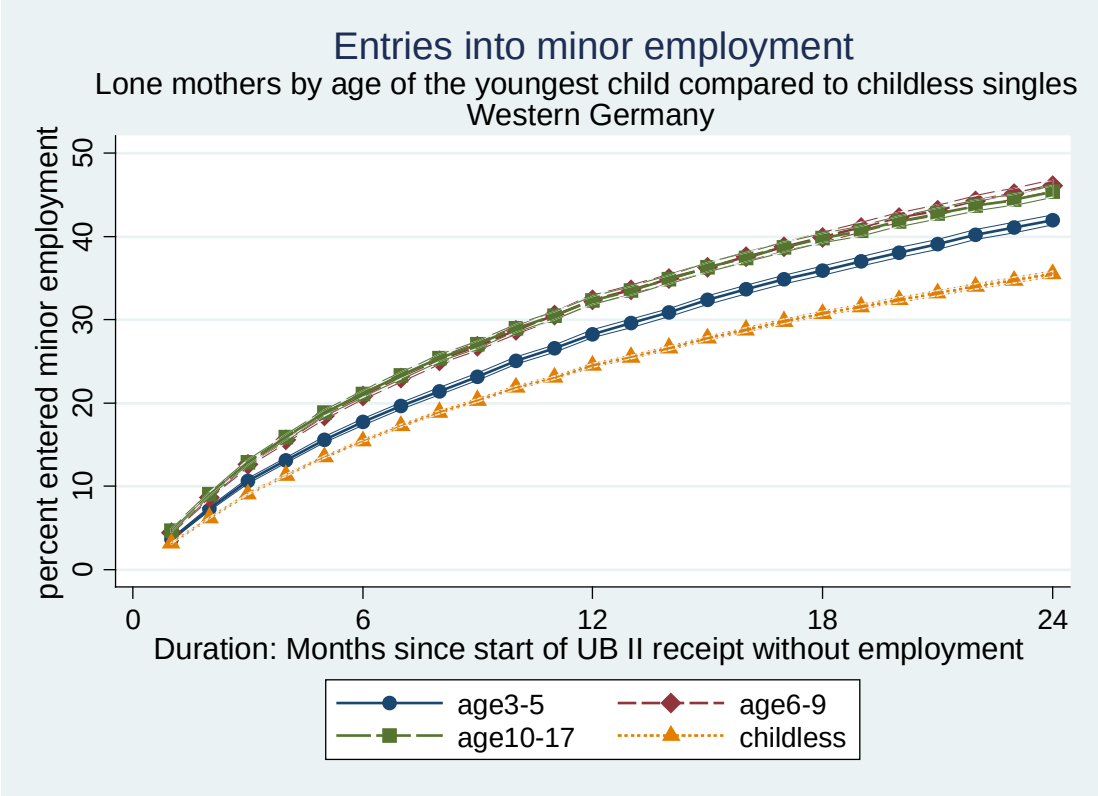


Figure 2

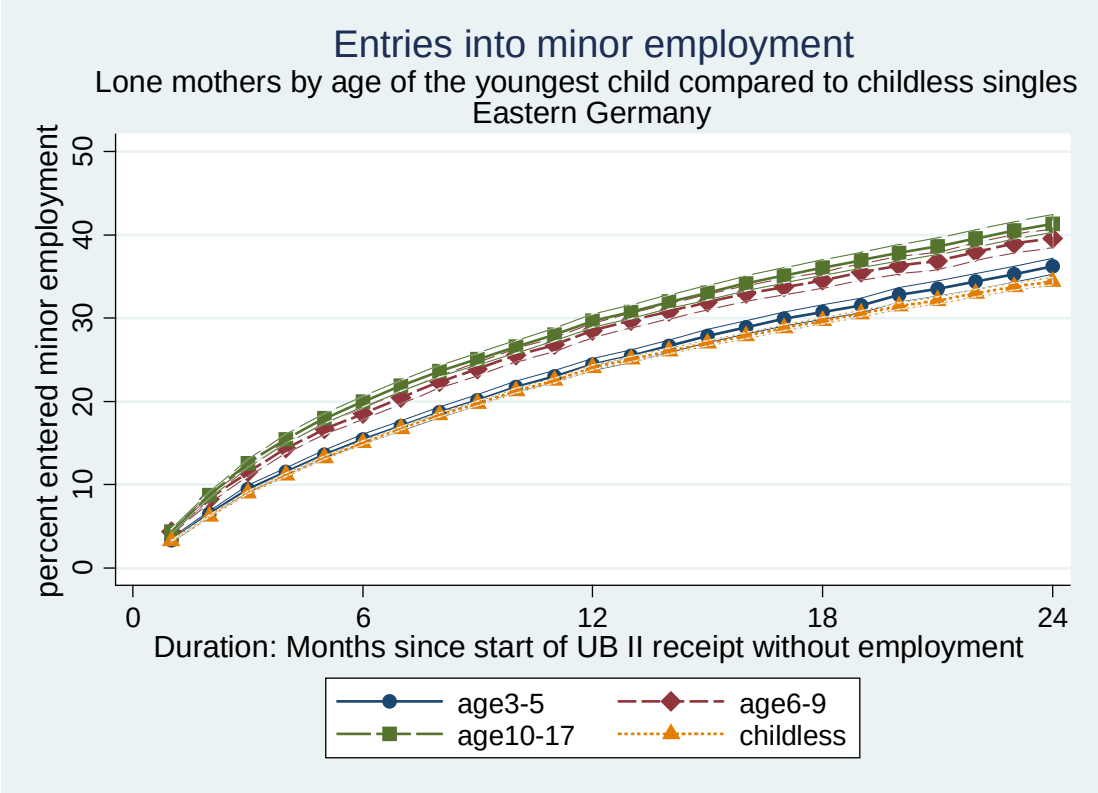


Figure 3

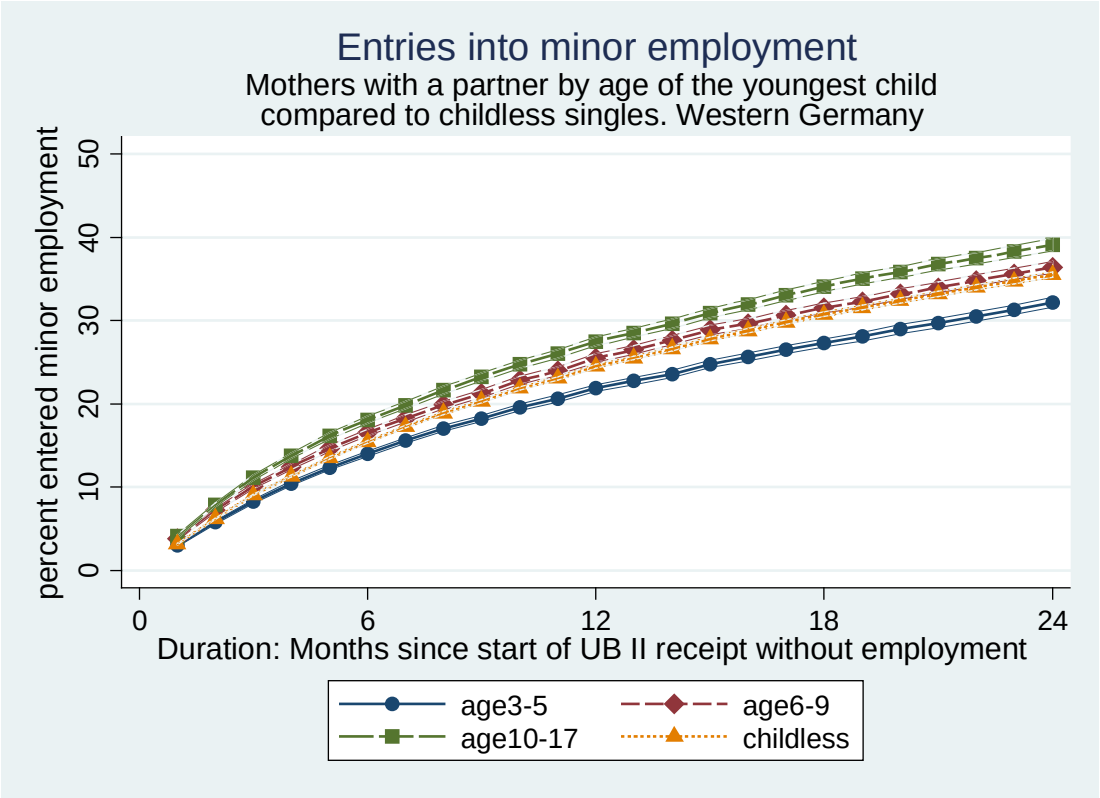


Figure 4

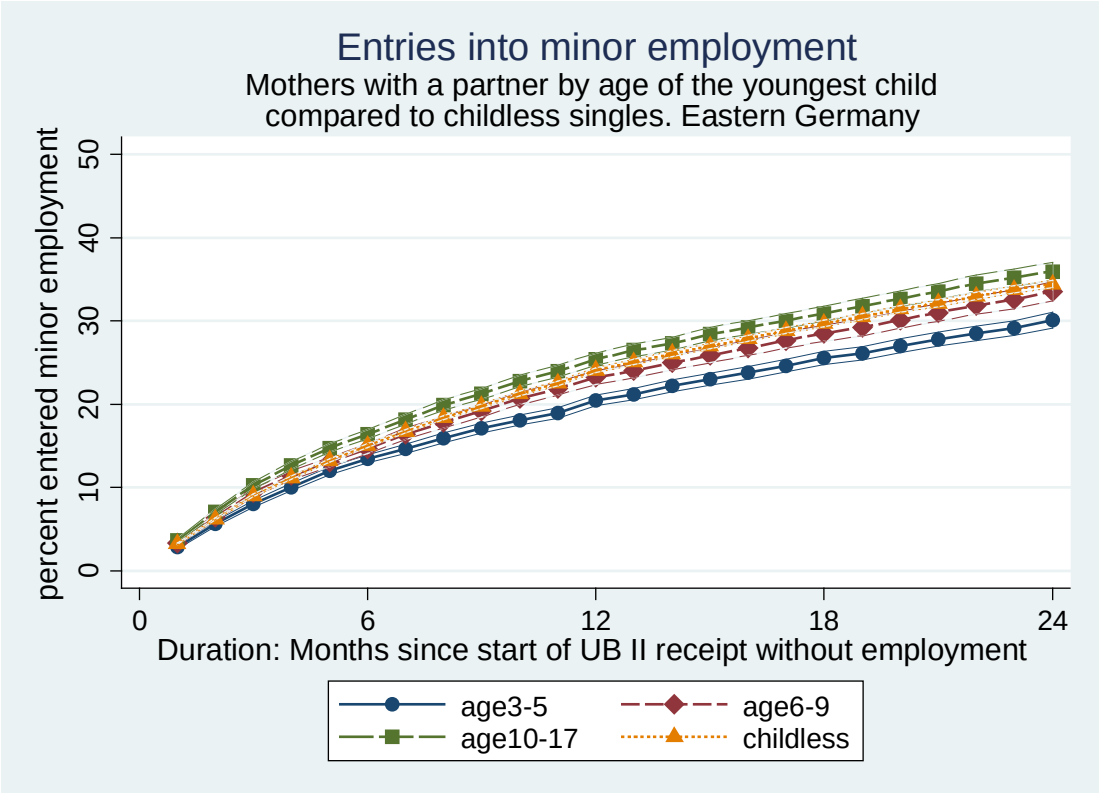


Figure 5

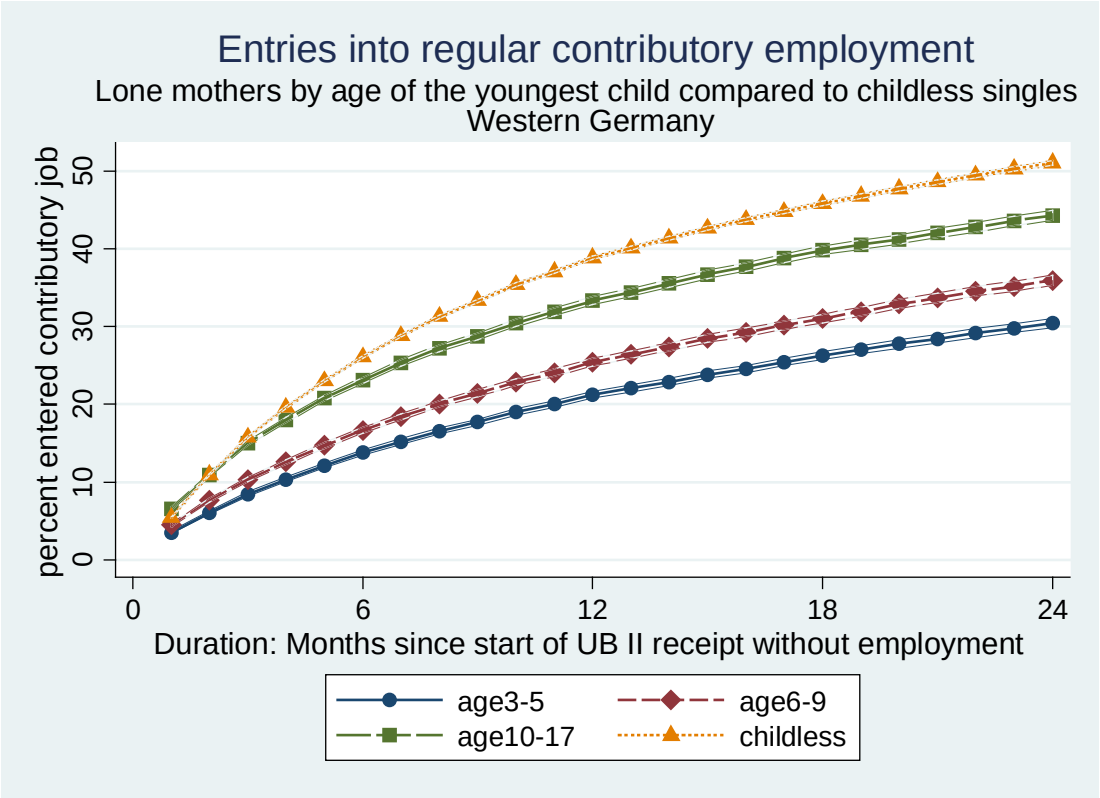
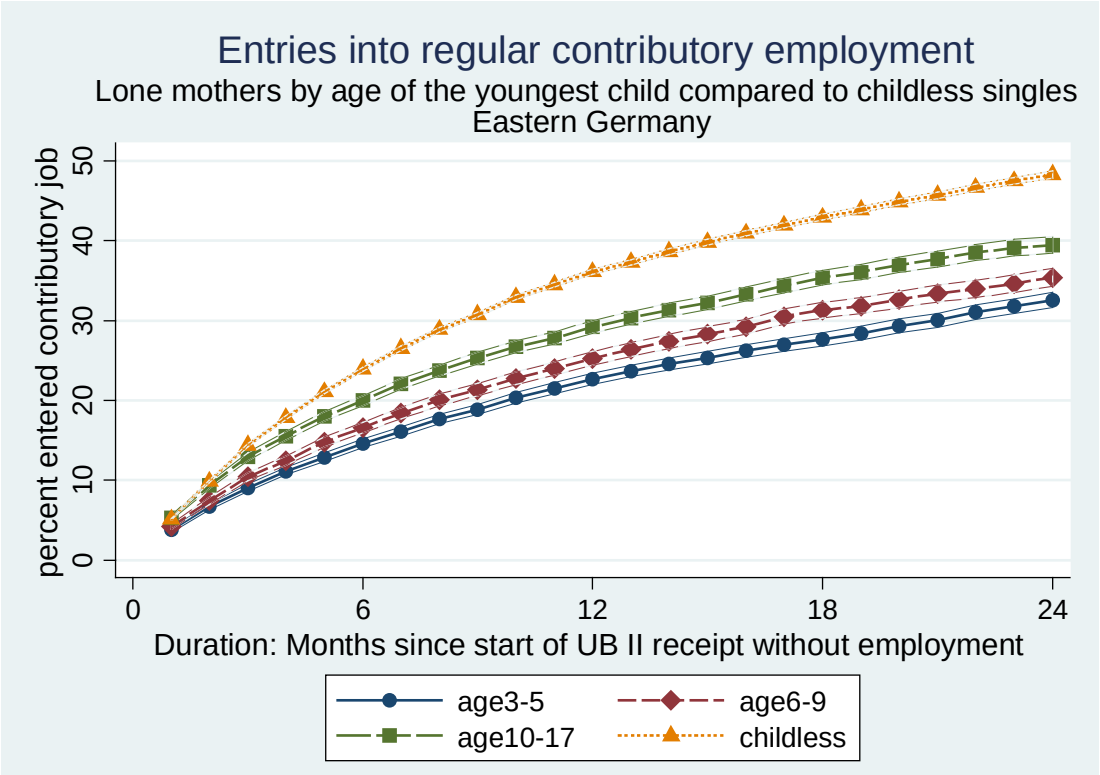


Figure 6



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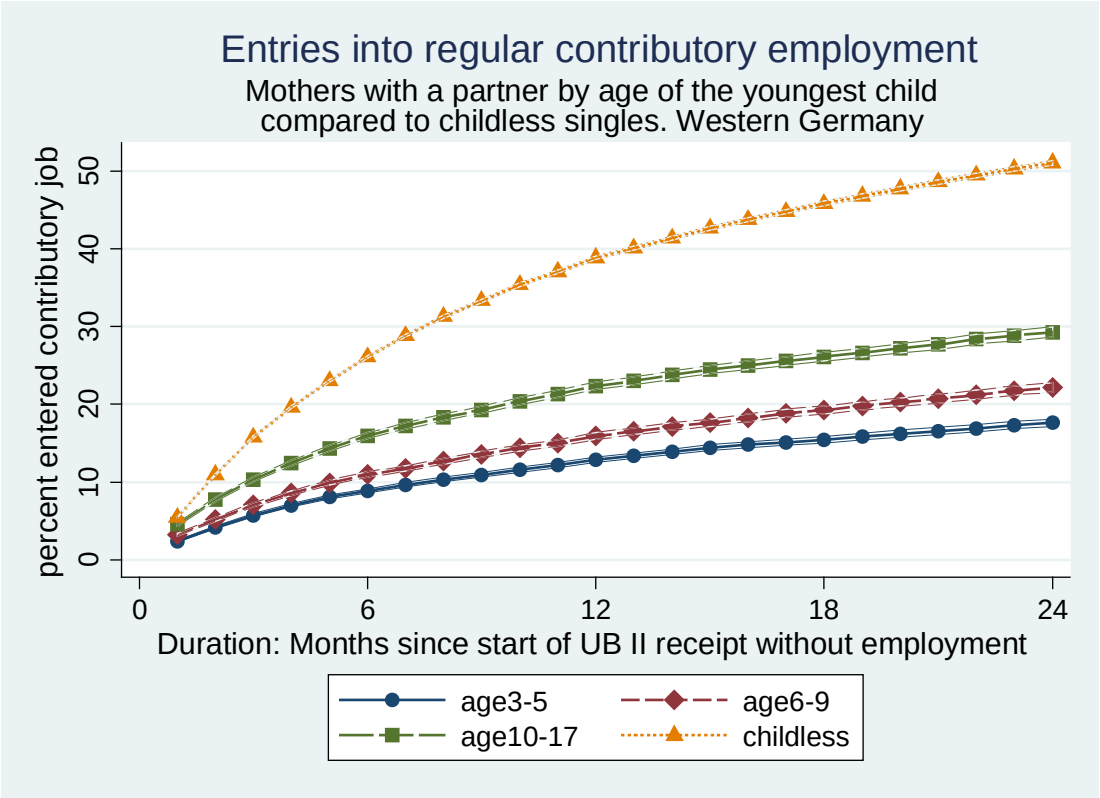

Figure 8

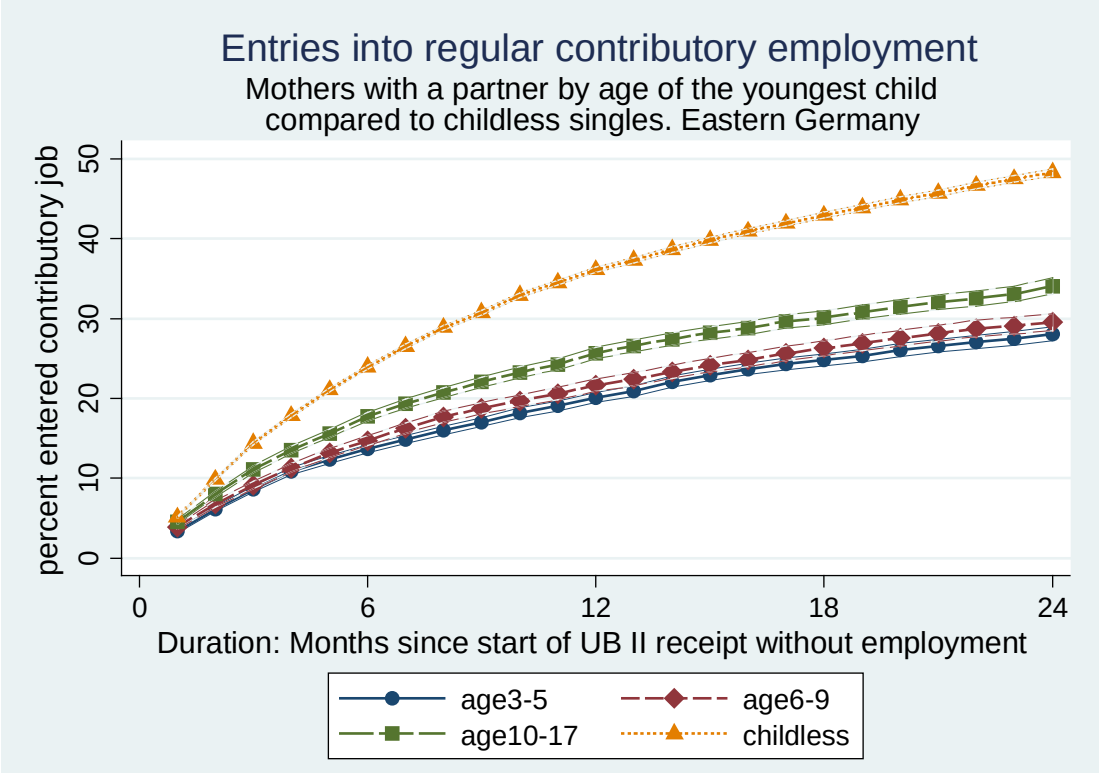

Figure 9

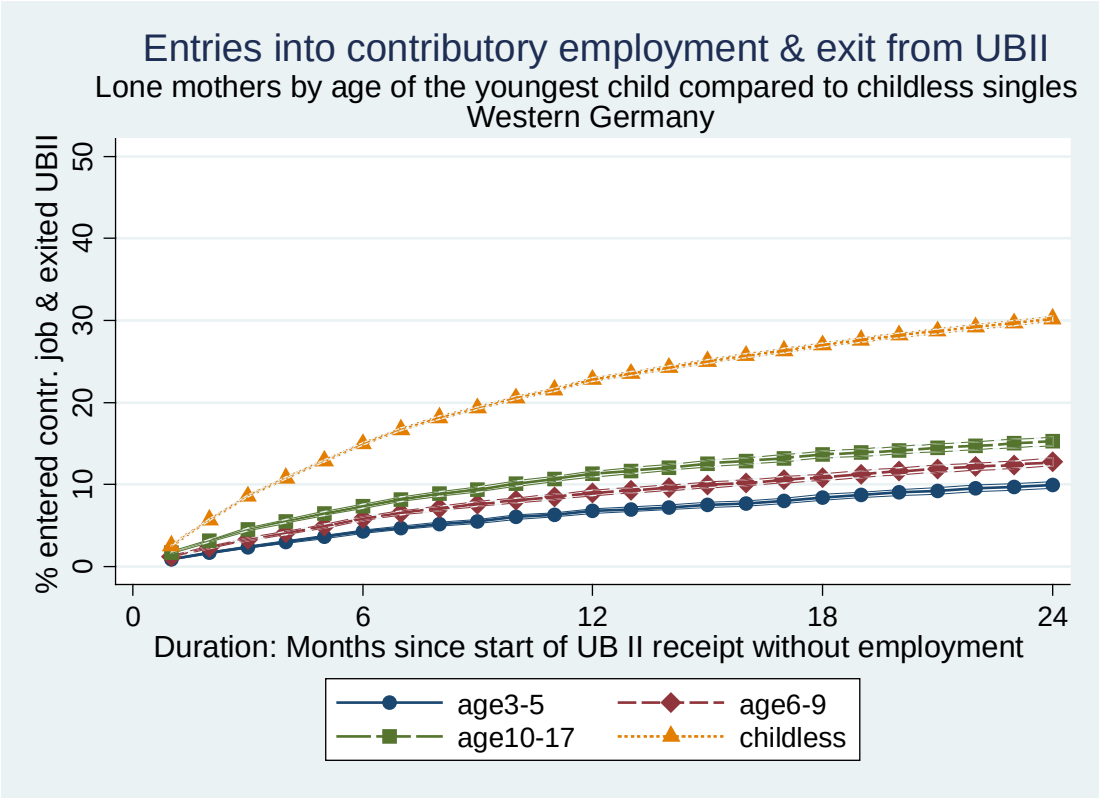

Figure 10

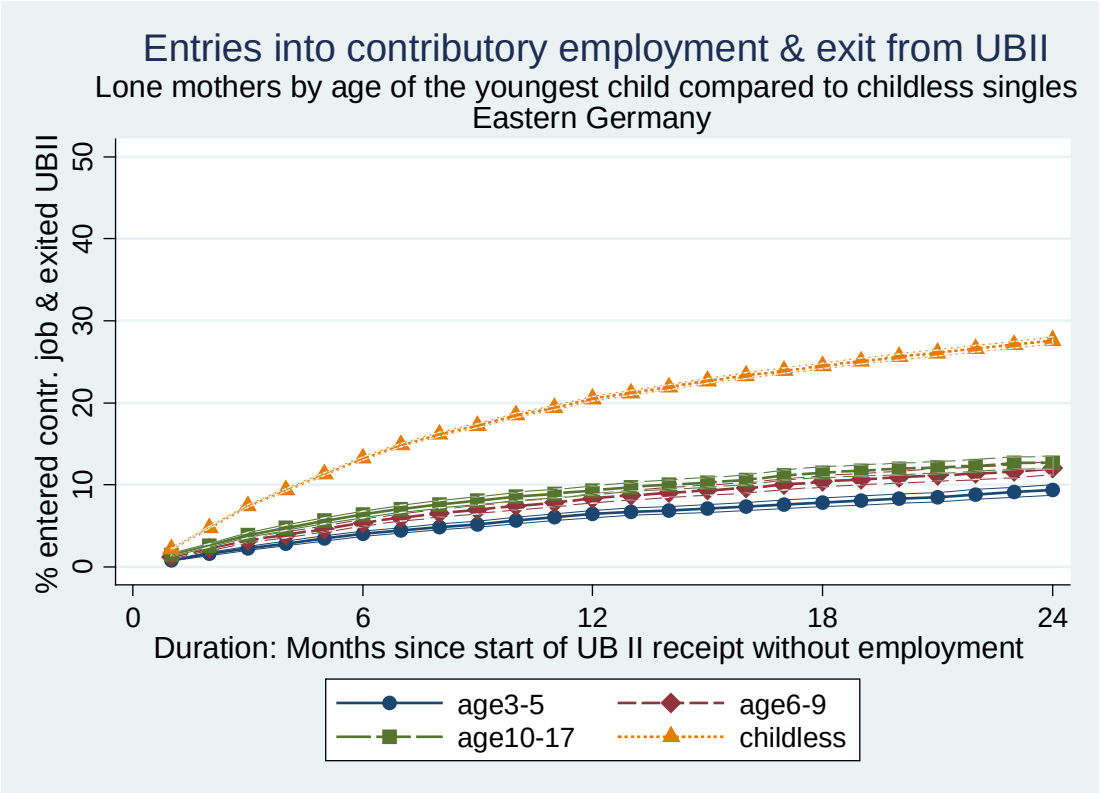

Figure 11

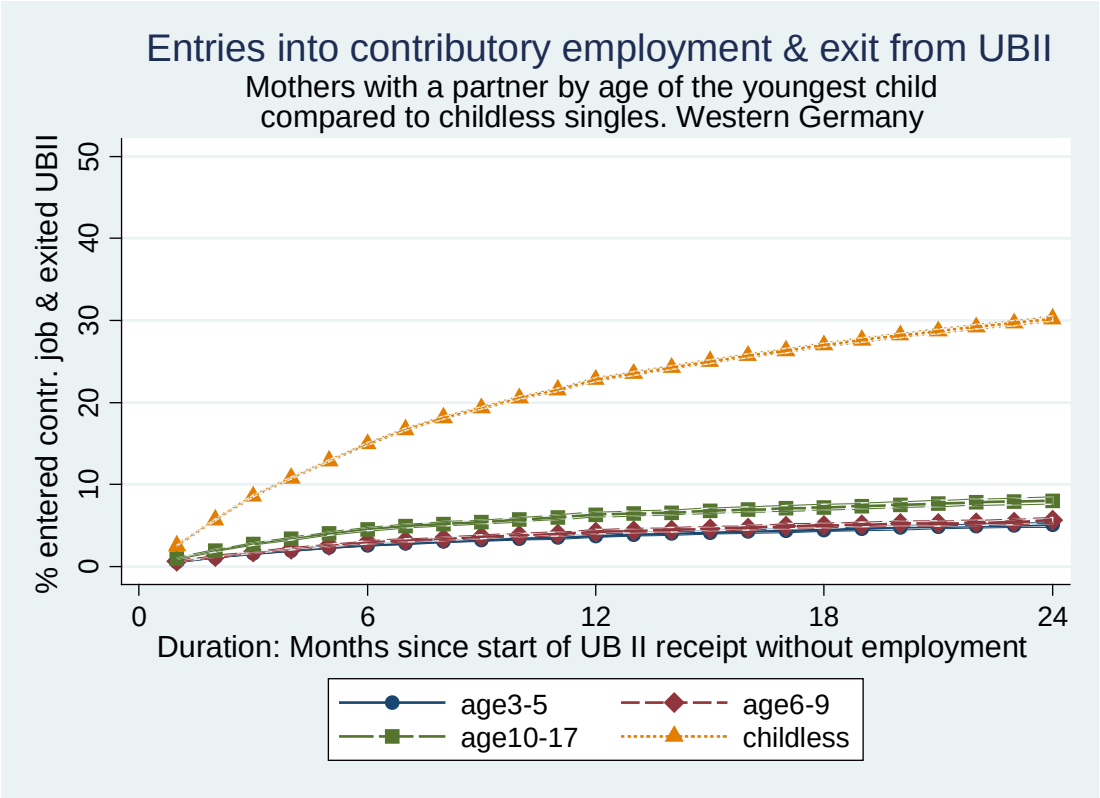

Figure 12

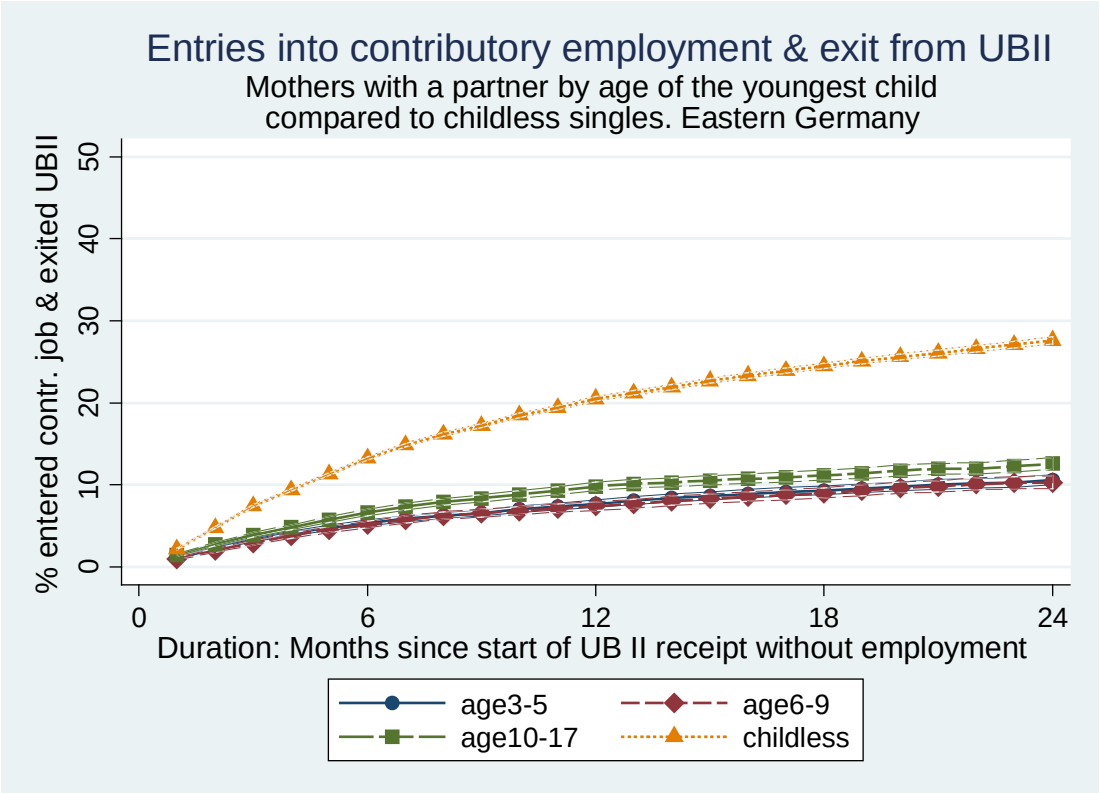

Table 1
Effects of Further Vocational Training. Western Germany
Relative entry rates into employment. Control variables: see methods section

	childless single women		lone mothers youngest child aged 3-5		lone mothers youngest child aged 6-9		lone mothers youngest child aged 10 +		mothers with a partner youngest child aged 3-5		mothers with a partner youngest child aged 6-9		mothers with a partner youngest child aged 10 +	
effects on minor employment														
no program participation	*1*		*1*		*1*		*1*		*1*		*1*		*1*	
duration since program start														
0-3 months	0.49	***	0.52	***	0.35	***	0.44	***	0.61	**	0.52	***	0.74	
3-6 months	0.73	***	0.61	***	0.71	***	0.61	***	1.14		0.78		0.93	
6-12 months	0.91		0.97		1.06		0.97		1.21		1.05		1.40	
12+ months	0.95		0.82		0.87		0.89		1.56		1.18		1.48	
corr. error terms ρ_{FM}	0.216	***	0.201		0.254	***	0.245	*	0.041		0.241	***	-0.089	
# events minor empl.	66,037		18,379		19,752		21,199		15,415		13,122		14,020	
effects on contributory employment														
no program participation	*1*		*1*		*1*		*1*		*1*		*1*		*1*	
duration since program start														
0-3 months	0.57	***	0.64	***	0.62	***	0.55	***	0.80		0.58	**	0.72	*
3-6 months	1.05		1.41	**	1.13		1.30	**	1.56	**	1.46	*	1.10	
6-12 months	1.26	***	1.88	***	1.69	***	1.85	***	2.91	***	2.60	***	2.18	***
12+ months	1.30	***	2.39	***	2.07	***	2.35	***	3.66	***	3.70	***	3.01	***
corr. error terms ρ_{FR}	0.422	***	0.194		0.430	***	0.267	**	0.502	***	0.494	***	0.134	
# events contr. empl.	112,929		13,342		15,018		22,191		8,607		7,959		11,545	
effects on contributory employment and simultaneous exit from benefit receipt														
no program participation	*1*		*1*		*1*		*1*		*1*		*1*		*1*	
duration since program start														
0-3 months	0.57	***	0.68		0.54	***	0.52	***	1.48		0.43		0.78	
3-6 months	1.12	*	1.29		1.02		1.20		1.93		2.20	**	1.66	
6-12 months	1.25	***	2.08	***	1.59	**	1.74	***	5.50	***	3.69	***	3.00	***
12+ months	1.31	***	2.32	***	2.34	***	2.27	***	5.67	***	3.85	**	2.70	*
corr. error terms ρ_{FS}	0.385	***	0.268		0.416	***	0.447	*	0.103		0.291	**	0.211	
# ev. contr. empl./ exit	57,506		3,847		4,548		6,233		2,413		1,959		2,955	
persons	276,894		53,669		51,283		58,750		62,448		45,369		48,223	
spells	364,335		64,303		63,916		77,765		76,198		56,698		62,461	
# events further vocational training	8,650		2,054		1,910		2,173		944		729		838	

* p<.1; ** p<.05; *** p<.01

Table 2
Effects of Further Vocational Training. Eastern Germany
Relative entry rates into employment. Control variables: see methods section

	childless single women		lone mothers youngest child aged						mothers with a partner youngest child aged					
			3-5		6-9		10 +		3-5		6-9		10 +	
effects on minor employment														
no program participation	*1*		*1*		*1*		*1*		*1*		*1*		*1*	
duration since program start														
0-3 months	0.44	***	0.33	***	0.31	***	0.36	***	0.31	***	0.36	***	-	
3-6 months	0.72	***	0.46	***	0.66	**	0.67	*	0.69		0.73		-	
6-12 months	0.85	*	0.61	**	0.53	***	0.73		0.85		0.88		-	
12+ months	0.99		0.98		0.81		0.56	*	0.45	**	0.95		-	
corr. error terms ρ_{FM}	0.148	*	0.375		0.354	***	0.495	**	0.443	***	0.407	***	-	
# events minor empl.	34,897		6,217		5,522		7,105		5,750		4,652		6,701	
effects on contributory employment														
no program participation	*1*		*1*		*1*		*1*		*1*		*1*		*1*	
duration since program start														
0-3 months	0.61	***	0.61	**	0.53	***	0.82		0.80		0.53	**	-	
3-6 months	1.20	***	1.38		2.12	***	2.26	***	1.68	***	1.95	***	-	
6-12 months	1.19	***	1.83	***	1.54	*	2.39	***	1.67	**	2.51	***	-	
12+ months	1.35	***	2.10	***	2.05	***	3.56	***	1.47		1.42		-	
corr. error terms ρ_{FR}	0.537	***	-0.061		0.238		-0.163		0.453	***	0.417		-	
# events contr. empl.	56,012		5,624		4,845		7,023		5,550		4,289		6,755	
effects on contributory employment and simultaneous exit from benefit receipt														
no program participation	*1*		*1*		*1*		*1*		*1*		*1*		*1*	
duration since program start														
0-3 months	0.66	***	0.70		0.77		0.72		1.03		-		-	
3-6 months	1.28	***	1.05		2.73	***	1.41		2.00	**	-		-	
6-12 months	1.21	**	2.16	*	1.98	*	2.88	***	2.18	**	-		-	
12+ months	1.22		2.79	**	2.01		3.11	***	1.63		-		-	
corr. error terms ρ_{FS}	0.425	***	-0.059		0.078		0.362	***	0.337	***	-		-	
# ev. contr. empl./ exit	27,489		1,420		1,415		1,943		1,965		1,394		2,291	
persons	145,126		20,846		16,393		20,870		25,333		17,901		25,048	
spells	191,149		25,080		20,388		27,334		31,726		23,166		33,971	
# events further vocational training	5,189		1003		787		869		766		503		542	

* p<.1; ** p<.05; *** p<.01. - bars indicate that no convergence was achieved

Table 3
Effects of Classroom Training Programs. Western Germany
Relative entry rates into employment. Control variables: see methods section

	childless single women		lone mothers youngest child aged			mothers with a partner youngest child aged		
			3-5	6-9	10 +	3-5	6-9	10 +
effects on minor employment								
no program participation	*1*		*1*	*1*	*1*	*1*	*1*	*1*
duration since program start								
0-3 months	1.17	***	1.32 ***	-	1.05	1.46 ***	1.47 ***	1.24 **
3-6 months	1.20	***	1.49 ***	-	1.43 ***	1.55 ***	1.74 ***	1.36 ***
6-12 months	1.21	***	1.39 ***	-	1.22 **	1.51 ***	1.69 ***	1.36 **
12+ months	1.23	***	1.14	-	1.22 *	1.31 *	1.75 ***	1.36 **
corr. error terms ρ_{CM}	-0.322	***	-0.210 *	-	-0.233 *	-0.02	-0.143	-0.037
# events minor empl.	66,037		18,379	19,752	21,199	15,415	13,122	14,020
effects on contributory employment								
no program participation	*1*		*1*	*1*	*1*	*1*	*1*	*1*
duration since program start								
0-3 months	1.05	*	1.03	-	1.13 *	1.58 ***	1.34 **	1.26 **
3-6 months	1.17	***	1.34 ***	-	1.33 ***	1.87 ***	1.40 **	1.50 ***
6-12 months	1.15	***	1.15	-	1.21 **	1.66 ***	1.47 **	1.53 ***
12+ months	1.12	**	1.51 ***	-	1.60 ***	1.88 ***	1.79 ***	1.96 ***
corr. error terms ρ_{CR}	0.266	***	0.299 **	-	0.078	0.176	0.341 **	0.169
# events contr. empl.	112,929		13,342	15,018	22,191	8,607	7,959	11,545
effects on contributory employment and simultaneous exit from benefit receipt								
no program participation	*1*		*1*	*1*	*1*	*1*	*1*	*1*
duration since program start								
0-3 months	0.90	***	0.60 ***	-	0.67 ***	1.22	1.28	1.24
3-6 months	1.04		0.97	-	0.96	1.63 *	1.54	0.93
6-12 months	0.97		0.70 *	-	0.85	1.74 *	1.85 **	1.50
12+ months	0.93		1.01	-	0.89	1.52	1.80	0.81
corr. error terms ρ_{CS}	0.371	***	0.616 **	-	0.626 ***	0.277	0.382	0.266
# ev. contr. empl./ exit	57,506		3,847	4,548	6,233	2,413	1,959	2,955
persons	276,894		53,669	51,283	58,750	62,448	45,369	48,223
spells	364,335		64,303	63,916	77,765	76,198	56,698	62,461
# events classroom training	23,757		4,377		5,189	2,875	2,604	2,905

* p<.1; ** p<.05; *** p<.01. - bars indicate that no convergence was achieved

Table 4
Effects of Classroom Training Programs. Eastern Germany
Relative entry rates into employment. Control variables: see methods section

	childless single women		lone mothers youngest child aged				mothers with a partner youngest child aged			
			3-5	6-9		10 +	3-5	6-9		10 +
effects on minor employment										
no program participation	*1*		*1*	*1*		*1*	*1*	*1*		*1*
duration since program start										
0-3 months	0.93		1.14	1.09		0.79 *	0.94	1.19		1.19
3-6 months	1.04		1.04	0.99		0.90	1.13	1.46 *		1.20
6-12 months	0.88 *		1.15	0.89		0.87	1.08	1.65 **		1.02
12+ months	0.94		1.08	0.73		0.82	1.12	2.17 ***		0.90
corr. error terms ρ_{CM}	0.041		-0.059	0.083		0.371	0.048	-0.034		-0.291
# events minor empl.	34,897		6,217	5,522		7,105	5,750	4,652		6,701
effects on contributory employment										
no program participation	*1*		*1*	*1*		*1*	*1*	*1*		*1*
duration since program start										
0-3 months	1.18 ***		0.78	1.04		1.02	1.10	1.19		0.86
3-6 months	1.25 ***		1.20	0.88		1.04	0.83	1.26		1.13
6-12 months	1.39 ***		1.29	1.24		1.22	1.29	1.38		0.97
12+ months	1.38 ***		1.12	1.73 **		1.30	0.86	1.15		1.05
corr. error terms ρ_{CR}	-0.021		0.290	0.265		0.404 ***	0.384 *	0.231		0.561 ***
# events contr. empl.	56,012		5,624	4,845		7,023	5,550	4,289		6,755
effects on contributory employment and simultaneous exit from benefit receipt										
no program participation	*1*		*1*	*1*		*1*	*1*	*1*		*1*
duration since program start										
0-3 months	1.00		1.04	0.68		1.06	1.41	1.26		0.51 **
3-6 months	1.13		1.22	0.53		1.06	1.04	1.05		1.19
6-12 months	1.24 **		1.40	0.78		1.07	1.16	0.88		0.70
12+ months	0.99		1.34	1.11		1.17	1.10	0.83		1.01
corr. error terms ρ_{CS}	0.000		0.105	0.511 *		0.344 ***	0.340	0.660		0.592
# ev. contr. empl./ exit	27,489		1,420	1,415		1,943	1,965	1,394		2,291
persons	145,126		20,846	16,393		20,870	25,333	17,901		25,048
spells	191,149		25,080	20,388		27,334	31,726	23,166		33,971
# events classroom training	9,195		1,501	1,073		1,223	1,473	927		1,300

* p<.1; ** p<.05; *** p<.01

Table 5
Effects of One-Euro-Job Participations. Western Germany
Relative entry rates into employment. Control variables: see methods section

	childless single women		lone mothers youngest child aged			mothers with a partner youngest child aged		
			3-5	6-9	10 +	3-5	6-9	10 +
effects on minor employment								
no program participation	*1*		*1*	*1*	*1*	*1*	*1*	*1*
duration since program start								
0-3 months	0.57	***	0.60 ***	0.54 ***	0.45 ***	0.81	0.92	0.72 ***
3-6 months	0.70	***	0.62 ***	0.69 ***	0.54 ***	1.08	0.97	0.80 *
6-12 months	0.90	***	0.81 **	0.78 ***	0.80 **	1.07	1.31 *	1.02
12+ months	1.08		0.97	0.87	0.83 *	1.03	1.59 ***	1.09
corr. error terms ρ_{EM}	-0.054		0.201 *	0.232	0.221 **	0.116	0.142	0.204 *
# events minor empl.	66,037		18,379	19,752	21,199	15,415	13,122	14,020
effects on contributory employment								
no program participation	*1*		*1*	*1*	*1*	*1*	*1*	*1*
duration since program start								
0-3 months	0.69	***	0.59 ***	0.69 ***	0.71 ***	1.22	1.06	0.78 *
3-6 months	0.82	***	0.87	1.02	0.85 *	1.29	1.70 ***	1.29 *
6-12 months	1.13	***	1.18	1.31 **	1.37 ***	2.45 ***	2.12 ***	1.76 ***
12+ months	1.34	***	1.23	1.77 ***	1.59 ***	3.19 ***	2.45 ***	2.68 ***
corr. error terms ρ_{ER}	0.000		0.299 **	-0.061	-0.129	0.068	0.105	-0.119
# events contr. empl.	112,929		13,342	15,018	22,191	8,607	7,959	11,545
effects on contributory employment and simultaneous exit from benefit receipt								
no program participation	*1*		*1*	*1*	*1*	*1*	*1*	*1*
duration since program start								
0-3 months	0.57	***	0.49 ***	0.61 **	0.62 ***	0.82	0.94	0.60
3-6 months	0.80	***	0.92	1.17	0.90	1.08	1.29	1.87 **
6-12 months	1.06		0.88	1.23	1.19	1.68	2.59 **	1.81 *
12+ months	1.16	**	0.91	1.30	1.04	1.25	2.24	1.38
corr. error terms ρ_{ES}	0.042		0.335	-0.189	-0.051	0.262	0.135	0.014
# ev. contr. empl./ exit	57,506		3,847	4,548	6,233	2,413	1,959	2,955
persons	276,894		53,669	51,283	58,750	62,448	45,369	48,223
spells	364,335		64,303	63,916	77,765	76,198	56,698	62,461
# events One-Euro-Jobs	25,614		3,957	3,902	4,763	2,074	1,898	2,665

* p<.1; ** p<.05; *** p<.01

Table 6
Effects of One-Euro-Job Participations. Eastern Germany
Relative entry rates into employment. Control variables: see methods section

	childless single women		lone mothers youngest child aged						mothers with a partner youngest child aged					
			3-5		6-9		10 +		3-5		6-9		10 +	
effects on minor employment														
no program participation	*1*		*1*		*1*		*1*		*1*		*1*		*1*	
duration since program start														
0-3 months	0.41	***	0.40	***	0.31	***	0.32	***	0.35	***	0.40	***	0.29	***
3-6 months	0.55	***	0.47	***	0.57	***	0.43	***	0.52	***	0.62	***	0.39	***
6-12 months	0.83	***	0.73	**	0.82		0.66	***	0.90		0.98		0.63	***
12+ months	0.90		0.76	*	0.87		0.68	**	0.88		0.89		0.74	**
corr. error terms ρ_{EM}	0.164	***	0.310	*	0.110		0.493	***	0.320	***	0.302	**	0.436	***
# events minor empl.	34,897		6,217		5,522		7,105		5,750		4,652		6,701	
effects on contributory employment														
no program participation	*1*		*1*		*1*		*1*		*1*		*1*		*1*	
duration since program start														
0-3 months	0.60	***	0.74	**	0.45	***	0.41	***	0.57	***	0.53	***	-	
3-6 months	0.89	**	0.89		1.02		0.73	*	0.88		0.81		-	
6-12 months	1.13	***	1.39	**	1.30		1.04		1.42	**	1.09		-	
12+ months	1.44	***	1.31		1.64	**	1.75	***	1.23		1.02		-	
corr. error terms ρ_{ER}	-0.096	*	-0.175		-0.034		-0.152		0.052		0.256		-	
# events contr. empl.	56,012		5,624		4,845		7,023		5,550		4,289		6,755	
effects on contributory employment and simultaneous exit from benefit receipt														
no program participation	*1*		*1*		*1*		*1*		*1*		*1*		*1*	
duration since program start														
0-3 months	0.59	***	-		0.42	**	0.49	**	-		0.52	**	0.48	***
3-6 months	0.99		-		1.07		0.62		-		0.79		0.88	
6-12 months	1.16	**	-		1.51		0.97		-		0.61		1.72	**
12+ months	1.40	***	-		1.42		1.86	*	-		0.97		1.48	
corr. error terms ρ_{ES}	-0.136		-		-0.238		-0.103		-		0.443	*	-0.177	
# ev. contr. empl./ exit	27,489		1,420		1,415		1,943		1,965		1,394		2,291	
persons	145,126		20,846		16,393		20,870		25,333		17,901		25,048	
spells	191,149		25,080		20,388		27,334		31,726		23,166		33,971	
# events One-Euro-Jobs	15,345		2,551		1,768		2,365		2,354		1,853		3,004	

* p<.1; ** p<.05; *** p<.01.- bars indicate that no convergence was achieved.

Table 7
Effect of Further Vocational Training on probability of having entered employment within given duration after program start. Effects in percentage points. Effects calculated for persons with median/ modal values of covariates.*

	contributory employment		contributory employment + exit from benefit receipt		minor employment	
	12 months	**18 months**	**12 months**	**18 months**	**12 months**	**18 months**
Western Germany						
lone mothers						
youngest child aged						
3-5	+5	+10	+1	+3	-7	-8
6-9	+3	+8	+0	+2	-7	-7
10-17	+5	+12	+1	+3	-8	-8
mothers with a partner						
youngest child aged						
3-5	+3	+5	+1	+1	+1	+5
6-9	+3	+6	+1	+1	-4	-1
10-17	+3	+8	+1	+2	+2	+6
childless singles	+0	+2	+0	+1	-5	-5
Eastern Germany						
lone mothers						
youngest child aged						
3-5	+3	+7	+1	+1	-14	-12
6-9	+5	+10	+2	+3	-18	-17
10-17	+10	+19	+2	+4	-14	-18
mothers with a partner						
youngest child aged						
3-5	+4	+5	+2	+2	-7	-12
6-9	+7	+8	-	-	-9	-8
10-17	-	-	-	-	-	-
childless singles	+1	+3	+0	+1	-7	-6

- bars indicate that no convergence was achieved

* Simulations assuming that the program started 6 months after the beginning of the welfare spell without employment. Effects give differences in employment probabilities for persons who participated in the program to those who did not participate.

Table 8
Effect of Classroom Training on probability of having entered employment within given duration after program start. Effects in percentage points. Effects calculated for persons with median/ modal values of covariates.*

	contributory employment		contributory employment + exit from benefit receipt		minor employment	
	12 months	**18 months**	**12 months**	**18 months**	**12 months**	**18 months**
Western Germany						
lone mothers						
youngest child aged						
3-5	+2	+4	-1	-1	+11	+10
6-9	-	-	-	-	-	-
10-17	+4	+7	-1	-1	+7	+7
mothers with a partner						
youngest child aged						
3-5	+2	+3	+0	+0	+9	+11
6-9	+2	+3	+0	+0	+13	+17
10-17	+3	+5	+0	+0	+7	+9
childless singles	+3	+3	+0	-1	+4	+5
Eastern Germany						
lone mothers						
youngest child aged						
3-5	+1	+2	+0	+0	+3	+3
6-9	+1	+5	-1	-1	-1	-4
10-17	+1	+3	+0	+0	-5	-6
mothers with a partner						
youngest child aged						
3-5	+1	+1	+0	+1	+1	+2
6-9	+3	+4	+0	+0	+13	+20
10-17	+0	+0	-1	-1	+2	+1
childless singles	+7	+9	+1	+1	-2	-2

- bars indicate that no convergence was achieved

* Simulations assuming that the program started 6 months after the beginning of the welfare spell without employment. Effects give differences in employment probabilities for persons who participated in the program to those who did not participate.

Table 9
Effect of One-Euro-Jobs on probability of having entered employment within given duration after program start. Effects in percentage points. Effects calculated for persons with median/ modal values of covariates.*

	contributory employment		contributory employment + exit from benefit receipt		minor employment	
	12 months	**18 months**	**12 months**	**18 months**	**12 months**	**18 months**
Western Germany						
lone mothers						
youngest child aged						
3-5	-1	+0	-1	-1	-9	-8
6-9	+1	+5	+0	+0	-11	-10
10-17	+1	+4	+0	+0	-12	-12
mothers with a partner						
youngest child aged						
3-5	+2	+4	+0	+0	+0	+0
6-9	+3	+5	+0	+0	+3	+7
10-17	+3	+6	+0	+1	-3	-1
childless singles	-2	+1	-2	-1	-5	-4
Eastern Germany						
lone mothers						
youngest child aged						
3-5	+1	+2	-	-	-11	-12
6-9	+0	+3	+0	+1	-13	-12
10-17	-3	+0	-1	+0	-19	-19
mothers with a partner						
youngest child aged						
3-5	+1	+1	-	-	-8	-8
6-9	-2	-2	-1	-1	-8	-8
10-17	-	-	+0	+1	-14	-15
childless singles	-2	+2	-1	+0	-8	-8

- bars indicate that no convergence was achieved

* Simulations assuming that the program started 6 months after the beginning of the welfare spell without employment. Effects give differences in employment probabilities for persons who participated in the program to those who did not participate.

Appendix

Table A.1
Descriptive statistics for selected covariates. Western Germany

		lone mothers youngest child aged			mothers with a partner youngest child aged		
	childless singles	3-5	6-9	10-17	3-5	6-9	10-17
age							
15-24	39%	16%	2%	0%	11%	2%	0%
25-29	20%	31%	18%	2%	31%	15%	2%
30-34	10%	25%	27%	13%	29%	28%	11%
35-39	9%	17%	28%	30%	19%	29%	28%
40-44	11%	9%	18%	35%	9%	19%	35%
45-49	12%	2%	6%	21%	2%	7%	24%
marital status							
ever married	27%	61%	73%	82%			
never married	73%	39%	27%	18%			
marital status							
married					80%	83%	84%
not married					20%	17%	16%
education							
no degree	15%	20%	19%	19%	33%	35%	35%
lower secondary degree	39%	45%	47%	50%	40%	41%	42%
intermed. sec. degree	27%	26%	25%	22%	19%	17%	16%
upper sec. degree (qual. for technical college)	7%	4%	4%	3%	3%	3%	2%
upper sec. degree (qual. for university)	12%	5%	5%	5%	5%	5%	4%
last occupation							
managers	2%	2%	2%	2%	1%	1%	1%
professionals	8%	7%	8%	7%	4%	4%	4%
technicians and associate prof.	9%	10%	8%	7%	6%	5%	4%
clerical support workers	12%	12%	13%	13%	7%	7%	7%
service and sales workers	23%	29%	29%	29%	22%	21%	21%
skilled agricultural, forestry, fishery	1%	0%	1%	1%	1%	1%	1%
craft and related trades workers	3%	3%	3%	3%	3%	3%	3%
plant and machine operators, assemblers	3%	5%	6%	6%	5%	6%	7%
elementary occupations	14%	14%	18%	23%	16%	20%	25%
others, missing	2%	1%	1%	1%	1%	1%	1%
no previous job	23%	15%	12%	8%	34%	32%	27%
nationality							
german	86%	82%	81%	82%	61%	62%	66%
not german	14%	18%	19%	18%	39%	38%	34%
N	276,894	53,669	51,283	58,750	62,448	45,369	48,223

Table A.2
Descriptive statistics for selected covariates. Eastern Germany

		lone mothers youngest child aged			mothers with a partner youngest child aged		
	childless singles	3-5	6-9	10-17	3-5	6-9	10-17
age							
15-24	47%	21%	3%	0%	13%	2%	0%
25-29	21%	37%	25%	2%	33%	16%	1%
30-34	7%	21%	28%	13%	27%	28%	10%
35-39	6%	13%	25%	35%	18%	30%	32%
40-44	9%	6%	14%	34%	8%	18%	37%
45-49	10%	1%	5%	17%	2%	6%	20%
marital status							
ever married	19%	33%	49%	67%			
never married	81%	67%	51%	33%			
marital status							
married					57%	68%	79%
not married					43%	32%	21%
education							
no degree	8%	10%	9%	9%	13%	14%	13%
lower secondary degree	20%	27%	24%	22%	25%	23%	21%
intermed. sec. degree	48%	53%	57%	62%	53%	56%	61%
upper sec. degree (qual. for technical college)	6%	3%	3%	2%	3%	2%	1%
upper sec. degree (qual. for university)	18%	7%	8%	6%	7%	5%	4%
last occupation							
managers	2%	2%	2%	2%	2%	2%	2%
professionals	8%	8%	9%	9%	6%	6%	6%
technicians and associate prof.	9%	8%	8%	7%	7%	6%	5%
clerical support workers	13%	14%	15%	15%	12%	11%	11%
service and sales workers	24%	33%	30%	27%	29%	26%	22%
skilled agricultural, forestry, fishery	1%	2%	2%	3%	2%	3%	5%
craft and related trades workers	3%	4%	4%	4%	4%	4%	4%
plant and machine operators, assemblers	2%	3%	3%	5%	3%	4%	5%
elementary occupations	9%	11%	15%	20%	14%	20%	26%
others, missing	4%	4%	3%	2%	3%	2%	1%
no previous job	24%	12%	8%	7%	17%	16%	13%
nationality							
german	95%	93%	91%	92%	86%	84%	88%
not german	5%	8%	9%	8%	14%	16%	12%
N	145,126	20,846	16,393	20,870	25,333	17,901	25,048

Table A.3
Total spell duration and spell durations after program start (days)

	percentiles					
	maximum	**10%**	**25%**	**50%**	**75%**	**90%**
Total spell duration	1157	29	61	160	366	669
After start of further voc. training	1154	39	88	187	354	546
After start of classroom training	1154	29	71	171	364	595
After start of One-Euro-Job	1155	45	106	234	427	648

Table A.4
Percentage of program participants and non-participants who have been without a regular contributory job for over two years

	% without a regular job for over 2 years					
	Further voc. training		**Classroom training**		**One-Euro-Jobs**	
	participants	**non-participants**	**participants**	**non-participants**	**participants**	**non-participants**
Western Germany						
lone mothers						
youngest child aged						
3-5	56%	57%	58%	57%	65%	57%
6-9	57%	60%	62%	59%	67%	59%
10-17	47%	50%	52%	49%	57%	49%
mothers with a partner						
youngest child aged						
3-5	68%	71%	70%	71%	75%	70%
6-9	65%	71%	70%	71%	76%	71%
10-17	62%	65%	64%	65%	71%	64%
childless singles	40%	48%	45%	48%	52%	47%
Eastern Germany						
lone mothers						
youngest child aged						
3-5	53%	52%	53%	52%	58%	51%
6-9	54%	51%	52%	51%	58%	51%
10-17	50%	50%	53%	50%	62%	49%
mothers with a partner						
youngest child aged						
3-5	59%	61%	65%	61%	69%	61%
6-9	56%	60%	66%	60%	72%	59%
10-17	51%	58%	62%	58%	70%	57%
childless singles	44%	50%	45%	50%	53%	49%

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