INSTITUT FÜR VOLKSWIRTSCHAFTSLEHRE

JOHANNES KEPLER UNIVERSITÄT LINZ

The effects of marginal employment on subsequent labour market outcomes

von

René Böheim

und

Andrea Weber[*)]

Arbeitspapier Nr. 0612

Juli 2006

Johannes Kepler Universität Linz
Institut für Volkswirtschaftslehre
Altenberger Straße 69
A-4040 Linz - Auhof, Austria
www.economics.uni-linz.ac.at

[*)] Korrespondierende Autorin:
andrea.weber@ihs.ac.at

The effects of marginal employment on subsequent labour market outcomes*

René Böheim
Johannes Kepler University Linz and IZA, Bonn

Andrea Weber†
UC Berkeley, Institute for Advanced Studies, Vienna, and IZA, Bonn

July 25, 2006

*We thank Martina Zweimüller for excellent research assistance. Many thanks to David Card, Peter Huber, and Rudolf Winter-Ebmer for valuable comments and suggestions. This research was supported by the Austrian National Bank, Grant Nr 11090. Part of this research was conducted while René Böheim was at UC Berkeley, supported by the Austria-Berkeley Exchange Programme of the European Recovery Programme ('Marshall Fund'). Andrea Weber gratefully acknowledges financial support form the Austrian Science Foundation, Project Nr J2365-G05 and from the Center for Labour Economics at UC, Berkeley.

†Institute for Advanced Studies, Department of Economics and Finance, Stumpergasse 56, A-1060 Vienna, Tel +43-59991-147; fax +43-59991-163, email: andrea.weber@ihs.ac.at

The effects of marginal employment on subsequent labour market outcomes

Abstract

We analyse the consequences of starting a wage subsidised job, "marginal employment", for unemployed workers. Marginal employment is a type of wage subsidy paid to unemployed workers and they do not lose their unemployment benefits if the wage is below a certain threshold. We ask if the unemployed who start marginal jobs face better labour market outcomes than those who do not work. A priori it is not clear if those who work in marginal employment improve their labour market status, e.g. by signalling effort, or worsen it by reduced job search effort. We select unemployed workers and investigate the effect of marginal employment on their labour market outcomes, by means of propensity score matching. Our results suggest that selection into marginal employment is "negative", i.e. workers with characteristics we usually associate with low-productivity are more likely to select into such jobs. The unemployed who start to work in marginal employment during their unemployment spell suffer a (causal) penalty for doing so, relative to their peers who do not. The penalty, in terms of less employment, more unemployment, lower wages, lessens over time but is still present after three years.

Keywords: marginal employment, atypical employment, labour supply, propensity score matching
JEL classification: J22, J64

1 Introduction

The causes for the high unemployment rates in (Western) Europe are highly debated, among the candidates are high wage levels which reduce the demand for workers, especially those with low levels of productivity; strict employment contracts and protection laws, which may not allow employers to react flexibly to short-term demand fluctuations; benefit systems, which are seen to provide little incentive for unemployed workers to find employment.[1] Consequently, many labour market reforms focus on employment contracts that allow for more employment flexibility (e.g. the recent attempt in France to extend the probationary period of youth workers) or incentive schemes to induce unemployed workers back into employment (e.g. the German *Kombilohn*).

In Austria, a special employment contract exists, "marginal employment", which combines flexibility and incentives. Marginal employment (ME) is defined by wage income being below a threshold. In 2006, the threshold was €333.16 per month before tax, or about 19% of the median gross wage. Marginal employment is an attractive type of contract for employers, because for these jobs social security contributions are substantially reduced and only minimal employment protection applies. It is attractive to the unemployed, because an unemployed worker does not lose any benefit entitlements while working in ME. In other words, ME provides a wage subsidy paid to the worker (Katz, 1998; Phelps, 1994). This wage subsidy has, for the unemployed claiming unemployment benefits, a discontinuity at the threshold, because benefits are fully withdrawn for any wage income above the ME threshold.

[1] Nickell (1997) provides a critical assessment of such arguments.

We analyse the marginal employment of unemployed workers and examine whether it facilitates their return to regular employment or not. Potentially, a marginal job may allow the worker to stay attached to the labour market and to signal motivation to employers. This way it would act as a "stepping stone" (Booth, Francesconi and Frank, 2002). Alternatively, marginal employment could ultimately force workers out of the regular labour market, offering merely a "dead end" (Booth et al., 2002).

To evaluate the outcomes of marginal employment, we analyse new entrants into unemployment using data from the administrative registers. These data have the advantage of detailing, for each employee, the complete history of labour market spells. In the sample, we find that upon entry into unemployment many choose to become marginally employed before they start regular employment. Marginal employment is thus for many unemployed an option, but how does it effect their future careers?

We compare the unemployed who start marginal employment before returning to regular employment with those who do not. The data offer a wide range of outcome measures, we compare the days employed, the days unemployed, and the wages of the two types of the unemployed for up to three years after the start of their unemployment spell. The decision to become marginally employed is most likely correlated with expected future labour market outcomes and marginally employed workers are then not a random sample of all unemployed workers. Since we have no source of exogenous variation in the entry to marginal employment, which would allow to model the selection into ME, we use propensity score matching to control for selection on observable characteristics (Dehejia and Whaba, 1999; Rosenbaum and Rubin, 1984). The data provide a wide range of individual characteristics, extended labour market histories, and

previous experiences with marginal employment for an appropriate estimation of the propensity score.

There have been a number of studies examining the effect of temporary job placement on subsequent labour market outcomes over the last years. (Ichino, Mealli and Nannicini (2006) provide an overview.) Autor and Houseman (2005), using US data, find a negative association between between temporary jobs and subsequent labour market careers and argue that their finding is more robust than European studies because they exploit a semi-experimental setting. The European studies typically use some sort of matching technique and generally find a positive association between temporary jobs and subsequent labour market careers.

Our results show that marginal employment is, despite its popularity among the unemployed, associated with less employment, lower wages, and with more unemployment in subsequent periods. Although the negative effect of ME lessens over time, after three years these workers still fare worse than their peers. A way to improve chances of marginal workers in the labour market and facilitate transitions to regular employment might be to combine marginal employment with a more generous wage subsidy or incentive scheme in the context of active labour market policies, like suggested by Fertig, Kluve and Schmidt (2006).

2 Institutional Background

In Austria, health, pension, and unemployment insurance is compulsory for every employee. Social security contributions are split between the employer and the employee and amount in total to 39.9% of the gross wage. This makes Aus-

trian non-wage labour costs relatively high (see, for example, U.S. Department of Labor, 2005, Table 15).

Marginal employment is a special type of contract defined by wage income being below a certain limit. In 2006, the monthly limit for ME was €333.16, or about 19% of the median gross wage. Workers who are marginally employed are, by and large, exempt from compulsory social security. For them, the employer has to contribute 1.4% of the gross wage towards the employees' insurance against work-related accidents. A marginally employed worker may voluntarily enroll into health and pension insurance by paying €46 per month, or 14% of the threshold for ME. Marginal jobs are not covered by the unemployment insurance system. Marginal workers are entitled to their (state) pension payments, or to unemployment benefits (and unemployment assistance), if eligible.

In Austria, unemployment benefits (UB) amount to 55% of previous net wages, plus a family allowance. The eligibility period is 20 or 30 weeks, depending on previous work experience. After exhaustion of UB, the unemployed worker can apply for unemployment assistance (UA), which is means tested. In case of continued eligibility, unemployment assistance can be claimed indefinitely. Recipients of unemployment benefits or unemployment assistance are fully covered by the state health insurance system and the time claiming UB counts towards state pension eligibility.

The importance of marginal employment in Austria has increased over the past years. Figure 1 plots the number of ME as a percentage of all employment from May 1995 to December 2005. Since 1995, employment in marginal jobs has increased from about 4.6 per cent of total employment to about 7.5 per cent in 2005. In a study about the sales sector in Austria Huber and Huemer (2004)

find a marked increase in marginal employment in retail sales after a relaxation of shop opening hours in 1997. The majority of marginal workers are women (70% in 2004). According to Huber and Huemer (2004), women also tend to stay longer in marginal employment and are less likely to switch to regular jobs than men.

3 Theoretical Considerations and Model

Marginal employment is a flexible, and cheap, instrument for employers to react to short-term demand fluctuations. The non-wage labour costs paid jointly by employer and employee are at least halved. In addition, flexible dismissal regulations apply as for marginal employment the period of notice is 14 days.

Marginal employment is attractive for two groups of workers. The first group are workers who are detached from the labour force, i.e. either not working in a regular job or out-of-the labour force. A marginal job may provide access to the social security system and thus relatively cheap access to pension and health insurance. The second group are unemployed workers, especially those who claim UB, because income from ME is added to the benefit income.[2] We focus on the second group and investigate the effect of marginal employment started during an unemployment spell on the worker's future wage and employment outcomes. We do not consider that ME may offer an entry to the labour market for persons who are out-of-the-labour force.

[2] A third group would be those who want to supply many hours of work, but are hours constrained in their main job. However, multiple job holding is relatively uncommon in Austria. Only about 4% of regular workers hold a second job. Likewise, we find few workers in two or more marginal jobs.

Marginal employment has some features that make it comparable to a wage subsidy program. A wage subsidy is typically individually based, not means-tested, and has a limited duration. Where wage subsidies are provided to individuals, rather than directly to firms, eligibility usually depends on a certain duration of unemployment insurance receipt. Usually the wage subsidy also imposes a minimum working requirement. Marginal employment, on the other hand, allows the unemployed benefit recipient to earn extra income if they supply few hours, or earns a wage below the threshold. As soon as the threshold is crossed, however, UB is withdrawn completely. Consequently, the unemployed worker faces a discontinuous hours choice, which is sketched in Figure 2. The graph draws the relationship between earnings and hours worked for a given wage rate w. An unemployed worker's earnings equal the benefit level b. By supplying a few hours h_{ME} of work in a marginal job the worker earns $b + ME$, benefits plus the ME threshold. Jobs which put wage income slightly above the marginal threshold are unattractive, because they generate less income than income from benefits alone. In order to be strictly better off the worker would have to supply as many hours as to receive earnings above the benefit level plus the marginal threshold, in the graph this is h_E. The gap between h_{ME} and h_E, or the magnitude of the discontinuity, depends on the benefit level b. Consequently, the discontinuity may be especially important for full-time workers, as the benefit level depends on earnings in the previous job.

What are the behavioural responses that we expect from unemployed workers? Because of the discontinuity in hours choices we expect workers to start a marginal job and to collect benefits for a prolonged time, or to start a regular job relatively quickly. This means that the short-term effects of the marginal job are determined by the behavioural responses generated by the incentives on earnings and hours

choices. The causal effects of ME on future employment and wage outcomes will be revealed over a medium time horizon.[3]

Because there are no special restrictions to receiving the wage subsidy implicit in marginal employment other than benefit eligibility one may ask whether this system induces individuals to reduce their work effort in order to benefit from the subsidy. We think that the sharp discontinuity mitigates the negative incentives created by this system. In order to address the issue of windfall beneficiaries or collusions between firms and workers we investigate how take-up varies with the elapsed unemployment duration and whether employers rehire their former employees as marginal workers or not.

We choose the following setup for the empirical analysis. We sample workers entering unemployment and compare those taking up ME within the first 6 months of their unemployment spell with workers who do not enter ME before their unemployment spell ends. (We drop individuals entering ME after 6 months from the sample.) We call the first the ME group and the other the control group. The choice of 6 months appears somewhat arbitrary, but it corresponds to the average UB entitlement period (remember that the entitlement period is either 20 or 30 weeks depending on prior work experience.)

For these two groups, we compare wage and (regular) employment outcomes in the first, second, and third year after the start of unemployment.

To account for non-randomness in the choice to start ME we use a propensity score matching technique. The matching is valid, if conditional on all information available at the start of the unemployment spell starting ME is random. This

[3]We do not expect special effects to occur upon benefit exhaustion, because the Austrian system with the combination of unemployment insurance and unemployment assistance allows basically for an unlimited benefit period.

further implies that at the beginning of the unemployment spell an individual, with given characteristics, faces a job finding rate that is known to him and which is constant over time.

One problem is that the matching approach assumes that the propensity to work ME is independent of elapsed unemployment duration. For example, if prospects for regular employment deteriorate over time, an unemployed worker may become more likely to accept a marginal job. By conditioning on characteristics at the start of the spell we cannot control for time-varying changes of behaviour. Our strategy to assess the importance of this problem is to check the robustness of our results by selecting different ME groups, based on varying lengths of elapsed unemployment duration (three, six, and twelve months). We also estimate the effects of ME for a smaller sample of workers who had no ME experience in the five years preceding the unemployment spell. We further examine the robustness of our results by comparing them to those for the unemployed who were employed the whole month prior to the unemployment spell.

4 Data

We use data on individual labour market careers from Austrian administrative records. Our sample consists of the total inflow into unemployment between March and August 1999.[4] To avoid conflicts with time spent in education, or (early) retirement, we only consider workers between 20 and 50 years of age. This leaves us with a sample of 193,276 unemployed. All our analyses are carried

[4]We define an individual as unemployed if she is either collecting unemployment benefits or actively searching for work, but not working in regular employment. For those with multiple spells in this period, we select the first unemployment spell.

out separately for women (93,896) and men (99,380), because women are more likely to work in ME than men are.

We combine individual data from two different sources, (i) the *Austrian social security database* which contains detailed information on the individuals' employment, unemployment and earnings history, and information on the employer (e.g. region and industry); and (ii) the *Austrian unemployment register* from which we get socio-economic characteristics. We use information on employment and wage histories for the period 1993 to 2001, i.e. five years before and three years after the start of the spell. The records contain, for each day, information on the labour market status and we distinguish between regular employment, marginal employment, unemployment, parental leave, and non-participation.

The median unemployment duration in the sample is 1.8 months (mean is 4 months) and 6% of the individuals are unemployed longer than 12 months. Unemployment spells end in most cases (80%) because of the start of a regular employment spell, the remaining unemployment spells end because of withdrawal from the labour market (maternity, retirement, or other, unknown, reasons.)

Upon entry into unemployment, history and outcomes are measured in one-year intervals from that date. While the data are appropriate for our research as they provide precise labour market histories for a long period, they also have limitations. The most restricting for our application is that the data do not detail the hours of work and we therefore cannot identify part-time work.[5] Wages are measured as the average of monthly wages over all regular jobs during the year, and are deflated to 2005 prices (in Euros). No wages are available for marginal

[5]The share of part-time work in all employment in 1999 was 16.4%: 32.4% of women and 4.4% of men worked in part-time jobs in 1999 (Statistics Austria, 2006).

jobs and the wage is set equal to zero for individuals with no regular employment during the year.

In Figure 3, we plot for our sample of unemployed workers the monthly share of marginal workers, from 1994 to 2004. It is apparent that the share of ME increases sharply upon entry into unemployment. The inflow period into unemployment 03-08/1999 is marked by vertical lines. During that time marginal employment increases by about two percentage points for women and by about one percentage point for men. Over the following six months the shares of ME revert to the trend. This suggests that on becoming unemployed workers are more likely to start a marginal job. The figure also confirms the high share of women in marginal employment noted by Huber and Huemer (2004). The trend in our sample resembles the trend of marginal employment for the whole population, plotted in Figure 1.

Figure 4 shows the frequency of ME starts by the elapsed unemployment duration. We see that the majority of ME spells start a short time after entry into unemployment, most of the marginal spells start within 2 months form unemployment entry. Usually it requires some time to search for a (marginal) job and the picture confirms that we capture most of the workers who start ME within 6 months upon entry to unemployment.

Table 1 presents the incidence of marginal employment in our sample and describes the composition of ME and control groups our analysis is based on. The control group consisting of individuals who never take up a marginal job before returning to regular employment, or before their unemployment spell ends is 178,427 individuals (84,105 women). We have 11,965 individuals taking a marginal job within 6 months of becoming unemployed. The share of marginal

workers among women (8.5%) is twice as high as among men (4.2%). If we restrict the ME group to individuals taking up ME within the first three months of unemployment the share of marginal workers in the full sample (consisting of ME and control group) is reduced to 4.7% on average, whereas it is 7.7% if we allow for all individuals taking a marginal job during the first year.

As a separate robustness check we will restrict the sample to individuals who were employed for at least one day in the month before entering unemployment. This reduces the sample by about 25%, the share of marginal workers remains the same though.

To address the potential problem of windfall beneficiaries or collusion between employers and employees who agree to substitute regular employment for UB plus ME, Table 2 presents recall rates to the same employer among the various employment states. The overall recall rate in the Austrian economy, i.e. those who work for the same employer before and after the unemployment spell, is relatively high (Pichelmann and Riedel, 1992), in our sample the recall rate is some 33 per cent for women and about 22 per cent for men. The recall rate from a marginal job to regular employment, for individuals finding a job after unemployment, is 27% and about as high as the overall rate. It occurs much less often that an employer lays off an individual from a regular job and rehires them as marginal worker. The recall rate from a regular job to a marginal job is only 15%. This means that the number of windfall beneficiaries generated by ME cannot be particularly high, as we expected.

In the Appendix, Table A-1, we present descriptive statistics, separately for the ME and the control group. If we consider age, educational attainment or marital status, we see little differences between women who started ME and

those who did not. When we consider past labour market experiences, we find that more of those who started ME have had previously worked in ME than those in the control group, suggesting that some persistence is present in those who work ME. In the year before the start of the unemployment spell, women who started ME had worked on average some 82 days in ME. This contrasts with an average of some 20 days for those who did not start ME. Those who started ME have had fewer employment spells in the year preceding the unemployment spell (women, 1.2, and men, 1.5) than those who did not (women, 1.5, and men, 1.7). The difference between the two groups in terms of days employed is about two weeks for women and about one week for men, with those who did not start ME having worked more days. On average, those who did not start ME had higher wages (women: €966 vs. €811; men: €1,418 vs. €1,273).

Those who started ME have had, two years earlier, consistently fewer days in regular employment, they had earned lower wages, and they have had more days in ME than those in the control group. The farther we go back in time, however, the smaller the differences between the two groups become.

Looking at the descriptive statistics of the outcome variables, we observe that those who chose ME had spent, on average, fewer days in (regular) employment, spent more days in unemployment, and earned a lower wage than those in the control group. Over time, the differences become smaller, but they do persist. In the third year after the start of the unemployment spell, apart from the mentioned differences in wages, hardly any differences remain for women; for example, average days employed were 216 (control) and 213 (ME) days. Differences are greater for men. Men who chose ME spent about three weeks less in employment than those who did not choose ME, their wages were about 10% lower, and their average unemployment duration was about a week longer.

5 Method

Our aim is to estimate the average effect of marginal employment (ME) on labour market outcomes for those unemployed who start ME before they enter regular employment. In order to estimate the "average treatment effect on the treated" (ATT), we would like to compare labour market outcomes for unemployed workers who started ME with the counterfactual outcome in case they did not start ME. Since we never observe both outcomes for the same individual, we need to compare observations on individuals entering marginal employment (ME group) with observations on individuals who do not (the control group). A direct comparison of average outcomes of these two groups of unemployed may be confounding the true effect, because an individual's decision to start ME is most likely related to expected future labour market outcomes. For example, imagine that highly skilled workers are less likely to start ME than those with few skills. As a consequence of the different skill compositions in the ME and the control group, we may observe differences in mean wage outcomes in both groups, which are not driven by ME, but by differences in productivity.

In order to control for such factors confounding the true effect of ME, our strategy is to compare the outcomes for individuals who are as similar as possible in terms of their predetermined characteristics. The main assumption is that selection into ME is based on observable characteristics and conditional on this information the individual's decision to start ME is random.

To be more specific, let Y_{i1} be individual i's outcome variable if she enters ME, and Y_{i0} the counterfactual. Further, let T_1 be an indicator variable equal 1

if the individual decides to enter ME, and 0 if she does not. The ATT, or the average effect ME has on those who start ME, can be expressed as

$$ATT = E(Y_{i1}|T_i = 1) - E(Y_{i0}|T_i = 1).$$

As mentioned before, this expression cannot be estimated directly, because Y_{i0} is not observed for ME individuals. Assuming selection on observable covariates X_i, namely $Y_{i1}, Y_{i1} \perp T_i|X_i$, we obtain

$$E(Y_{ij}|X_i, T_i = 1) = E(Y_{ij}|X_i, T_i = 0) = E(Y_i|X_i, T_i = j)$$

for $j = 0, 1$. In other words, the assumption means that conditional on observable variables X_i there is no systematic difference between the ME group and the control group at the point of entry into unemployment. It allows us to identify the average treatment effect on the treated in the following way:

$$ATT = E\left[E(Y_i|X_i, T_i = 1) - E(Y_i|X_i, T_i = 0)|T_i = 1\right].$$

A nonparametric estimate may still be difficult to obtain, if X has many dimensions and it would amount to finding a perfect counterpart for every ME individual in the control group. Rosenbaum and Rubin (1984) have shown that the information in X_i can be summarised in a single variable, the propensity score $p(X_i)$. The propensity score is the conditional probability that individual i with observable covariates X_i is taking up ME,

$$p(X_i) = P[T_i = 1|X_i] = E(T_i|X_i).$$

Therefore, instead of comparing individuals with identical X's, it is sufficient to compare individuals with similar values of the propensity score and estimate the ATT by

$$ATT = E\left[E(Y_i|p(X_i), T_i = 1) - E(Y_i|p(X_i), T_i = 0)|T_i = 1\right].$$

The empirical estimation proceeds in two steps. First, we estimate the propensity score, separately for women and men. Conditional on the propensity score each individual has the same probability of taking a marginal job, as in a randomised experiment. We use this proposition to assess our estimates of the propensity score and group observations into blocks with similar values of the estimated propensity score to check whether the distributions of the observed covariates for ME and controls coincide in each group or not ("balancing" the distributions). The estimation of the propensity score is augmented by interaction terms and polynomials of variables in X until we succeed in balancing the covariates in each block.

In a second step, given the estimated propensity score from the balanced distribution, we estimate a univariate nonparametric regression $E(Y_i|p(X_i), T_i = j)$ for $j = 0, 1$. We use two different matching methods to construct the control group, nearest neighbour matching and stratification matching. The nearest neighbour method searches for each ME observation an observation in the control group with the closest value of the propensity score. Subsequently the average outcomes in the ME and matched control samples are compared. The stratification method sorts observations from the lowest to the highest value of the propensity score. Then strata, defined on the estimated propensity score, are chosen such that the distributions of covariates is balanced between ME and

controls. We use the groups on which we based the balancing of the propensity score. Within each block we take the mean difference in outcomes between ME observations and controls, and weight these by the number of ME observations in each block.[6]

6 Results

6.1 Propensity Scores

We estimate the propensity score with a logit model of the propensity to start ME, using a range of the workers' characteristics, including the labour market history up to five years in the past. In addition, we include interaction terms and polynomials in order to balance the distributions of explanatory variables between the control and ME groups. The estimation results are tabulated in the Appendix, Table A-2, and significance tests are given in Table A-3.

Figure 5 shows box plots of the distributions of propensity scores for the ME and the control groups, for men and women. These plots provide a check of the comparability of the ME and the control group in terms of observable characteristics.[7] A wider overlap in the distributions of the propensity scores results in better matches between observations in the treatment group and observations in the control group. The box plots show that the propensity scores are lower than

[6] We use Stata and the routines by Becker and Ichino (2002).

[7] The box plots depict for each of the four groups the distribution of the propensity scores. The interquartile range, i.e. the distance between the 25th and the 75th percentile, is depicted by a (grey) box. The line within that gray box gives the median. The "whiskers" extend to the adjacent values, which separate the outliers from the rest of the data. The adjacent values are the 25th (or the 75th) percentiles minus (plus) 1.5 times the distance between the 25th and 75th percentiles (the interquartile range). For sake of clarity, we have excluded outliers from the graph; however, the outliers are used in our calculations. The maximum propensity scores are 0.669 for men, no ME; 0.714 for men, ME; 0.661 for women, no ME; 0.685, women, ME.

0.3 for women and lower than 0.2 for men for most of the observations in our data. While the control groups have typically lower values of the propensity score than those who started ME, the distributions do overlap and provide adequate support for the matching procedures.

Figures 6 and 7 plot the estimated propensity scores against labour market outcomes, the days employed, days unemployed, and wages in the first year after entry into unemployment. We group the estimated propensity scores into 40 blocks of equal size and calculate average outcomes for ME and controls in each block. The difference in outcomes in each block provides the ME effect at a constant value of the propensity score, i.e. holding observable characteristics fixed.

Figure 6 reveals that women with ME were employed for fewer days than women in the control group and that this difference is about the same size at all levels of the propensity score. The graph also shows a negative relationship between days employed and the propensity to work in ME for propensity scores of less than 0.12. At low values of the propensity score, women who have lower chances to be employed in a regular job are more likely to start ME than those with better chances. At higher values of the propensity score, the selection mechanism seems to revert and women who face better employment outcomes are more likely to enter ME.

Remember that a worker who has a marginal job is still entitled to UB. This entitlement may explain the widening gap in the number of days unemployed as the propensity score increases because women who are more likely to enter ME are also collecting UB for a longer period than the control group. The relationship between wages in the first year after entering employment and the

estimated propensity scores is markedly negative for those with low propensity scores. Women around the median propensity level, around 0.085 for the control group and about 0.11 for the women with ME, earn monthly wages well below €1,000.

Figure 7 shows the corresponding graphs for male workers. The gaps between ME and controls are greater than for female workers, which suggests an even stronger negative effect of ME for men. Again we notice that the distribution of the propensity scores is more concentrated at low levels for men. There are only three bins for propensity scores higher than 0.1 and negative selection into ME is even more evident for men than for women.

6.2 Matching Estimates

Our estimation results of the average treatment effect on the treated (ATT) are presented in Table 3. For each outcome variable, we estimate the ATT using the stratification method and the nearest neighbour method of matching. The choice of matching method matters little, the differences between the estimated ATTs are small. We discuss only the results from the stratification method.

For the outcomes in the first year since the start of the unemployment spell, we estimate that women who start ME spend about 40 days less in employment than the control group, which corresponds to about 30 per cent of the control group's mean days employed. The ATT has a small standard error of 1.4. The results for men are similar, the difference in days employed is about 49 (SE of 1.8). This difference is about 33 per cent of the control group's mean days employed. Considering the time spent in unemployment, women who work in ME spend some 30 days more in unemployment than those who do not, men are estimated

to spend some 40 days more in unemployment than those who do not work in ME.

The estimated ATT for the monthly wage in the first year states that women who started ME earn about €136 less per month than women in the control group. Men who started ME are estimated to earn €207 less per month than those in the control group. The estimated reduction in wages caused by ME amounts to about 15 per cent of the average monthly wage of women (€965) who are in the control group. Men in the control group earned on average €1,390 and the reduction due to ME amounts to about 16 per cent. This large effect is most likely a combination of an employment and wage effect, because employment is considerably lower during the first year and wages of those who were not employed in the year are set equal to 0.

These "short-term" effects during the first year are well in line with our considerations about the behavioural incentives in section 3. Especially, we find that individuals who take up ME are much longer unemployed, which is not surprising given the possibility to claim UB while being marginally employed. On the other hand, those who move to regular employment directly have less incentive to exhaust their full benefit entitlement. In the second and third year after unemployment entry, the the possibilities to claim are much smaller, because of restricted access to prolonged benefits, making it less desirable to remain unemployed. We believe that the causal relationship between ME and subsequent labour market performance is revealed in the medium-term, i.e. once the UB's incentives have worn out for the majority of the unemployed.

By looking at the outcome variables in the second year after the start of the unemployment spell, we see that the differences are indeed smaller. For example,

women with ME work about 6 days less than women in the control group; for men, the difference is some 10 days. When we look at days unemployed, we find no statistically significant difference between workers with and without ME. When we consider wages, we still estimate that those with ME earn less than those with no ME. For women it is about €76 less per month, or about 6 per cent of the control group's average wage in the second year. For men, the difference is about €115 per month, or about 9 per cent of the control group's average wage.

In the third year after the start of the unemployment spell, the differences between those with and those without ME are somewhat smaller than in the second year. However, we still estimate a negative effect of starting ME on labour market outcomes, be it days employed, days unemployed, or in terms of wages. Women who started ME are estimated to have slightly better outcomes in terms of days unemployed, they are estimated to spend about 4 days less in unemployment than those in the control group. Women with ME are estimated to spend about 2 days less in employment (these estimates are not statistically significant at conventional levels) and they earned €56, or about 6%, less per month than women in the control group. Men with ME spent about 9 days less in employment, about 4 days more in unemployment, and earned €90, or about 7%, less per month than men in the control group.

Overall we find negative effects of ME on all employment and wage outcomes. Throughout men are more effected by ME than women. The medium-term results point at small and negative employment effects of about one week. The wage effects are, however, still considerable after the third year. Because the differences in employment are relatively small, the difference in wages between ME and controls is arguably a pure wage loss effect.

The persistent wage penalty could arise from the fact that those who started ME have a preference for part-time work and those in the control group seek full-time employment. The difference in wages would thus be merely driven by the resulting difference in hours worked. While this is a possible critique of our results—remember that we do not know the number of hours worked—we do not consider it a likely explanation, because although the number of part-time workers has increased, especially for women, it is still almost negligible for men.

6.3 Robustness checks

Elapsed unemployment duration As we discussed above, our estimation technique does not allow for the elapsed unemployment duration to affect the probability of starting ME. It is probable that some workers have an increasing risk of ME the longer they are unemployed, for others, this risk might be falling. We have re-estimated the ATTs for different durations of elapsed unemployment and starting ME.

Table 4 reports the results for the smaller group of individuals who started ME in the first 3 months after becoming unemployed, and for the group of all individuals who started ME during the first year after becoming unemployed. Comparing these results to the baseline case in Table 4, we see that the choice of the treatment group makes indeed a difference. All effects are smallest for the group of unemployed who start ME during the first 3 months and largest for the group who started in the first 12 months. For example, the employment effects are two days in the first case and -10 days in the second case for the third year for women, and -5 and -15 days for men. Wages per month in the third year are €38 or €83 lower for female ME workers and €66 or €133 lower for males,

depending on the length of the entry period. This result indicates that we cannot fully control for selection into ME by matching on the conditions at the start of the unemployment spell, because changes in behaviour over time seem to play a role. However, although the magnitude of the effects depends on the choice of the ME group, the main result is unchanged. Marginal employment has a negative, if small, impact on future employment and substantial negative wage effects in all samples.

Selection effects We have seen above that while most unemployed enter unemployment from a previous job, not all of them do so. ME is attractive, amongst other things, because it provides relatively cheap access to social insurance. Arguably some workers are less attached to the labour market, for example, those who start searching for a job without being entitled to UB, and have therefore different search strategies than workers who are closely attached to the labour market.

We re-estimated the ATTs of ME by restricting our sample to workers who enter unemployment directly from employment, rather than from any other labour market state. (Entry period to ME is six months.) The results from this exercise are tabulated in Panel 1 in Table 5. We note that the results show a greater penalty from working ME in subsequent periods than the results presented above. The negative effects of ME lessen over time, but they are still present in the third year after the start of the unemployment spell.

In particular, focussing on the medium-term outcomes after three years, we estimate for women in this subset a wage penalty of about €60 per month, in comparison to their peers who did not start ME. For men, the wage penalty is about €126.

We noted above, that previous experience of ME makes a worker more likely to start ME, all other things equal. Again, we worry that the previous experience of ME, although we control for this in the estimation of the propensity score, might be associated with unobserved characteristics that are correlated with our outcome measures. We therefore restrict the sample to workers who had no experience of ME in the five years prior to the unemployment spell and estimate the ATTs of ME. The results are tabulated in Panel 2 of Table 5. We see that for this subgroup of workers, the negative effects are slightly less severe for women and slightly more negative for men.

7 Summary and Conclusions

In our analysis, we investigated the consequences of starting a marginal job for unemployed workers. In particular, we asked ourselves whether the unemployed who work few hours face better labour market outcomes than those who do not work while collecting UB. A priori it is not clear if those who work in ME improve their labour market status, by signalling effort, possibly increasing the job offer arrival rate, etc., or worsen it by reducing their job search efforts.

Our results strongly indicate that for unemployed workers there is no positive consequence of marginal employment on subsequent regular employment. Our results are more in line with the US evidence in Autor and Houseman (2005) and stand in contrast to European studies, which find a positive effect of temporary jobs on transitions to regular employment. Marginal employment does not act as a stepping stone into regular jobs and all outcome measures we investigate—employment, unemployment, and wages—are less favourable for workers who started marginal employment than for those who did not. The effects are bigger

and more persistent over time for men than for women. Differences in outcomes lessen over time, for example, after three years, women who started ME earn about 6% less than women who did not. For men, neither employment nor wages of marginal workers catch up with workers in the control group after three years, wages are about 7% lower.

We also find that unemployed workers who are most likely to start marginal employment are individuals who are typically disadvantaged in the labour market, i.e. the young, those with little formal education, and those with interrupted employment careers. A worker with these characteristics would be the target of standard active labour market policy measures. Unemployed workers who are entitled to benefits are more likely to take a marginal job than those who have no entitlement.

A way to improve chances of marginally employed workers in the labour market would to integrate ME into the government's active labour market policy, where private sector employment programs already exist. ME is an income subsidy for workers who are eligible for UB and supply a minimum amount of hours. For jobs earning just above the marginal threshold, however, no subsidy is available and the full social security contributions have to be paid. This creates a huge disincentive to work in these kind of (part-time) jobs above the marginal threshold.

An extension of the income subsidy towards jobs with higher wages could create incentives for labour supply in the jobs above the marginal threshold and possibly also facilitate transitions into regular jobs. The idea would be to allow unemployed workers to keep a share of their UB, which reduces with wage earned, in order to phase out the discontinuity created by the marginal threshold. At

the same time social security contributions could be reduced for these jobs to create an incentive for employers to hire more workers. Of course the subsidy has to be limited in time and restricted to special target groups, e.g long-term unemployed, in order to prevent windfall beneficiaries. For several countries positive experiences with income subsidy measures of this type exist, like the US, Canada, and the UK where they were part of the welfare reforms (Blundell and Hoynes, 2004; Card and Hyslop, 2005).

References

Autor, David and Susan N. Houseman (2005), 'Do temporary help jobs improve labor market outcomes for low-skilled workers? Evidence from random assignments', *unpublished* . Department of Economics, MIT.

Becker, Sascha O and Andrea Ichino (2002), 'Estimation of average treatment effects based on propensity scores', *The Stata Journal* **2**, 358–377.

Blundell, Richard and Hillary Hoynes (2004), Has 'In-Work' benefit reform helped the labour market, *in* D.Card, R.Blundell and R.Freeman, eds, 'Seeking a Premier Economy: The Economic Effects of the British Economic Reforms, 1980-2000', University of Chicago Press for NBER, Chicago, pp. 411–459.

Booth, Alison, Marco Francesconi and Jeff Frank (2002), 'Temporary jobs: stepping stones or dead ends', *The Economic Journal* **112**, F189–F213.

Card, David and Dean R Hyslop (2005), 'Estimating the effects of a time-limited earnings supplement for welfare-leavers', *Econometrica* **73**, 1723–1770.

Dehejia, Rajeev H. and Sadek Whaba (1999), 'Causal effects in nonexperimental studies: Reevaluating the evaluation of training programs', *Journal of the American Statictical Association* **94**, 1053–1062.

Fertig, Michael, Jochen Kluve and Christoph Schmidt (2006), 'Der erweiterte Minijob für Arbeitslose - ein Reformvorschlag', *Perspektiven der Wirtschaftspolitik* . forthcoming.

Huber, Peter and Ulrike Huemer (2004), 'Beschäftigung im Handel - Vorläufige Fassung', WIFO Vienna, unpublished manuscript.

Ichino, Andrea, Fabrizia Mealli and Tommaso Nannicini (2006), 'From temporary help jobs to permanent employment: What can we learn from matching estimators and their sensitivity?', *IZA Discussion Papers* (2149).

Katz, Larry (1998), Wage subsidies for the disadvantaged, *in* R.Freeman and P.Gottschalk, eds, 'Generating jobs', Russell Sage Foundation, New York, pp. 21–53.

Nickell, Stephen (1997), 'Unemployment and labor market rigidities: Europe versus North America', *Journal of Economic Perspectives* **11**(3), 55–74.

Phelps, E S (1994), 'Raising the employment and pay of the working poor: low wage employment subsidies vs the welfare state', *AER Papers and Proceedings* pp. 54–58.

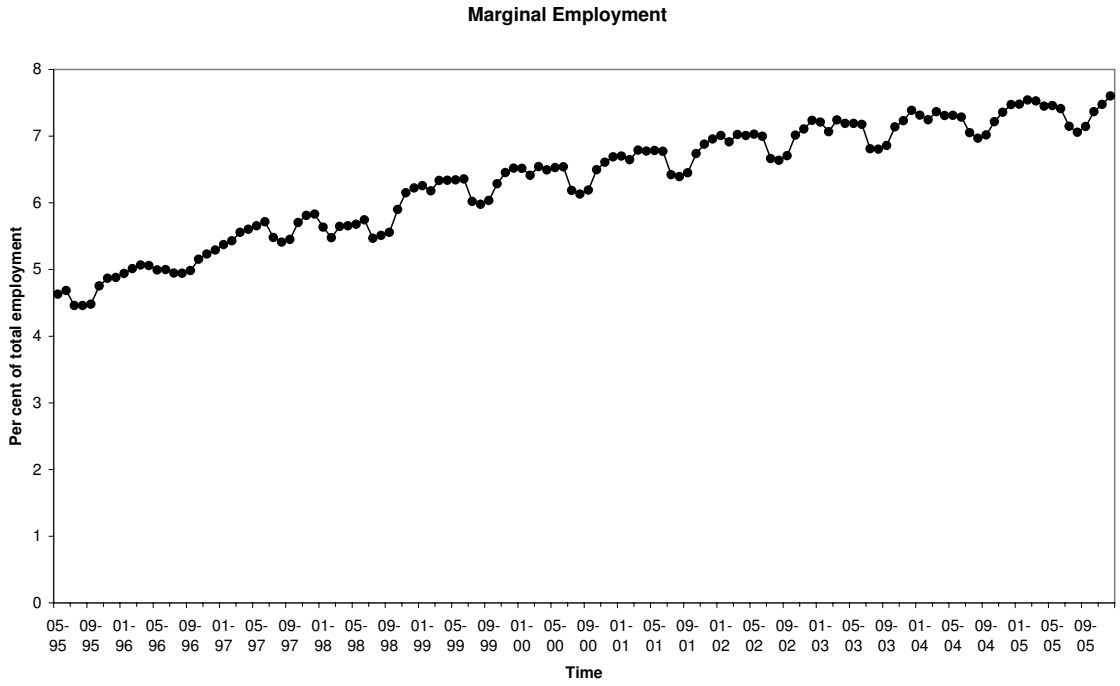
Pichelmann, Karl and Monika Riedel (1992), 'New jobs or recalls? Flow dynamics in Austrian unemployment reconsidered', **19**, 259–274.

Rosenbaum, Paul R. and Donald B. Rubin (1984), 'Reducing bias in observational studies using subclassification on the propensity score', *Journal of the American Statictical Association* **79**, 516–524.

Statistics Austria (2006), 'Statistical yearbook'. http://www.statistik.at/jahrbuch_2006/englisch/start.shtml.

U.S. Department of Labor (2005), 'Social insurance expenditures and other labor taxes as percent of hourly compensation costs for production workers in manufacturing, 32 countries or areas 1975-2004', *Bureau of Labor Statistics* (November). ftp://ftp.bls.gov/pub/special.requests/ForeignLabor/ichccsuppt15.txt.

Figure 1: Marginal employment in Austria, per cent of total employment, May 1995–December 2005.



Note: Austrian social security records.

Figure 2: Hours earnings relationship and hours choices under ME.

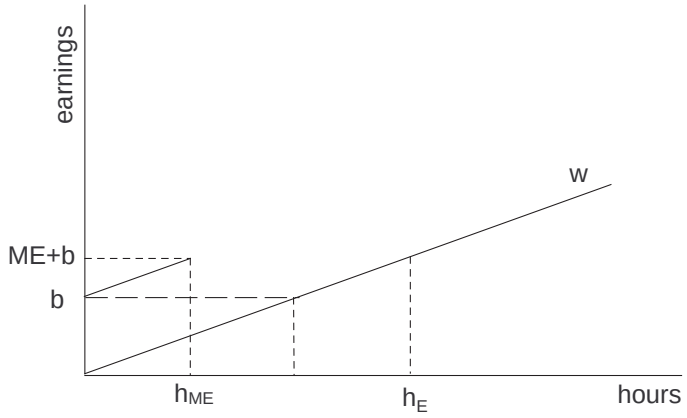


Figure 3: Development of marginal employment over time in the sample; vertical lines mark the inflow period into unemployment.

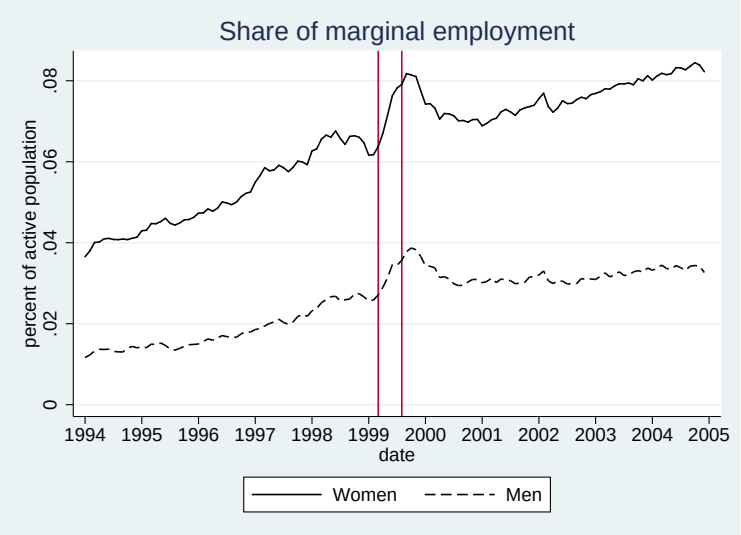


Figure 4: Frequency of marginal employment starts by duration of the unemployment spell

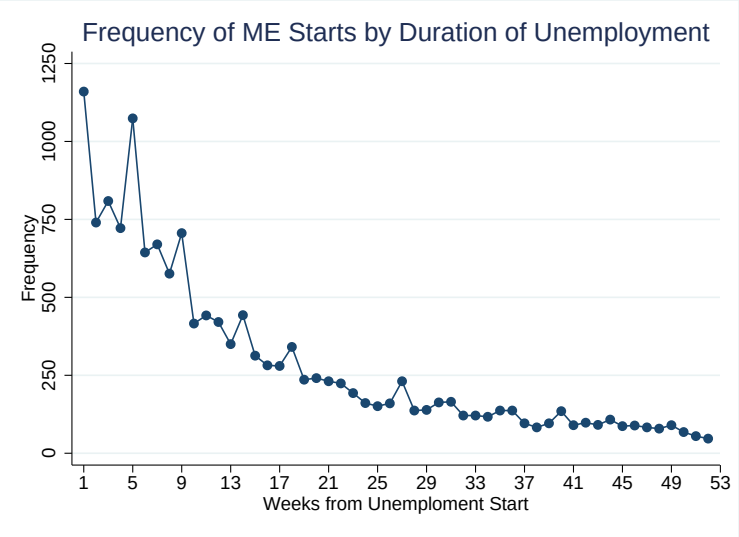


Figure 5: Distribution of the estimated propensity score in ME and control group.

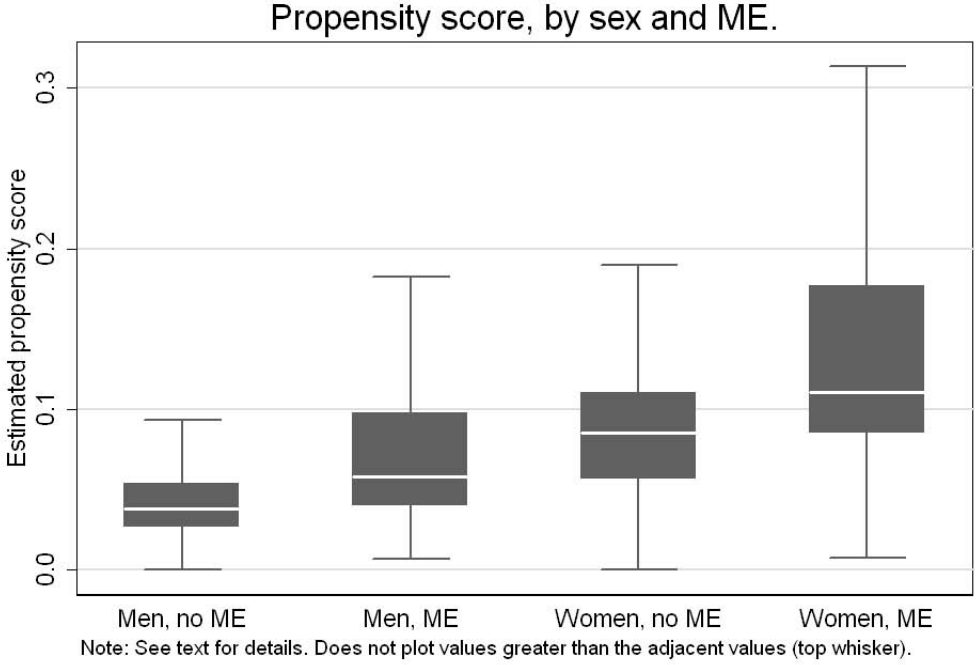


Figure 6: Outcomes in the first year by propensity score, women.

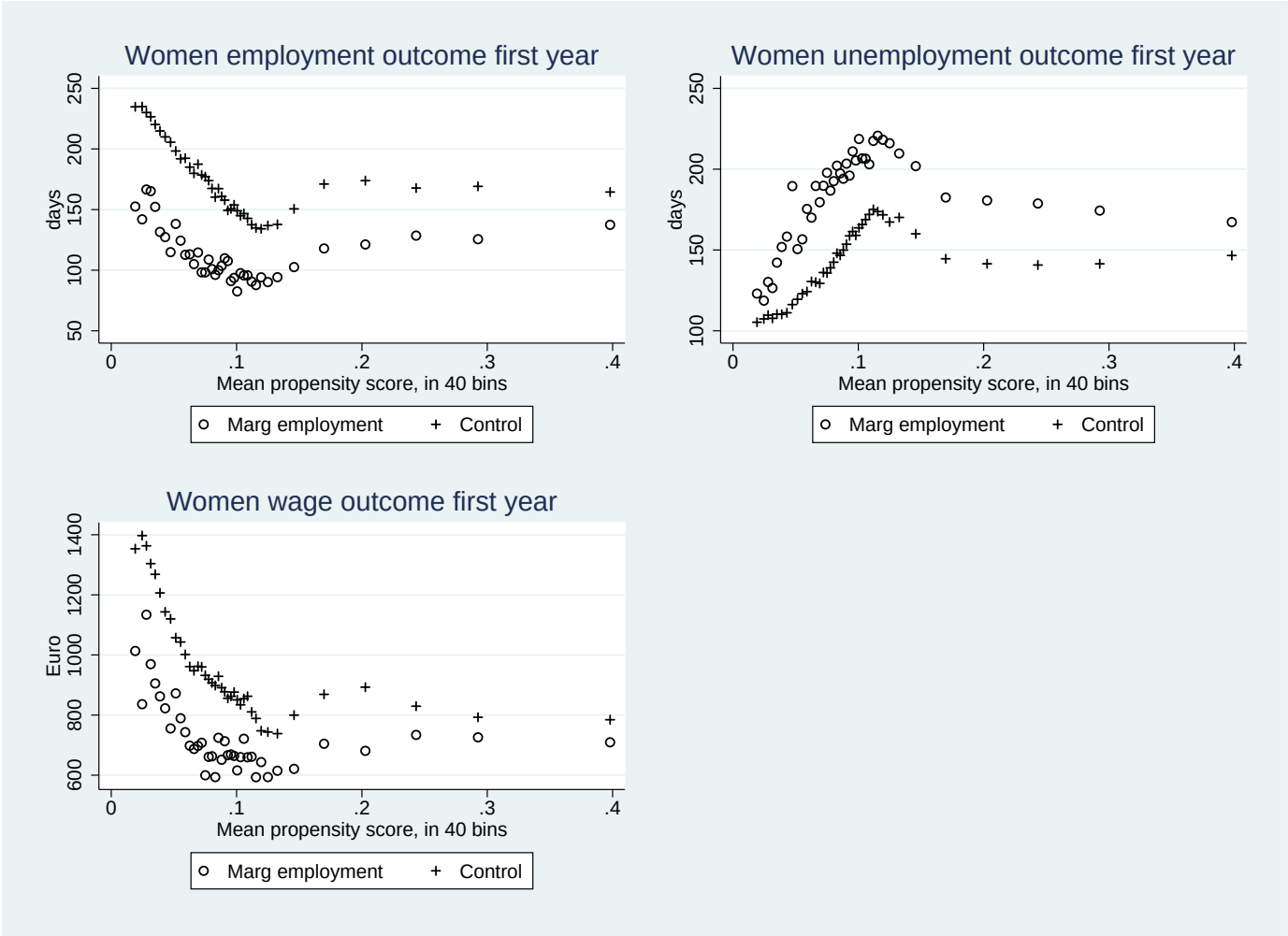


Figure 7: Outcomes in the first year by propensity score, men.

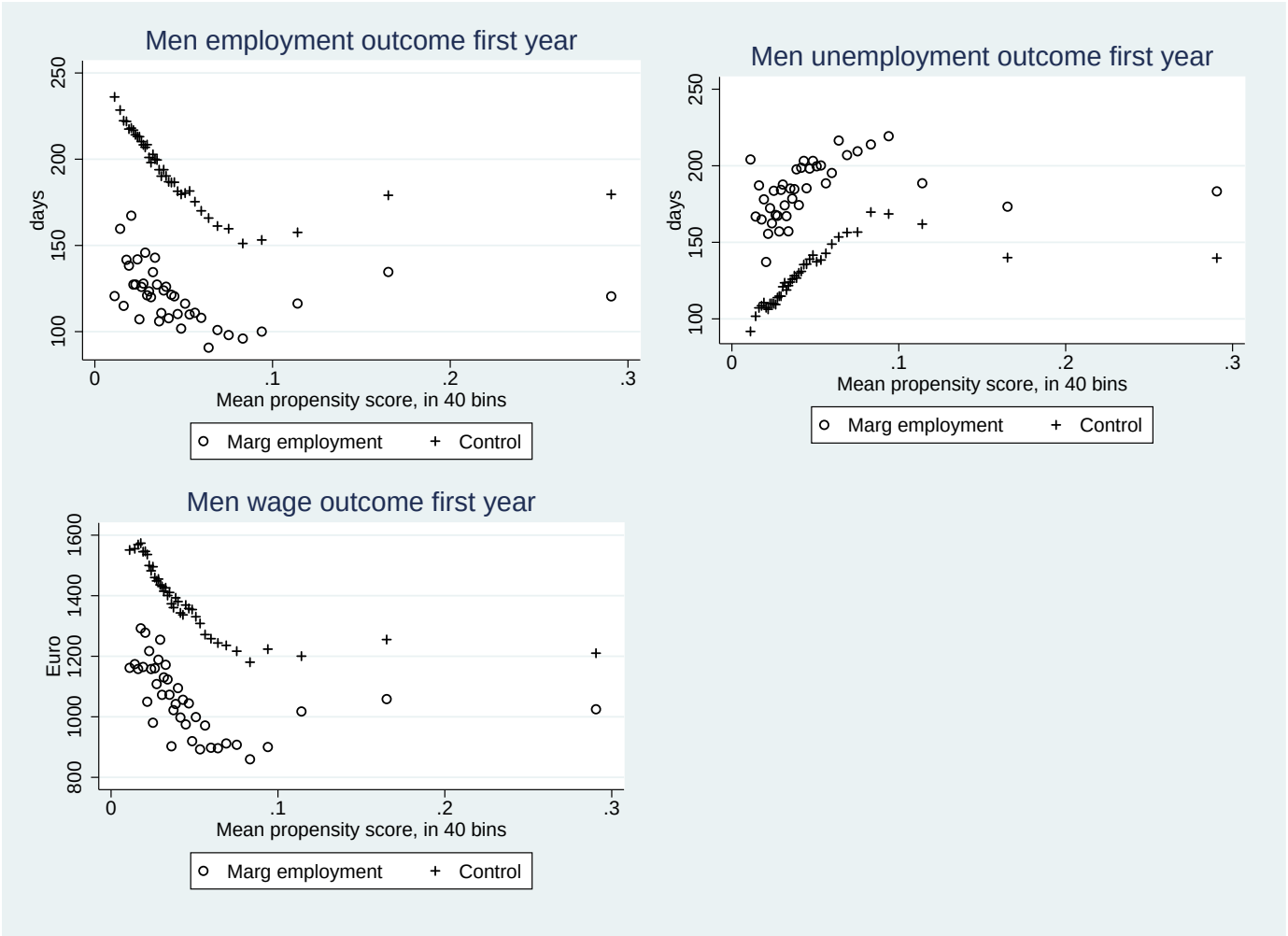


Table 1: Sample description

	Females	Males	Total
Control Group	84,105	94,322	178,427
ME Group			
ME within 6 months	7,789	4,176	11,965
	8.48%	4.24%	6.28%
ME within 3 months	5,587	3,143	8,730
	6.23%	3.22%	4.66%
ME within 12 months	9,791	5,058	14,849
	10.43%	5.09%	7.68%
Enter Unemployment from Employment*			
Control Group	61,312	69,899	131,211
ME within 6 months	5,303	3,015	8,318
	7.96%	4.14%	5.96%

Note: Control group - individuals who never take up a marginal job before their unemployment spell ends
ME group - individuals entering a marginal job while unemployed and within x months after unemployment start
percentages taken over the sum of ME and control group
* individuals who had a job within the last month before start of unemployment

Table 2: Recalls to the Same Employer

	Females	Males	Total
Job to ME Recall Rate	16.07%	13.37%	15.09%
Number of Observations			8,318
ME to Job Recall Rate	27.24%	26.12%	26.83%
Number of Observations			8,195
Job to Job Recall Rate	33.37%	21.95%	27.32%
Number of Observations			120,459

Note: xxx

Table 3: Estimated average effect of Marginal Employment (ATT).

	Women				Men			
	Stratification		Nearest Neighbour		Stratification		Nearest Neighbour	
	ATT	(SE)	ATT	(SE)	ATT	(SE)	ATT	(SE)
The first year								
Employment	-40.762	(1.37)	-39.936	(2.03)	-48.866	(1.76)	-51.164	(2.67)
Unemployment	30.523	(1.26)	30.478	(1.81)	37.647	(1.67)	40.388	(2.37)
Wage	-138.637	(7.61)	-135.885	(10.93)	-207.508	(12.59)	-227.148	(17.92)
The second year								
Employment	-5.564	(1.77)	-3.979	(2.46)	-9.927	(2.23)	-12.646	(3.23)
Unemployment	-2.133	(1.19)	-1.827	(1.66)	1.935	(1.68)	3.543	(2.35)
Wage	-76.047	(7.55)	-69.317	(10.95)	-115.155	(12.47)	-130.973	(18.42)
The third year								
Employment	-2.032	(1.16)	-2.807	(1.63)	-8.798	(2.34)	-10.699	(3.39)
Unemployment	-3.937	(1.30)	-5.101	(1.86)	3.632	(1.77)	4.377	(2.41)
Wage	-55.867	(8.00)	-59.303	(11.53)	-90.250	(13.73)	-99.968	(20.03)
Treated (Control)	7,766	(83,793)	7,766	(6,958)	4,144	(93,561)	4,176	(4,619)

Note: Start of ME within 6 months of start of unemployment. ATT refers to the average treatment effect on the treated. SE are standard errors.

Table 4: Estimated average effect of Marginal Employment (ATT), different entry periods.

	Women				Men			
	Stratification		Nearest Neighbour		Stratification		Nearest Neighbour	
	ATT	(SE)	ATT	(SE)	ATT	(SE)	ATT	(SE)
ME within 3 months								
The first year								
Employment	-25.090	(1.62)	-22.860	(2.36)	-34.270	(2.04)	-34.067	(3.06)
Unemployment	18.318	(1.43)	16.799	(2.06)	27.206	(1.85)	26.983	(2.69)
Wage	-97.494	(8.65)	-95.084	(12.51)	-158.971	(13.85)	-161.390	(20.34)
The second year								
Employment	1.148	(2.02)	3.685	(2.84)	-3.942	(2.50)	-5.367	(3.66)
Unemployment	-4.264	(1.32)	-5.430	(1.91)	-0.755	(1.85)	-1.170	(2.63)
Wage	-53.484	(8.71)	-43.996	(12.69)	-97.758	-(97.76)	-107.127	(20.86)
The third year								
Employment	2.646	(2.10)	3.825	(2.96)	-5.643	(2.62)	-4.292	(3.85)
Unemployment	-3.937	(1.30)	-5.101	(1.86)	2.260	(1.97)	-0.691	(2.71)
Wage	-38.561	(9.35)	-42.006	(13.60)	-66.091	(15.53)	-54.642	(22.80)
Treated (Control)	5571	(83793)	5571	(5118)	3119	(93560)	3140	(3716)
ME within 12 months								
The first year								
Employment	-58.993	(1.24)	-60.841	(1.84)	-66.283	(1.63)	-68.772	(2.45)
Unemployment	43.193	(1.20)	44.521	(1.68)	50.948	(1.60)	53.476	(2.25)
Wage	-211.951	(7.00)	-221.121	(10.02)	-312.804	(11.96)	-317.476	(16.74)
The second year								
Employment	-18.832	(1.64)	-20.747	(2.27)	-20.819	(2.09)	-23.818	(2.97)
Unemployment	2.773	(1.15)	2.521	(1.58)	7.666	(1.62)	8.825	(2.20)
Wage	-115.191	(6.87)	-127.088	(9.93)	-166.866	(11.59)	-178.471	(16.90)
The third year								
Employment	-10.287	(1.69)	-11.566	(2.34)	-15.768	(2.18)	-18.788	(3.10)
Unemployment	0.874	(1.10)	0.394	(1.52)	6.753	(1.67)	9.254	(2.23)
Wage	-83.545	(7.17)	-90.111	(10.38)	-133.261	(12.58)	-147.740	(18.18)
Treated (Control)	9761	(83793)	9761	(8514)	5024	(93561)	5058	(5428)

Note: ATT refers to the average treatment effect on the treated. SE are standard errors.

Table 5: Estimated average effect of Marginal Employment (ATT), subgroups.

	Women				Men			
	Stratification		Nearest Neighbour		Stratification		Nearest Neighbour	
	ATT	(SE)	ATT	(SE)	ATT	(SE)	ATT	(SE)
Had no previous experience of ME, entered ME within 6 months								
The first year								
Employment	-45.163	(1.81)	-43.925	(2.75)	-55.954	(2.16)	-53.378	(3.35)
Unemployment	34.200	(1.73)	34.236	(2.50)	43.912	(2.07)	43.141	(3.02)
Wage	-156.963	(10.91)	-155.290	(15.94)	-246.151	(15.97)	-242.512	(23.16)
The second year								
Employment	-2.726	(2.45)	-1.849	(3.46)	-10.563	(2.81)	-7.407	(4.10)
Unemployment	-5.327	(1.63)	-2.509	(2.28)	1.775	(2.08)	2.343	(2.91)
Wage	-86.600	(10.67)	-84.957	(15.72)	-158.628	(15.53)	-164.889	(23.40)
The third year								
Employment	0.915	(2.54)	0.805	(3.56)	-8.857	(2.93)	-6.054	(4.29)
Unemployment	-3.436	(1.60)	-2.512	(2.24)	2.948	(2.18)	2.645	(2.98)
Wage	-60.355	(11.18)	-67.629	(16.45)	-126.071	(17.17)	-137.886	(25.50)
Treated (Control)	3,878	(63,816)	3,878	(3,671)	2,483	(81,501)	2,505	(3,067)
Enter unemployment from employment, ME within 6 months								
The first year								
Employment	-48.608	(1.70)	-46.625	(2.47)	-52.395	(2.17)	-53.901	(3.23)
Unemployment	36.514	(1.53)	34.686	(2.20)	43.215	(2.04)	46.046	(2.89)
Wage	-156.394	(9.64)	-123.689	(13.42)	-206.756	(15.70)	-217.315	(21.88)
The second year								
Employment	-10.256	(2.15)	-6.853	(2.97)	-14.658	(2.69)	-12.144	(3.84)
Unemployment	-1.190	(1.45)	-3.220	(2.03)	6.380	(2.12)	6.886	(2.86)
Wage	-99.711	(9.56)	-76.462	(13.61)	-134.206	(15.41)	-135.732	(22.35)
The third year								
Employment	-8.999	(2.25)	-7.603	(3.12)	-11.427	(2.82)	-9.243	(4.06)
Unemployment	0.748	(1.44)	1.171	(1.98)	4.590	(2.21)	2.980	(2.97)
Wage	-71.717	(10.38)	-51.010	(14.79)	-105.164	(17.37)	-104.094	(25.11)
Treated (Control)	4,725	(56,109)	4,275	(4,234)	2,562	(61,210)	2,583	(2,837)

A Appendix

Table A-1: Descriptive statistics.

	Women				Men			
	No marginal employment		Marginal employment		No marginal employment		Marginal employment	
Variable	Mean	(SD)	Mean	(SD)	Mean	(SD)	Mean	(SD)
BACKGROUND								
Age (years)	32.485	(8.388)	32.553	(8.028)	32.291	(8.459)	31.677	(8.085)
$(\text{Age})^2/100$	11.257	(5.708)	11.241	(5.474)	11.142	(5.749)	10.687	(5.491)
$(\text{Age})^3/1000$	41.320	(30.715)	40.955	(29.472)	40.806	(30.912)	38.259	(29.471)
Foreign nationality	0.135	(0.342)	0.102	(0.303)	0.197	(0.398)	0.143	(0.350)
Married	0.488	(0.500)	0.478	(0.500)	0.424	(0.494)	0.370	(0.483)
Entitled to UI benefits	0.698	(0.459)	0.648	(0.478)	0.742	(0.438)	0.713	(0.452)
Education								
Compulsory or less	0.423	(0.494)	0.401	(0.490)	0.385	(0.487)	0.369	(0.483)
Apprenticeship	0.332	(0.471)	0.330	(0.470)	0.470	(0.499)	0.427	(0.495)
Middle school	0.103	(0.304)	0.105	(0.307)	0.036	(0.186)	0.039	(0.195)
High school	0.071	(0.257)	0.081	(0.273)	0.031	(0.173)	0.058	(0.233)
Vocational high school	0.031	(0.174)	0.034	(0.182)	0.052	(0.222)	0.062	(0.242)
University	0.039	(0.193)	0.048	(0.214)	0.026	(0.160)	0.044	(0.204)
Entry month								
March	0.170	(0.376)	0.176	(0.381)	0.207	(0.405)	0.197	(0.398)
April	0.283	(0.450)	0.215	(0.411)	0.245	(0.430)	0.216	(0.412)
May	0.155	(0.362)	0.157	(0.364)	0.164	(0.371)	0.155	(0.362)
June	0.123	(0.329)	0.131	(0.338)	0.132	(0.338)	0.148	(0.355)
July	0.151	(0.358)	0.179	(0.383)	0.136	(0.343)	0.153	(0.360)
August	0.117	(0.321)	0.142	(0.349)	0.115	(0.319)	0.125	(0.331)
Sector								
Agriculture	0.008	(0.091)	0.009	(0.096)	0.015	(0.123)	0.016	(0.124)
Manufacturing	0.133	(0.340)	0.131	(0.338)	0.372	(0.483)	0.339	(0.473)
Construction	0.010	(0.100)	0.010	(0.101)	0.162	(0.368)	0.085	(0.279)
Sales	0.157	(0.364)	0.197	(0.398)	0.125	(0.331)	0.169	(0.375)
Tourism	0.289	(0.453)	0.176	(0.381)	0.166	(0.372)	0.154	(0.361)
Service	0.101	(0.301)	0.125	(0.330)	0.025	(0.157)	0.030	(0.171)
Technical	0.011	(0.103)	0.012	(0.108)	0.052	(0.222)	0.071	(0.257)
Office	0.194	(0.396)	0.219	(0.413)	0.057	(0.232)	0.082	(0.275)
Health	0.104	(0.306)	0.131	(0.337)	0.041	(0.199)	0.071	(0.258)
Region								
Vienna	0.183	(0.387)	0.192	(0.394)	0.224	(0.417)	0.352	(0.477)
Lower Austria	0.131	(0.338)	0.140	(0.347)	0.139	(0.346)	0.130	(0.337)
Upper Austria	0.136	(0.343)	0.161	(0.368)	0.138	(0.345)	0.114	(0.318)
Salzburg	0.097	(0.295)	0.081	(0.273)	0.085	(0.279)	0.086	(0.281)
Tyrol	0.188	(0.391)	0.134	(0.340)	0.159	(0.365)	0.111	(0.314)
Burgenland	0.023	(0.151)	0.019	(0.138)	0.024	(0.153)	0.016	(0.124)
Styria	0.138	(0.345)	0.176	(0.381)	0.137	(0.344)	0.136	(0.342)
Carinthia	0.103	(0.304)	0.096	(0.294)	0.094	(0.292)	0.073	(0.260)
In the year before the start of the spell								
Number of previous jobs	1.521	(1.352)	1.347	(1.857)	1.734	(1.470)	1.660	(1.496)
% of year employed	0.590	(0.372)	0.586	(0.393)	0.633	(0.347)	0.619	(0.361)
Monthly wage	5.758	(2.700)	5.586	(2.713)	6.554	(2.253)	6.380	(2.322)

Continued on next page.

Table A-1 — continued from previous page.

	Women				Men			
	No marginal employment		Marginal employment		No marginal employment		Marginal employment	
Variable	Mean	(SD)	Mean	(SD)	Mean	(SD)	Mean	(SD)
% of year marginally employed	0.045	(0.174)	0.183	(0.331)	0.019	(0.108)	0.123	(0.269)
% of year on maternity leave	0.072	(0.239)	0.080	(0.253)	–		–	
Number of unemployment spells	0.868	(1.101)	0.660	(1.175)	0.952	(1.140)	0.843	(1.138)
% of year unemployed	0.170	(0.227)	0.152	(0.236)	0.172	(0.225)	0.168	(0.236)
In the second year before the start of the spell								
Number of previous jobs	1.302	(1.282)	1.142	(1.624)	1.610	(1.517)	1.566	(1.481)
% of year employed	0.536	(0.397)	0.511	(0.414)	0.633	(0.359)	0.599	(0.375)
Monthly wage	5.365	(2.960)	5.103	(3.034)	6.432	(2.352)	6.265	(2.439)
% of year marginally employed	0.043	(0.164)	0.133	(0.288)	0.016	(0.095)	0.074	(0.207)
% of year on maternity leave	0.119	(0.300)	0.131	(0.312)	–		–	
Number of unemployment spells	0.883	(1.173)	0.688	(1.098)	1.048	(1.301)	0.979	(1.439)
% of year unemployed	0.166	(0.242)	0.162	(0.261)	0.184	(0.247)	0.191	(0.261)
In the third year before the start of the spell								
Number of previous jobs	1.210	(1.216)	1.067	(1.542)	1.550	(1.584)	1.488	(1.252)
% of year employed	0.525	(0.407)	0.491	(0.423)	0.644	(0.367)	0.596	(0.387)
Monthly wage	5.172	(3.060)	4.869	(3.155)	6.342	(2.413)	6.145	(2.541)
% of year marginally employed	0.035	(0.149)	0.097	(0.251)	0.012	(0.081)	0.044	(0.165)
% of year on maternity leave	0.121	(0.301)	0.138	(0.318)	–		–	
Number of unemployment spells	0.805	(1.165)	0.616	(1.181)	0.964	(1.371)	0.862	(1.178)
% of year unemployed	0.150	(0.238)	0.145	(0.256)	0.165	(0.238)	0.171	(0.257)
In the fourth year before the start of the spell								
Number of previous jobs	1.185	(1.356)	1.050	(1.771)	1.524	(1.633)	1.450	(1.543)
% of year employed	0.517	(0.411)	0.480	(0.424)	0.645	(0.370)	0.598	(0.397)
Monthly wage	5.073	(3.100)	4.725	(3.210)	6.296	(2.427)	6.040	(2.611)
% of year marginally employed	0.030	(0.140)	0.082	(0.235)	0.010	(0.076)	0.031	(0.139)
% of year on maternity leave	0.116	(0.296)	0.140	(0.319)	–		–	
Number of unemployment spells	0.744	(1.255)	0.588	(1.288)	0.899	(1.461)	0.770	(1.270)
% of year unemployed	0.136	(0.228)	0.129	(0.238)	0.151	(0.229)	0.151	(0.248)
In the fifth year before the start of the spell								

Continued on next page.

Table A-1 — continued from previous page.

	Women				Men			
	No marginal employment		Marginal employment		No marginal employment		Marginal employment	
Variable	Mean	(SD)	Mean	(SD)	Mean	(SD)	Mean	(SD)
Number of previous jobs	1.120	(1.316)	1.015	(1.790)	1.465	(1.477)	1.414	(1.569)
% of year employed	0.499	(0.416)	0.472	(0.429)	0.636	(0.377)	0.593	(0.399)
Monthly wage	4.876	(3.183)	4.607	(3.249)	6.135	(2.562)	5.860	(2.741)
% of year marginally employed	0.027	(0.134)	0.068	(0.215)	0.009	(0.074)	0.028	(0.132)
% of year on maternity leave	0.114	(0.296)	0.141	(0.323)	–		–	
Number of unemployment spells	0.661	(1.187)	0.521	(1.323)	0.808	(1.390)	0.688	(1.130)
% of year unemployed	0.119	(0.216)	0.113	(0.226)	0.132	(0.216)	0.127	(0.223)
N	83,793		5,571		93,560		3,119	

Note: Wages are Euros, deflated to 1995 prices.

Table A-2: Logit estimations of Marginal Employment.

	Women		Men	
	Marginal effect	(SE)	Marginal effect	(SE)
Age	0.020	(0.006)	0.018	(0.004)
$(\text{Age})^2/100$	-0.052	(0.018)	-0.051	(0.012)
$(\text{Age})^3/1000$	0.004	(0.002)	0.005	(0.001)
Education	Reference category: Compulsory or less			
Apprenticeship	-0.0001	(0.002)	-0.005	(0.001)
Middle school	-0.003	(0.003)	-0.007	(0.003)
High school	0.0002	(0.004)	-0.001	(0.003)
Vocational high school	-0.007	(0.005)	-0.008	(0.002)
University	-0.015	(0.004)	-0.014	(0.003)
Foreign nationality	-0.015	(0.004)	-0.013	(0.002)
Married	-0.007	(0.002)	-0.005	(0.001)
Entry from employment	-0.017	(0.003)	-0.005	(0.002)
Entitled to UI benefits	-0.004	(0.003)	0.003	(0.001)
Region	Reference category: Vienna			
Lower Austria	0.001	(0.003)	-0.016	(0.001)
Upper Austria	0.004	(0.003)	-0.020	(0.001)
Salzburg	-0.007	(0.003)	-0.015	(0.002)
Tyrol	-0.012	(0.003)	-0.022	(0.001)
Burgenland	-0.011	(0.005)	-0.022	(0.002)
Styria	0.012	(0.003)	-0.015	(0.001)
Carinthia	-0.001	(0.003)	-0.019	(0.002)
Occupation	Reference category: Manufacturing			
Agriculture, Construction	0.002	(0.009)	-0.017	(0.002)
Sales	0.011	(0.003)	0.012	(0.002)
Tourism	-0.016	(0.003)	0.004	(0.002)
Service	0.010	(0.004)	0.007	(0.004)
Technical	-0.002	(0.008)	0.014	(0.003)
Office	0.008	(0.003)	0.015	(0.003)
Health	0.008	(0.004)	0.017	(0.004)
Entry month	Reference category: March			
April	-0.010	(0.003)	-0.005	(0.002)
May	-0.004	(0.003)	0.000	(0.002)
June	-0.005	(0.003)	0.003	(0.002)
July	-0.006	(0.003)	0.000	(0.002)
August	-0.002	(0.003)	0.002	(0.002)
Monthly wage (ln)				
first year $(t-1)$	0.002	(0.001)	0.0001	(0.0004)
second year $(t-2)$	0.001	(0.001)	0.0005	(0.0004)
third year $(t-3)$	0.0004	(0.001)	0.0003	(0.0004)
fourth year $(t-4)$	-0.001	(0.001)	0.0007	(0.0004)
fifth year $(t-5)$	0.00001	(0.001)	-0.0004	(0.0004)
Number of previous jobs				
first year $(t-1)$	-0.007	(0.001)	-0.002	(0.001)
second year $(t-2)$	-0.004	(0.001)	0.000	(0.001)
third year $(t-3)$	0.002	(0.001)	0.000	(0.001)
fourth year $(t-4)$	0.001	(0.001)	0.001	(0.001)
fifth year $(t-5)$	0.002	(0.001)	0.001	(0.001)
$(\text{first year})^2$	0.0001	(0.00004)	0.000	(0.000)
% of year employed				
first year $(t-1)$	-0.037	(0.017)	0.006	(0.011)
second year $(t-2)$	0.003	(0.016)	-0.007	(0.010)
third year $(t-3)$	-0.026	(0.017)	-0.019	(0.011)
fourth year $(t-4)$	0.016	(0.017)	-0.034	(0.010)
fifth year $(t-5)$	-0.005	(0.017)	-0.003	(0.010)

Continued on next page.

Table A-2 — continued from previous page.

	Women		Men	
	Marginal effect	(SE)	Marginal effect	(SE)
(first year)^2	0.049	(0.014)	0.002	(0.009)
(second year)^2	-0.003	(0.014)	0.006	(0.008)
(third year)^2	0.014	(0.015)	0.013	(0.009)
(fourth year)^2	-0.020	(0.015)	0.026	(0.009)
(fifth year)^2	0.008	(0.015)	0.002	(0.009)
% of year marginally employed				
first year ($t-1$)	0.293	(0.014)	0.218	(0.012)
second year ($t-2$)	0.064	(0.015)	0.093	(0.012)
third year ($t-3$)	0.099	(0.017)	0.061	(0.015)
fourth year ($t-4$)	0.131	(0.018)	0.053	(0.017)
fifth year ($t-5$)	0.076	(0.020)	0.052	(0.018)
(first year)^2	-0.202	(0.015)	-0.155	(0.012)
(second year)^2	-0.063	(0.018)	-0.092	(0.015)
(third year)^2	-0.082	(0.018)	-0.055	(0.017)
(fourth year)^2	-0.124	(0.020)	-0.049	(0.021)
(fifth year)^2	-0.073	(0.022)	-0.046	(0.021)
first year * second year	-1.686	(1.380)	-0.887	(1.251)
first year * third year	-2.089	(1.536)	1.828	(1.465)
first year * fourth year	0.026	(1.800)	-2.261	(1.896)
first year * fifth year	3.900	(1.608)	0.637	(1.737)
first year * previously employed	0.011	(0.008)	0.005	(0.006)
first year * monthly wage in $t-1$	0.004	(0.001)	-0.0001	(0.001)
Number of previous unemployment spells				
first year ($t-1$)	-0.008	(0.002)	-0.002	(0.001)
second year ($t-2$)	-0.005	(0.002)	-0.0002	(0.001)
third year ($t-3$)	-0.008	(0.002)	-0.002	(0.001)
fourth year ($t-4$)	-0.002	(0.002)	-0.001	(0.001)
fifth year ($t-5$)	-0.004	(0.002)	-0.001	(0.001)
(first year)^2	0.0002	(0.0001)	0.0001	(0.0001)
% of year unemployed				
first year ($t-1$)	-0.001	(0.006)	0.001	(0.004)
second year ($t-2$)	0.025	(0.006)	0.006	(0.004)
third year ($t-3$)	0.005	(0.007)	0.008	(0.004)
fourth year ($t-4$)	-0.002	(0.007)	-0.0001	(0.004)
fifth year ($t-5$)	0.013	(0.006)	0.001	(0.004)
% of year on maternity leave				
first year ($t-1$)	-0.014	(0.028)	—	
second year ($t-2$)	0.003	(0.019)	—	
third year ($t-3$)	0.005	(0.019)	—	
fourth year ($t-4$)	0.007	(0.020)	—	
fifth year ($t-5$)	0.034	(0.018)	—	
(first year)^2	0.013	(0.026)	—	
(second year)^2	0.013	(0.018)	—	
(third year)^2	-0.014	(0.018)	—	
(fourth year)^2	-0.010	(0.019)	—	
(fifth year)^2	-0.023	(0.019)	—	
N no ME (N ME)	86907 (9788)		94580 (5039)	

Note: Marginal effects evaluated at the mean of the dependent variable.
Wages are Euros, deflated to 1995 prices.

Table A-3: Testing of joint significance in logit estimation.

Variables (degrees of freedom)	Women χ^2	Men χ^2
Education (5)	10.82[a]	29.43
Occupation (7)	96.75	158.02
Previous employment spells (5)	24.37	12.80[e]
Previous unemployment spells (5)	85.67	23.94
Previous days employed (5)	7.11[b]	18.70
Previous days marginally employed (5)	712.35	606.47
Previous days unemployed (5)	40.14	10.81[f]
Previous days maternity leave (5)	5.34[c]	—
Previous wages (5)	12.01[d]	9.95[g]
All of these (42)	1123.95	943.83

Note: All test statistics have p-values of less than 0.01 except: [a]0.0551, [b]0.2124; [c]0.3764; [d]0.0347; [e]0.0254; [f]0.0552; [g]0.0765.

ARBEITSPAPIERE 1991-2006

des Instituts für Volkswirtschaftslehre, Johannes Kepler Universität Linz

9101 WEISS, Christoph: Price inertia and market structure under incomplete information. Jänner 1991. in: *Applied Economics*, 1992.

9102 BARTEL, Rainer: Grundlagen der Wirtschaftspolitik und ihre Problematik. Ein einführender Leitfaden zur Theorie der Wirtschaftspolitik. Jänner 1991; Kurzfassung erschienen unter: Wirtschaftspolitik in der Marktwirtschaft, in: *Wirtschaft und Gesellschaft*, 17. 1991,2, S. 229-249

9103 FALKINGER, Josef: External effects of information. Jänner 1991

9104 SCHNEIDER, Friedrich; Mechanik und Ökonomie: Keplers Traum und die Zukunft. Jänner 1991, in: R. Sandgruber und F. Schneider (Hrsg.), "*Interdisziplinarität Heute*", Linz, Trauner, 1991

9105 ZWEIMÜLLER, Josef, WINTER-EBMER, Rudolf: Manpower training programs and employment stability, in: *Economica*, 63. 1995, S. 128-130

9106 ZWEIMÜLLER, Josef: Partial retirement and the earnings test. Februar 1991, in: *Zeitschrift für Nationalökonomie / Journal of Economics*, 57. 1993,3, S. 295-303

9107 FALKINGER, Josef: The impacts of policy on quality and price in a vertically integrated sector. März 1991. Revidierte Fassung: On the effects of price or quality regulations in a monopoly market, in: *Jahrbuch für Sozialwissenschaft*.

9108 PFAFFERMAYR, Michael, WEISS, Christoph R., ZWEIMÜLLER, Josef: Farm income, market wages, and off-farm labour supply, in: *Empirica*, 18, 2, 1991, S. 221-235

9109 BARTEL, Rainer, van RIETSCHOTEN, Kees: A perspective of modern public auditing. Pleading for more science and less pressure-group policy in public sector policies. Juni 1991, dt. Fassung: Eine Vision von moderner öffentlicher Finanzkontrolle, in: *Das öffentliche Haushaltswesen in Österreich*, 32. 1991,3-4, S. 151-187

9110 SCHNEIDER, Friedrich and LENZELBAUER, Werner: An inverse relationship between efficiency and profitability according to the size of Upper--Austrian firms? Some further tentative results, in: *Small Business Economics*, 5. 1993,1, S. 1-22

9111 SCHNEIDER, Friedrich: Wirtschaftspolitische Maßnahmen zur Steigerung der Effizienz der österreichischen Gemeinwirtschaft: Ein Plädoyer für eine aktivere Industrie- und Wettbewerbspolitik. Juli 1991, in: *Öffentliche Wirtschaft und Gemeinwirtschaft in Österreich*, Wien, Manz, 1992, S. 90-114

9112 WINTER-EBMER, Rudolf, ZWEIMÜLLER, Josef: Unequal promotion on job ladders, in: *Journal of Labor Economics, 15. 1997,1,1, S. 70-71*

9113 BRUNNER, Johann K.: Bargaining with reasonable aspirations. Oktober 1991, in: *Theory and Decision*, 37, 1994, S 311-321.

9114 ZWEIMÜLLER, Josef, WINTER-EBMER, Rudolf: Gender wage differentials and private and public sector jobs. Oktober 1991, in: *Journal of Population Economics*, 7. 1994, S. 271-285

9115 BRUNNER, Johann K., WICKSTRÖM, Bengt-Arne: Politically stable pay-as-you-go pension systems: Why the social-insurance budget is too small in a democracy. November 1991, in: *Zeitschrift für Nationalökonomie = Journal of Economics*, 7. 1993, S. 177-190.

9116 WINTER-EBMER; Rudolf, ZWEIMÜLLER, Josef: Occupational segregation and career advancement. Dezember 1991, in: *Economics Letters*, 39. 1992, S. 229-234

***

9201 SCHNEIDER, Friedrich: Ecological objectives in a market economy: Three simple questions, but no simple answers? Jänner 1992, in: Giersch, H. (Hrsg.), *Environmental economics*, Heidelberg, Springer-Verl., 1993

9202 SCHNEIDER, Friedrich: The federal and fiscal structures of representative and direct democracies as models for a European federal union: Some preliminary ideas using the public-choice approach, in: *Journal des Economistes et des Etudes Humaines*, 3. 1993,2

9203 SCHNEIDER, Friedrich: The development of the shadow economy under changing economic conditions: Some tentative empirical results for Austria. Revised version. März 1992.

9204 HACKL, Franz, SCHNEIDER, Friedrich, WITHERS, Glenn: The public sector in Australia: A quantitative analysis. März 1992, in: Gemmell, N. (ed), *The growth of the public sector*, Aldershot, Elgar, 1993, S. 212-231

9205 SCHNEIDER, Friedrich: The federal and fiscal structures of western democracies as models for a federal union in former communist countries? Some thoughts using the public-choice approach. April 1992, in: Wagner, H.-J. (ed.), *On the theory and policy of systematic change*, Heidelberg, Springer-Verl., 1993, S. 135-154

9206 WINTER-EBMER, Rudolf: Endogenous growth, human capital, and industry wages. in: *Bulletin of Economic Research*, 4/1994, 289-314.

9207 BARTEL, Rainer: Gleichgewicht, Ungleichgewicht und Anpassung in der komparativen Statik. August 1992; 1. Teil erschienen unter: Auf welchen Grundlagen beruhen unsere ökonomischen Aussagen? in: *Wirtschaft und Gesellschaft*, 19, 2, 1993, S. 153-170; 2. Teil erschienen unter: Neoklassische Rationierung, in: *WiSt*, 23, 3, 1993, S. 151-154

9208 WEISS, Christoph R.: Market structure and pricing behaviour in Austrian manufacturing. August 1992. in: *Empirica*, 21. 1994, S. 115-131.

9209 WINTER-EBMER, Rudolf: Unemployment and individual pay: Wage curve or compen-sating differentials? erscheint u.d.T.: Wage Curve, Unemployment Duration and Compensating Differentials, in: *Labour Economics*, 3/1996,4, S. 425-434

9210 SCHUSTER, Helmut: Chaostheorie und Verkehrswissenschaft? September 1992, in: *Österreichische Zeitschrift für Verkehrswissenschaft*, 1-2, 38. 1992, S. 48-51

9211 BARTEL, Rainer, PRUCKNER, Gerald: Strukturelle und konjunkturelle Charakteristika der Budgetpolitik von Bund und Gesamtstaat in Österreich. Oktober 1992, in: *Wirtschaftspolitische Blätter*, 40. 1993,2, S. 134-154

9212 PFAFFERMAYR, Michael: Foreign direct investment and exports: A time series approach. Oktober 1992

9213 HACKL, Franz, SCHNEIDER, Friedrich: Austrian economic policy since 1945: An ex-ploratory analysis. Oktober 1992, in: Paldam, M. (ed.), *Economic development of small open economies in Europe and South America*, Basingstoke, Macmillan, forthcoming 1994

9214 SCHNEIDER, Friedrich: Die Kunst als Wirtschaftsfaktor - vernachlässigbar oder beach-tenswert? Oktober 1992, in: *Musicologica Austriaca*, 11. 1993,1, S. 19-29

9215 SCHNEIDER, Friedrich: Measuring the size and the development of the shadow economy: Can the causes be found and the obstacles be overcome? November 1992, in: Brandstätter, Hermann and Güth, W. (eds.), *Essays on Economic Psychology*, Heidelberg, Springer-Verl., 1994, S. 208-211

9216 SCHNEIDER, Friedrich: Public choice - economic theory of politics: A survey in selected areas. Dezember 1992, in: Brandstätter, Hermann and Güth, W. (eds.), *Essays on*

Economic Psychology, Heidelberg, Springer-Verl., 1994, S. 188-192

***

9301 SCHUSTER, Helmut: Energiepolitik im Spannungsfeld zwischen Wirtschaft und Umwelt. Jänner 1993, in: Friedrich Schneider (Hrsg.), *Energiepolitik in Österreich*, Linz, Trauner, 1993

9302 WINTER-EBMER, Rudolf: Motivation to migrate and economic success. März 1993, erscheint u.d.T.: Motivation for Migration and Economic Success, in: *Journal of Economic Psychology*, 15. 1994, S. 282-284

9303 LANDESMANN, Michael and GOODWIN, Richard: Productivity growth, structural change and macroeconomic stability. März 1993

9304 PFAFFERMAYR, Michael: Foreign outward direct investment and exports in Austrian manufacturing. März 1993

9305 BARTEL, Rainer: Zur Ökonomie der öffentlichen Finanzkontrolle. April 1993, erschienen unter: Öffentliche Finanzkontrolle als politische Machtkontrolle. Eine ökonomische Fundierung, in: *Politische Vierteljahresschrift*, 34. 1993,4, S. 613-639

9306 HACKL, Franz: Die Internalisierung von überbetrieblichen Leistungen der Landwirtschaft aus allokationstheoretischer Sicht. April 1993.

9307 ZWEIMÜLLER, Josef, WINTER-EBMER, Rudolf, FALKINGER, Josef: Retirement of spouses and social security reform, in: *European Economic Review*, 40/1996, S. 471-472

9308 BRUNNER, Johann K.: Abilities, needs, and the size of the cake: an axiomatic bargaining approach to redistributive taxation. Juli 1993.

9309 HACKL, Franz, PRUCKNER, Gerald: Touristische Präferenzen für den ländlichen Raum: Die Problematik ihrer empirischen Erfassung und Internalisierung. Juli 1993. Ersch. in: Gesellschaftliche Forderungen an die Landwirtschaft / Gesellschaft für Wirtschafts- und Sozialwissenschaften des Landbaues (GEWISOLA), hrsg. von Konrad Hagedorn ... 1994, Schriften der GEWISOLA, Bd. 30

9310 NECK, Reinhard, SCHNEIDER, Friedrich: Steuersystem und Schattenwirtschaft. Juli 1993.

9311 POINTNER, Johannes und SCHNEIDER, Friedrich: Österreich im internationalen Writschaftssystem, August 1993, in: Ewald Nowotny und Günther Winckler (Hrsg.), *Grundzüge der Wirtschaftspolitik Österreichs*, 1994.

9312 SCHNEIDER, Friedrich: The Relationship between efficiency and profitability with respect to the size of firms: an empirical investigation for Austria. September 1993.

9313 ÖTSCH, Walter: Die mechanistische Metapher in der Theoriengeschichte der Nationalökonomie. September 1993.

9314 BARTEL, Rainer: Wirtschaftspolitische Kontrolle und Beratung: Grundlagen, Probleme, Erfordernisse. September 1993, erschienen als: Kontrolle und Beratung in der Wirtschaftspolitik, in: *Wirtschaftspolitische Blätter*, 41. 1994,4, S. 442-462

9315 BARTH, Erling and ZWEIMÜLLER, Josef: Relative wages under decentralized and under corporatist bargaining systems, in: *Scandinavian Journal of Economics*, 97. 1995,3, S. 369-384

9316 FALKINGER, Josef and ZWEIMÜLLER, Josef: The impact of income inequality on product diversity and economic growth. Oktober 1993.

9317 SCHNEIDER, Friedrich: Anreizorientierte Systeme im Gesundheitswesen unter besonderer Berücksichtigung des stationären Sektors. Oktober 1993.

9318 HORSTMANN, Winfried and SCHNEIDER, Friedrich: Deficits, bailout and free riders: Fiscal elements of European constitution. Oktober 1993.

9319 BARTEL, Rainer: Egoismus, Altruismus, Ineffizienz und Kontrolle im öffentlichen Bereich: Ein kurzer Blick auf die Argumente und ihre Implikationen. November 1993, in: *Wirtschaft und Gesellschaft*, 20. 1994,2, S. 231-246

9320 BURGER, Christina: Theorien der Koalitionsbildung und ihre Anwendbarkeit auf österreichische Regierungen. November 1993.

9321 BARTEL, Rainer: Konjunkturelle Selbststabiliseriung oder kompensatorische Nachfragepolitik? Ein Leitfaden für Studenten. Dezember 1993, tw. erschienen unter: Konjunkturprobleme - Selbstheilung oder Staatseingriffe?, in: *WISO*, 17. 1994,4, S. 111-39, erscheint tw. unter: Lohnindexierung - Effiziente Institution zur Stabilisierung der Wirtschaft?, in: *WiSt*, 26. 1997,3, S. 154-156

***

9401 WINTER-EBMER, Rudolf, ZWEIMÜLLER, Josef: Immigration and the Earnings of Young Native Workers. Jänner 1994, in: *Oxford Economic Papers*, 48. 1996, S. 473-491

9402 KUNST, Robert, HAUSER, Michael: Fractionally Integrated Models With ARCH Errors. Jänner 1994.

9403 ZWEIMÜLLER, Josef, WINTER-EBMER, Rudolf: Internal Markets and Firm-Specific Determination of Earnings in the Presence of Immigrant Labor, in: *Economics Letters*, 48. 1995, S. 185-191

9404 SCHUSTER, Helmut: Energie und Umwelt. März 1994.

9405 PFAFFERMAYR, Michael: Testing for Ownership Advantages of Direct Investing Firms. März 1994.

9406 SCHNEIDER, Friedrich: Determinanten der Steuerhinterziehung und der Schwarzarbeit im internationalen Vergleich. März 1994.

9407 FALKINGER, Josef: Social Stability and the Equity-Efficiency Trade-off. April 1994.

9408 WINTER-EBMER, Rudolf, ZWEIMÜLLER, Josef: Do Immigrants Displace Native Workers? Mai 1994, erscheint in: *Journal of Population Economics*, 1998.

9409 FALKINGER, Josef: How to overcome free-riding: Rewarding deviations from average. Mai 1994. Revidierte Fassung: Efficient Private Provision of Public Goods by Rewarding Deviations from Average, in: *Journal of Public Economics*, 62. 1996,3, S. 413-422

9410 ZWEIMÜLLER, Josef: Wealth distribution, innovations, and economic growth. Mai 1994.

9411 GANTNER, Manfried, SCHNEIDER, Friedrich: Budgetausgliederungen - eine polit-ökonomische Analyse. Juni 1994.

9412 AIGINGER, Karl: The use of game theoretical models for empirical research - A survey of testing non-cooperative game theory with real world data in recent industrial organization literature. Juni 1994.

9413 FALKINGER, Josef: The private provision of public goods when the relative size of contribution matters. Juli 1994, in: *Finanzarchiv*, 51, 1994, S. 358 - 371.

9414 WINTER-EBMER, Rudolf: Sex discrimination and competition in product and labour markets, in: *Applied Economics*, 27. 1995,9, S. 849-857

9415 FALKINGER, Josef, ZWEIMÜLLER, Josef: The cross-country Engel curve for product diversification, August 1994, in: *Structural Change and Economic Dynamics*, 7. 1996,1, S. 79-97

9416 FALKINGER, Josef: Tax evasion, consumption of public goods and fairness, August 1994, in: *Journal of Economics Psychology*, 16, 1995, S. 63 - 72.

9417 SCHNEIDER, Friedrich: Einige Gedanken zur Harmonisierung indirekter Steuern in der Europäischen Union, September 1994.

9418 WINTER-EBMER, Rudolf: Firm size, earnings and displacement risk, Oktober 1994, erscheint in: *Economic Inquiry*, 2000.

9419 WEISS, Christoph: Labour market adjustment in U.S. manufacturing: Does market structure matter? Oktober 1994.

9420 WEISS, Christoph: State dependence, symmetry and reversibility of off-farm employment, November 1994.

9421 SCHNEIDER, Friedrich: Is there a European public choice perspective?, Dezember 1994.

***

9501 BARTEL, Rainer: Reform des öffentlichen Sektors - Grundlagen und Grundsätze, Jänner 1995.

9502 RIESE, Martin: The GINI-index as a measure of the goodness of prediction, Jänner 1995, in: *Bulletin of Economic Research*, 49. 1997,2, S. 127-135.

9503 AIGINGER, Karl, WINTER-EBMER, Rudolf und ZWEIMÜLLER, Josef: Eastern European Trade and the Austrian Labour Market, in: *Weltwirtschaftliches Archiv*, 132. 1996,3, S. 476-500

9504 WEISS, Christoph: Size, Growth, and Survival of Upper Austrian Farms in the 1980s, Februar 1995. in: Sotte, F. and Zanoli, R.: "The Regional Dimension of Agricultural Economics and Politics", forthcoming (1995).

9505 BARTEL, Rainer: Umweltpolitik in den Reformländern Europas. Voraussetzungen und Erfordernisse, Februar 1995.

9506 PFAFFERMAYR, Michael: Foreign Outward Direct Investment and Exports in Austrian Manufacturing: Substitutes or Complements?, March 1995.

9507 BURGER, Christina, SCHNEIDER, Friedrich: How Valuable is the Health of the Elderly- Evaluation of the Treatment of Alzheimer's Disease; April 1995.

9508 BRUNNER, Johann, RIESE, Martin: Measuring the Severity of Unemployment, April 1995.

9509 SCHNEIDER, Friedrich: Volkswirtschaftliche Aspekte der Mitarbeiterbeteiligung, Mai 1995.

9510 ÖTSCH, Walter: Erwartungen und Framing. Keynes und die "Anomalien" der Erwartungsnutzentheorie, Mai 1995.

9511 ÖTSCH, Walter: Die Herausforderung des Konstruktivismus für die ökonomische Theorie, Mai 1995, in: Birger P. Priddat und Gerhard Wegner, Hrsg., Zwischen Evolution und Institution, Metropolis-Verl., Marburg, 1996, S. 35 - 55

9512 ÖTSCH, Walter: Kreativität und Logik im ökonomischen Handlungsmodell, Mai 1995.

9513 WEISS, Christoph: Determinants of Farm Survival and Growth, Mai 1995.

9514 BARTEL, Rainer: Zum Verhältnis von Ökonomie und Politik des öffentlichen Sektors. Einige kurze Anmerkungen, Juni 1995.

9515 KUNST, Robert M.: The Myth of Misspecification. Some Metaphors, Juni 1995.

9516 VAN DER BURG, Brigitte, SIEGERS, Jacques, WINTER-EBMER, Rudolf: Gender and Promotion in the Academic Labour Market. Juli 1995.

9517 FALKINGER, Josef, FEHR, Ernst, GÄCHTER, Simon, WINTER-EBMER, Rudolf: A simple mechanism for the efficient private provision of public goods - experimental evidence, August 1995, erscheint in: *American Economic Review*, 1999.

9518 SCHNEIDER, Friedrich: Some Elements of a European Federal Union: A Public Choice Approach, September 1995.

9519 BRUNNER, Johann, FALKINGER, Josef: Nonneutrality of taxes and subsidies for the private provision of public goods, September 1995.

9520 WEISS, Christoph: Product Market Power and Dynamic Labour Demand, September 1995.

9521 LANDESMANN, Michael, PFAFFERMAYR, Michael: Technological Competition and Trade Performance, October, 1995.

***

9601 WEISS, Christoph: Exits From a Declining Sector: Econometric Evidence From a Panel of Upper-Austrian Farms 1980-90., Jänner 1996.

9602 BÖS, Dieter und SCHNEIDER, Friedrich: Private-public partnership: Gemeinschaftsunternehmen zwischen Privaten und der öffentlichen Hand, Februar 1996.

9603 GÄCHTER, Simon, FEHR, Ernst, KMENT, Christiane: Does Social Exchange Increase Voluntary Cooperation?, Februar 1996.

9604 ZWEIMÜLLER, Josef, BRUNNER, Johann: Heterogeneous consumers, vertical product differentiation and the rate of innovation, März 1996.

9605 SCHNEIDER, Friedrich: The Contributions of Werner W. Pommerehne to Public Choice, März 1996.

9606 SEDJAV, Tsagaan-Uvgun: Wissenschaftlich-technologische Entwicklungsfragen der Mongolei, April 1996, Wissenschaftlicher Betreuer: o.Univ.-Prof. Dr. Helmut Schuster, B.Com.

9607 KEUSCHNIGG, Christian u. KOHLER Wilhelm: Innovation, Capital Accumulation and Economic Transition, revised version April 1996.

9608 AIGINGER, Karl: Beyond Trade Balances: the competitive race between the US, Japan and Europe, Juni 1996.

9609 POMMEREHNE, Werner W., HART, Albert und SCHNEIDER, Friedrich: Tragic Choices and Collective Decision-Making: An Empirical Study of Voter Preferences for Alternative Collective Decision-Making Mechanisms, Juli 1996.

9610 BARTEL, Rainer, POINTNER, Johannes, SCHNEIDER, Friedrich: Österreich im internationalen Wirschaftssystem, Juli 1996, erschienen in: E.Nowotny und G. Winckler (Hg.), Grundzüge der Wirtschaftspolitik Österreichs, 2. Aufl., Manz-Verlag, Wien 1997, S. 49-98.

9611 SCHNEIDER, Friedrich, VOLKERT, Jürgen: Die Realisierung ökologisch-orientierter Wirtschaftspolitik - eine Unmöglichkeit? Überlegungen aus Sicht der Neuen Politischen Ökonomie, Juli 1996.

9612 AIGINGER, Karl, WEISS, Christoph R.: Does it Pay to be Flexible? Empirical Evidence on the Relation- ship between Labour Demand Flexibility and Profit Margins, Juli 1996.

9613 WEISS, Christoph R.: Beneficial Concentration in a Menu Cost Model: A Note, August 1996.

9614 GUSENLEITNER, Markus, WINTER-EBMER, Rudolf, ZWEIMÜLLER, Josef: The Distribution of Earnings in Austria, 1972-1991, *Allgemeines Statistisches Archiv*, 3/98.

9615 WINTER-EBMER, Rudolf:: Benefit Duration and Unemployment Entry: Quasi-Experimental Evidence for Austria, Oktober 1996.

9616 WINTER-EBMER, Rudolf:: Potential Unemployment Benefit Duration and Spell Length: Lessons from a Quasi-Experiment in Austria, in: *Oxford Bulletin of Economics and Statistics*, 60. 1998,1, S. 33-45

9617 SCHNEIDER, Friedrich, FREY, Bruno S.: Warum wird die Umweltökonomik kaum angewendet?, November 1996.

9618 SCHNEIDER, Friedrich: Aktuelle Ergebnisse über die Schattenwirtschaft (Pfusch) in Österreich, November 1996.

9619 KOHLER, Wilhelm: Die langfristige Entwicklung der Transformationsländer Osteuropas: Welche Rolle spielt die Integration der Märkte?, Dezember 1996.

9620 BRUNNER, Johann K., PRINZ, Christopher, WIRTH, Friedrich: Die Zukunft der gesetzlichen Pensionsversicherung, Dezember 1996.

9621 SCHNEIDER, Friedrich, GAWEL, Erik: Umsetzungsprobleme ökologisch orientierter Steuerpolitik: Eine polit-ökonomische Analyse, Dezember 1996.

***

9701 SCHNEIDER, Friedrich: Hält der EURO, was er verspricht? Ökonomische Überlegungen zur Stabilität und zur Einführung des EURO, Jänner 1997.

9702 SCHNEIDER, Friedrich: Welche Chancen hat Österreich als Wirtschaftsstandort im EU- und Globalisierungskontext derzeit und in Zukunft?, Jänner 1997.

9703 BRUNNER, Johann K.: Ökonomische Analyse des umlagefinanzierten Pensionsversicherungssystems, Jänner 1997.

9704 PFAFFERMAYR, Michael, WEISS, Christoph R.: On Market Power and Investment Behaviour, January 1997.

9705 LANDESMANN, Michael A., STEHRER, Robert: Industrial Specialisation, Catching-up and Labour Market Dynamics, January 1997.

9706 BARTEL, Rainer: Taking even introductory textbooks seriously. A note on the importance of a usual neglect, February 1997.

9707 KUNST, Robert M.: Decision bounds for data-admissible seasonal models, March 1997.

9708 WINTER-EBMER, Rudolf, ZWEIMÜLLER, Josef: Intra-firm Wage Dispersion and Firm Performance, *Kyklos*, 1999.

9709 PRITZL, F. J. Rupert und SCHNEIDER, Friedrich: Korruption, März 1997.

9710 SCHNEIDER, Friedrich: Empirical Results for the Size of the Shadow Economy of Western European Countries Over Time, März 1997.

9711 SCHNEIDER, Friedrich und VOLKERT, Jürgen: No Chance for Incentive-orientated Environmental Policies in Representative Democracies? A Public Choice Approach, März 1997.

9712 FALKINGER, Josef: Wachstum, Verteilung und Beschäftigung, März 1997.

9713 PRITZL, F. J. Rupert und SCHNEIDER, Friedrich: Zur Politischen Ökonomie autokratischer politischer Systeme - Ein theoretischer und empirischer Ansatz, April 1997.

9714 SCHUSTER, Helmut: Das Phänomen der strukturellen Arbeitslosigkeit und Maßnahmen zu seiner Bekämpfung„ Mai 1997.

9715 BARTEL, Rainer: Paradigmatik versus Pragmatik in der (Umwelt-)Ökonomie. Eine epistemologische Sicht, Mai 1997.

9716 BERGER, Helge und SCHNEIDER, Friedrich: Does the Bundesbank Yield in Conflicts? Frey and Schneider Revisited, Juni 1997.

9717 RIESE, Martin und BRUNNER, Johann K.: Interpreting risk with demographic statistics, Juni 1997.

9718 KUNST, Robert M.: Asymptotics for Unit-Root Processes with Underspecified Deterministic Structures, Juni 1997.

9719 GAWEL, Erik und SCHNEIDER, Friedrich: Implementation Problems of Eco-Taxation: A Political-Economy Analysis, Juli 1997

9720 PRITZL, Rupert und SCHNEIDER, Friedrich: Political Economy of Autocratic Political Regimes: A Theoretical and Empirical Approach, Juli 1997

9721 WINTER-EBMER, Rudolf: Unknown Wage Offer Distribution and Job Search Duration, *Economics Letters*, 1998.

9722 BRUNNER, Johann K.: Optimal Taxation of Income and Bequests, August 1997

9723 KEUSCHNIGG, Christian and KOHLER, Wilhelm: Eastern Enlargement of the EU: How Much is it Worth for Austria?, November 1997

9724 HOFER, Helmut, KEUSCHNIGG, Christian und Wilhelm KOHLER, A Dynamic Applied General Equilibrium Model for the Austrian Economy With Special Emphasis on the Eastern EU Enlargement, November 1997.

***

9801 WINTER-EBMER, Rudolf und Klaus F. ZIMMERMANN: East-West Trade and Migration: The Austro-German Case, Jänner 1998, erscheint in: Jaime de Melo, Riccardo Faini und Klaus F. Zimmermann (eds.): Trade and Factor Mobility, Cambridge (CUP).

9802 ICHINO, Andrea und Rudolf WINTER-EBMER: The Long-Run Educational Cost of World War 2: An Application of Local Average Treatment Effect Estimation, Jänner 1998.

9803 SCHNEIDER, Friedrich: Deregulierung und Privatisierung als Allheilmittel gegen ineffiziente Produktion von öffentlichen Unternehmen? Ein Erklärungsversuch mit Hilfe der ökonomischen Theorie der Politik, Jänner 1998.

9804 SCHNEIDER, Friedrich: Märkte, Moral und Umwelt: Was sagt die Ökonomie dazu?, Jänner 1998.

9805 LENK, Thomas, FUGE, Heidi und SCHNEIDER, Friedrich: Zurück zu mehr Föderalismus: Ein Vorschlag zur Neugestaltung des Finanzausgleichs in der BRD unter besonderer Berücksichtigung der ökonomischen Theorie der Politik, Jänner 1998.

9806 SCHNEIDER, Friedrich: Stellt das starke Anwachsen der Schwarzarbeit eine wirtschaftspolitische Herausforderung dar? Einige Gedanken aus volkswirtschaftlicher Sicht, Jänner 1998.

9807 SCHNEIDER, Friedrich: Einige grundlegende Elemente einer europäisch-föderalen Verfassung unter Zuhilfenahme der konstitutionellen ökonomischen Theorie, Jänner 1998.

9808 LANDESMANN, Michael: Vertical produkt differentiation and international trade: an econometric analysis, März 1998.

9808a BARTEL, Rainer: Öffentliche Finanzen, Finanzkontrolle und gesellschaftliche Wohlfarht. Volkwirtschaftliche Thesen, Antithesen und mögliche Synthesen, März 1998. Erschienen in überarbeiteter Version in: F. Klug (Hrsg.), Wesen und staatspolitische Funktion der öffentlichen Finanzkontrolle, Schriftenreihe des Instituts für Kommunalwissenschaften an der Universität Linz, Bd. 107, S. 85-127.

9809 AIGINGER, Karl und PFAFFERMAYR, Michael: Product quality, cost asymmetry and the welfare loss of oligopoly, Februar 1998.

9810 KOHLER, Wilhelm: Die Ost-Erweiterung der EU: Eine österreichische Perspektive, April 1998.

9811 BERGER, Mathias und SCHNEIDER, Friedrich: Schattenwirtschaft und Steuerhinterziehung: Ökonomische und psychologische Aspekte, April 1998.

9812 SCHNEIDER, Friedrich und STIEGLER, Harald: Controlling als effizienzsteigerndes Instrument der Universitätsführung – Zauber- oder Leerformel?, April 1998.

9813 KUNST, Robert M.: Some aspects of modeling seasonality in economic time series, Juni 1998.

9814 KOHLER, Wilhelm: Fifty Years Later: A New Marshall Plan for Eastern Europe?, Juli 1998.

9815 RAPHAEL, Steven und WINTER-EBMER, Rudolf: Identifying the Effect of Unemployment on Crime, September 1998.

9816 ICHINO, Andrea und WINTER-EBMER, Rudolf: Lower and Upper Bounds of Returns to Schooling: An Exercise in IV Estimation with Different Instruments, September 1998, erscheint in: *European Economic Review*, 1999.

9817 PÖLL, Günther und SCHNEIDER, Friedrich: Schattenwirtschaft, Juli 1998.

9818 BRUNNER, Johann K.: Kapitaldeckungsverfahren versus Umlageverfahren: Grundsätzliches zur Systemdiskussion, August 1998.

9819 SCHNEIDER, Friedrich und ENSTE, Dominik: Increasing Shadow Economies all over the world - Fiction or Reality? A Survey of the Global Evidence of its Size and of its Impact from 1970 to 1995, November 1998.

9820 LENK, Thomas und SCHNEIDER, Friedrich: Zurück zu mehr Föderalismus: Ein Vorschlag zur Neugestaltung des Finanzausgleichs in der Bundesrepublik Deutschland unter besonderer Berücksichtigung der neuen Bundesländer, November 1998.

9821 KOHLER, Wilhelm: Die Bedeutung der EU-Osterweiterung für verschiedene Sektoren der österreichichen Wirtschaft, November 1998.

9822 KOHLER, Wilhelm: Die pan-europäische Integration: Herausforderungen für die Wirtschaftswissenschaft, November 1998.

9823 ATKINSON, Anthony B.: The Changing Distribution of Income: Evidence and Explanations (1. K.W. Rothschild Vorlesung), November 1998.

9824 PECH, Susanne und PFAFFERMAYR, Michael: Strategic Environmental Taxation in the Presence of Involuntary Unemployment and Endogenous Location Choice, November 1998.

9825 BARTEL, Rainer: Reform und Öffnung Osteuropas, November 1998.

9826 ÖTSCH, Walter: Zur Geschichte und Zukunft von Grundkategorien des ökonomischen Denkens: Raum, Zeit, Objekt und Ich, November 1998.

9827 ÖTSCH, Walter: „Äußere“ und „Innere“ Glücksmodelle in der Theoriegeschichte der Ökonomie, November 1998, erscheint in: Zinn, Bellebaum und Schaaf: Ökonomie und Glück, Frühjahr 1999.

9828 ÖTSCH, Walter: Konstruktivismus und ökonomische Theorie, November 1999, erscheint in: Lehmann und Pillath: Handbuch der Evolutorischen Ökonomik, Springer Verlag, 1999.

***

9901 WINTER-EBMER, Rudolf and ZWEIMÜLLER, Josef: Firm Size Wage Differentials in Switzerland: Evidence from Job Changers, Jänner 1999, erscheint in: *American Economic Review, Papers & Proceedings*, 1999.

9902 BRANDSTÄTTER, Eduard, KÜHBERGER, Anton und SCHNEIDER, Friedrich: "Surprise in Decision making under Uncertainty, Jänner 1999.

9903 SCHNEIDER, Friedrich und WAGNER, Alexander: "The Role of International Monetary Institutions after the EMU and after the Asian Crises: Some Preliminary Ideas Using Constitutional Economics", Februar 1999

9904 BRUNNER, Johann K.: Transfers zwischen den Generationen, Februar 1999.

9905 LACKÓ, Mária: Hidden Economy – An Unknown Quantity? Comparative Analysis of Hidden Economies in Transition Countries in 1989-1995, Februar 1999

9906 KOHLER, Wilhelm: Trade and Wages: What Can Factor Contents Tell Us? Februar 1999.

9907 LANDESMANN, Michael und STEHRER Robert: The European Unemployment Problem: A Structural Approach, März 1999.

9908 SCHNEIDER, Friedrich: Das Verhältnis von Innovation und Beschäftigung aus wirtschaftlicher Sicht – Jobkiller oder Jobwunder?, Mai 1999.

9909 SCHNEIDER, Friedrich und LENK, Thomas: Zurück zum Trennsystem als Königsweg zu mehr Föderalismus in Zeiten des „Aufbau Ost", Juni 1999.

9910 SCHNEIDER, Friedrich: Die Entwicklung der Sozialpolitik in repräsentativen und in direkten Demokratien: Königsweg oder Sackgasse? Einige Bemerkungen aus der „Public Choice"-Perspektive, Juni 1999.

9911 SCHNEIDER, Friedrich: Ist Schwarzarbeit ein Volkssport geworden? Ein internationaler Vergleich des Ausmaßes der Schwarzarbeit von 1970 bis 1997, Juni 1999.

9912 FELBERMAYR, Gabriel, und KOHLER, Wilhelm: Zur ökonomischen Logik spekulativer Attacken, Juli 1999.

9913 FERSTERER, Josef und WINTER-EBMER, Rudolf: Returns to Education - Evidence for Austria, August 1999.

9914 BARTEL, Rainer: Social economic issues in sexual orientation – Where do we stand?, September 1999.

9915 SCHNEIDER, Friedrich und ENSTE, Dominik: Shadow Economies: Sizes, Causes, and Consequences, September 1999.

9916 BARTEL, Rainer: Ökonomische Rationalität im System der öffentlichen Finanzkontrolle. Die Funktionalität des neuen Oö. Landesrechnungshofs. September 1999.

9917 FERSTERER, Josef und Rudolf WINTER-EBMER: Are Austrian Returns to Education Falling Over Time?, Oktober 1999.

9918 SCHNEIDER, Friedrich und WINNER, Hannes: Ein Vorschlag zur Reform der österreichischen Unternehmensbesteuerung, November 1999.

9919 SCHNEIDER, Friedrich: Induzieren ökologische Steuerreformen einen Lenkungseffekt oder nur volle Staatskassen? Einige volkswirtschaftliche Überlegungen, November 1999.

9920 KOHLER, Wilhelm: Wer gewinnt, wer verliert durch die Osterweiterung der EU?, November 1999.

9921 DRÈZE, Jacques: On the Macroeconomics of Uncertainty and Incomplete Markets, November 1999.

9922 STIGLBAUER, Alfred M. und WEISS, Christoph R.: Family and Non-Family Succession in the Upper-Austrian Farm Sector, Dezember 1999.

9923 HOLZLEITNER, Christian: Linear Profit-Sharing in Regulatory Contracts, Dezember 1999.

9924 ÖTSCH, Walter: Objekt, Subjekt und Wert. Zur Kulturgeschichte in Georg Simmels "Philosophie des Geldes", Dezember 1999.

***

0001 KOHLER, Wilhelm: Die Osterweiterung der EU aus der Sicht bestehender Mitgliedsländer: Was lehrt uns die Theorie der ökonomischen Integration?, Jänner 2000.

0002 FERSTERER, Josef und WINTER-EBMER, Rudolf: Smoking, Discount Rates, and Returns to Education, Jänner 2000.

0003 BARTEL, Rainer: Quo vadimus. Grundgedanken zum Verhältnis von Wirtschaft, Staat und Gesellschaft, Februar 2000.

0004 SCHNEIDER, Friedrich und FREY, Bruno S.: Informal and Underground Economy, Februar 2000.

0005 SCHNEIDER, Friedrich und FELD, Lars P.: State and Local Taxation, Februar 2000.

0006 ZWEIMÜLLER, Josef und WINTER-EBMER, Rudolf: Firm-specific Training - Consequences for Job Mobility, März 2000.

0007 SCHNEIDER, Friedrich: Schattenwirtschaft – Tatbestand, Ursachen, Auswirkungen, April 2000

0008 SCHNEIDER, Friedrich: The Increase of the Size of the Shadow Economy of 18 OECD Countries: Some Preliminary Explanations, April 2000.

0009 SCHNEIDER, Friedrich und AHLHEIM, Michael: Allowing for Household Preferences in Emission Trading – A Contribution to the Climate Policy Debate, Mai 2000

0010 SCHNEIDER, Friedrich: Illegal Activities, but still value added ones (?): Size, Causes, and Measurement of the Shadow Economies all over the World, Mai 2000.

0011 WEICHSELBAUMER, Doris: Is it Sex or Personality? The Impact of Sex-Stereotypes on Discrimination in Applicant Selection, Mai 2000.

0012 FELBERMAYR, Gabriel, und KOHLER, Wilhelm: Effizienz- und Verteilungswirkungen der Handelsliberalisierung, Juni 2000.

0013 EGGER, Peter und PFAFFERMAYR, Michael: Trade, Multinational Sales, and FDI in a Three-Factors Model, Juni 2000.

0014 LANDESMANN, Michael und STEHRER, Robert: Potential Switchovers in Comparative Advantage: Patterns of Industrial Convergence, Juni 2000.

0015 SCHNEIDER, Friedrich und WAGNER, Alexander: Korporatismus im europäischen Vergleich: Förderung makroökonomischer Rahmenbedingungen?, Juli 2000.

0016 SCHNEIDER, Friedrich und LENK, Thomas: Grundzüge der föderalen Finanzverfassung aus ökonomischer Perspektive: Trennsystem vs. Verbundsystem, Juli 2000.

0017 HOLZLEITNER, Christian: Efficient Cost Passthrough, August 2000.

0018 HOLZLEITNER, Christian: Evolution of Regulatory Contracts in the Real World - A Change for Good?, August 2000.

0019 KOHLER, Wilhelm: International Fragmentation: A Policy Perspective, August 2000.

0020 KOHLER, Wilhelm: A Specific-Factors View on Outsourcing, August 2000.

0021 WEICHSELBAUMER, Doris: Sexual Orientation Discrimination in Hiring, September 2000.

0022 KOHLER; Wilhelm: Internationale Migration: Anmerkungen aus der Sicht der Außenwirtschaftstheorie, Oktober 2000.

0023 AIGINGER, Karl und DAVIES, S.W.: Industrial Specialisation and geographic Concentration: Two sides of the same coin? Not for the European Union, Oktober 2000.

0024 EGGER, Hartmut und EGGER, Peter: Outsourcing and Skill-Specific Employment in a Small Economy: Austria and the Fall of the Iron Curtain, Oktober 2000.

0025 KOHLER, Wilhelm: An Incumbent Country View on Eastern Enlargement of the EU - Part I: A Gerneral Treatment, November 2000.

0026 KOHLER, Wilhelm: An Incumbent Country View on Eastern Enlargement of the EU - Part II: The Austrian Case, November 2000.

0027 FREY, Bruno S.: What are the sources of happiness?, November 2000

0028 RIESE, Martin: Weakening the SALANT-condition for the Comparison of mean durations, Dezember 2000

0029 WINTER-EBMER, Rudolf: Long-term consequences of an innovative redundancy-retraining project: The Austrian Steel Foundation, Dezember 2000.

0030 BRUNNER, Johann K. und PECH, Susanne: Adverse Selection in the annuity market when payoffs vary over the time of retirement, Dezember 2000.

***

0101 KOHLER, Wilhelm: Osterweiterung der EU: Die Mitgliedschaft wird teurer – Wird sie auch wertvoller?, Jänner 2001.

0102 STEHRER, Robert: Industrial specialisation, trade, and labour market dynamics in a multisectoral model of technological progress, Jänner 2001.

0103 SCHNEIDER, Friedrich; SALHOFER, Klaus; SCHMID, Erwin, und STREICHER, Gerhard: Was the Austrian Agricultural Policy Least Cost Efficient?, März 2001.

0104 SCHNEIDER, Friedrich; KIRCHLER, Erich und MACIEJOVSKY, Boris: Social Representations on Tax Avoidance, Tax Evasion, and Tax Flight: Do Legal Differences Matter?, März 2001.

0105 SCHNEIDER, Friedrich; PITLIK, Hans, und STROTMANN, Harald: On the Politicization of Intergovernmental Fiscal Relations in Germany after Unification, März 2001.

0106 SCHNEIDER, Friedrich: Privatisierung und Deregulierung in Österreich in den 90er Jahren: Einige Anmerkungen aus Sicht der Neuen Politischen Ökonomie, März 2001.

0107 SCHNEIDER, Friedrich; BRAITHWAITE, Valerie, and REINHART, Monika: Individual Behavior in the Cash / Shadow Economy in Australia: Facts, Empirical Findings and some Mysteries, März 2001.

0108 BRUNELLO, Giorgio; LUCIFORA, Claudio, und WINTER-EBMER, Rudolf: The Wage Expectations of European College Students, März 2001.

0109 BRUNNER, Johann K. und PECH, Susanne: Die Dritte Säule der Altersvorsorge - Sparen und Versichern?, Juni 2001.

0110 STÖGER, Klaus und WINTER-EBMER, Rudolf: Lehrlings-ausbildung in Österreich: Welche Betriebe bilden Lehrlinge aus? Juli 2001.

0111 HEIJDRA, Ben J.; KEUSCHNIGG, Christian, und KOHLER, Wilhelm: Eastern Enlargement of the EU: Jobs, Investment and Welfare in Present Member Countries, Oktober 2001

0112 BRUNNER, Johann und BUCHEGGER, Reiner: Gesundheitsgüter und Gesundheitsdienstleistungen in Österreich, Dezember 2001.

0113 MALINVAUD, Edmond: On methodolgy in macroeconomics – with application to the demand for unskilled labour, November 2001.

***

0201 KOHLER, Wilhelm: The Distributional Effects of International Fragmentation, April 2002.

0202 WINTER-EBMER, Rudolf and WIRZ, Aniela: Public Funding and Enrolment into Higher Education in Europe, April 2002.

0203 KOHLER, Wilhelm: Issues of US-EU Trade Policy, May 2002.

0204 BRUNNER, Johann K. und PECH, Susanne: Adverse selection in the annuity market with sequential and simultaneous insurance demand, May 2002.

0205 Stiglbauer, Alfred, Stahl, Florian, Winter-Ebmer, Rudolf and Josef Zweimüller: Job Creation and Job Destruction in a Regulated Labor Market: The Case of Austria, July 2002.

0206 BÖHEIM, René und TAYLOR, Mark P: Job search methods, intensity and success in Britain in the 1990s, July 2002.

0207 BURGSTALLER, Johann: Are stock returns a leading indicator for real macroeconomic developments?, July 2002.

0208 KOHLER, Wilhelm: Aspects of International Fragmentation, August 2002.

0209 PECH Susanne: Tax incentives for private life annuities and the social security reform: effects on consumption and on adverse selection, August 2002.

0210 BRUNELLO, Giorgio and WINTER-EBMER, Rudolf: Why Do Students Expect to Stay Longer in College? Evidence from Europe, August 2002.

0211 RIESE, Martin: A New Class of Ageing Distributions, December 2002.

0212 BRUNNER, Johann K.: Welfare Effects of Pension Finance Reform, December 2002.

***

0301 SCHNEIDER, Friedrich and BAJADA, Christopher: The Size and Development of the Shadow Economies in the Asia-Pacific, April 2003.

0302 SCHNEIDER, Friedrich, CHAUDHURI, Kausik and CHATTERJEE, Sumana: The Size and Development of the Indian Shadow Economy and a Comparison with other 18 Asian Countries: An Empirical Investigation, April 2003.

0303 SCHNEIDER, Friedrich, WAGNER, Alexander F. and DUFOUR, Mathias: Satisfaction not guaranteed - Institutions and sastisfaction with democracy in Western Europe, April 2003.

0304 SCHNEIDER, Friedrich and WAGNER; Alexander, F.: Tradeable permits - Ten key design issues, April 2003.

0305 KOHLER, Wilhelm: Factor Price Frontiers with International Fragmentation of Multistage Production, April 2003.

0306 BURGSTALLER, Johann: Interest Rate Transmission to Commercial Credit Rates in Austria, May 2003.

0307 WEICHSELBAUMER, Doris and WINTER-EBMER, Rudolf: The effects of competition and equal treatment laws on the gender wage differential, July 2003.

0308 MAYR, Karin: Immigration and Majority Voting on Income Redistribution - Is there a Case for Opposition from Natives?, July 2003.

0309 BRUNNER, Johann K.: Optimum taxation of income from labour and capital in a dynamic two-person economy, September 2003.

0310 BRUNNER, Johann K.: Optimale direkte und indirekte Steuern bei unterschiedlicher Anfangsausstattung, September 2003.

0311 WEICHSELBAUMER, Doris and WINTER-EBMER, Rudolf: A meta-analysis of the international gender wage gap, September 2003.

0312 WEICHSELBAUMER, Dors and WINTER-EBMER, Rudolf: Rhetoric in Economic Research: The Case of Gender Wage Differentials, September 2003.

0313 DULLECK, Uwe, FRIJTERS, Paul and WINTER-EBMER, Rudolf: Reducing Start-up costs for New Firms. The Double Dividend on the Labor Market, October 2003.

0314 Aiginger, Karl: Insufficient investment into future growth: the forgotten cause of low growth in Germany, November 2003

0315 FELBERMAYR, Gabriel J. and LICANDRO, Omar: The underestimated virtues of the two-sector AK model, December 2003.

0316 KOHLER, Wilhelm: Eastern Enlargement of the EU: A Comprehensive Welfare Assessment, December 2003.

0317 RODRIK, Dani: Growth Strategies, December 2003.

***

0401 FELBERMAYR, Gabriel and KOHLER, Wilhelm: Immigration and Native Welfare, February 2004.

0402 FELBERMAYR, Gabriel: Specialization on a Technologically Stagnant Sector Need Not Be Bad for Growth, March 2004.

0403 SCHNEIDER, Friedrich and KLINGLMAIR, Robert: Shadow Economies around the World: What do we know?, April 2004.

0404 BELKE, Ansgar and SCHNEIDER, Friedrich: Privatization in Austria: Some Theoretical Reasons and Performance Measures, June 2004.

0405 SCHNEIDER, Friedrich and BURGER, Christina: Formal and Informal Labour Markets: Challenges and Policy in the Central and Eastern European new EU Members and Candidate Countries, June 2004.

0406 SCHOR, Juliet: Sustainable Consumption and Worktime Reduction, June 2004.

0407 FELBERMAYR, Gabriel: Does Trade Cause Divergence? Dynamic Panel Data Evidence, Juni 2004.

0408 BUCHEGGER, Reiner and WÜGER Michael: Private Expenditures for Children in Austria - Variations in Results applying different Models, July 2004.

0409 MAYR, Karin: The Fiscal Impact of Immigrants in Austria – A Generational Accounting Analysis, July 2004.

0410 HALLA, Martin: Unterhalt, Obsorge und Scheidungsanwälte: Eine ökonometrische Untersuchung der einvernehmlichen Scheidung in Österreich., August 2004.

0411 RAFERZEDER, Thomas and WINTER-EBMER Rudolf: Who is on the Rise in Austria: Wage Mobility and Mobility Risk, September 2004.

0412 PECH, Susanne: Adverse Selection with individual- and joint-life annuities, November 2004.

0413 LICHTENECKER, Ruperta: Gender Budget Analyse: Akademische Übung oder politische Relevanz?, December 2004.

0414 PECH, Susanne: Portfolio decisions on life annuities and financial assets with longevity and income uncertainty, December 2004.

0415 HACKL, Franz, HALLA, Martin and PRUCKNER, Gerald, J.: The Fallacy of the Good Samaritan: Volunteering as a Weird Way of Making Money, December 2004.

***

0501 BUCHEGGER, Reiner and RIEDL, René: Asymmetric Information as a Cause for Market Failure - Application Service Providing (ASP) in Austria, January 2005.

0502 SCHNEEWEIS, Nicole and WINTER-EBMER, Rudolf: Peer Effects in Austrian Schools, March 2005.

0503 BURGSTALLER, Johann: When and why do Austrian companies issue shares?, April 2005.

0504 BÖHEIM, René, STIGLBAUER, Alfred and WINTER-EBMER, Rudolf: When and how to create a job: The survival of new jobs in Austrian firms, May 2005.

0505 HALLA, Martin, SCHNEIDER, Friedrich: Taxes and Benefits: Two Distinct Options to Cheat on the State?, August 2005

0506 BRUNNER, Johann and PECH, Susanne: Optimum Taxation of Life Annuities, November 2005.

0507 SCHUSTER, Helmut: Reduktionismus, interaktionistischer Eigenschafts-Dualismus und Epiphänomenalismus, Dezember 2005.

0508 DULLECK, Uwe and KERSCHBAMER, Rudolf: Price Discrimination via the Choice of Distribution Channels, December 2005.

0509 DULLECK, Uwe and KERSCHBAMER, Rudolf: Experts vs. Discounters: Consumer Free Riding and Experts Withholding Advice in Markets for Credence Goods, December 2005.

0510 BURGSTALLER, Johann: Interest rate pass-through estimates from vector autoregressive models, December 2005.

0511 HACKL Franz, HALLA Martin and PRUCKNER, Gerald, J.: Coasian Payments for Agricultural External Benefits – An Empirical Cross Section Analysis, December 2005.

0512 BÖHEIM René and MAYR, Karin: Immigration and Public Spending, December 2005.

***

0601 LICHTENECKER, Ruperta: Umwelttechnikindustrie-Zukunftsmarkt China, Jänner 2006

0602 BURGSTALLER, Johann: The cyclicality of interest rate spreads in Austria: Evidence for a financial decelerator?, July 2006.

0603 DREHER, Axel and SCHNEIDER, Friedrich: Corruption and the Shadow Economy: An Empirical Analysis, July 2006.

0604 SAVASAN, Fatih and SCHNEIDER, Friedrich: What Determines Informal Hiring? Evidence from the Turkish Textile Sector, July 2006.

0605 SCHNEIDER, Friedrich, SOOKRAM Sandra and WATSON, Patrick Kent: Characteristics of the Household Sector of the Hidden Economy in an Emerging Economy, July 2006.

0606 BELKE, Ansgar, BAUMGÄRTNER, Frank, SETZER, Ralph and SCHNEIDER, Friedrich: The Different Extent of Privatisation Proceeds in EU Countries: A Preliminary Explanation Using a Public Choice Approach, July 2006.

0607 DELL'ANNO, Roberto and SCHNEIDER, Friedrich: Estimating the Underground Economy by Using MIMIC Models: A Response to T. Breusch´s critique, July 2006.

0608 SCHNEIDER, Friedrich and TORGLER, Benno: What Shapes Attitudes Toward Paying Taxes? Evidence from Multicultural European Countries, July 2006.

0609 DREHER Axel, MÉON, Pierre-Guillaume, SCHNEIDER, Friedrich and WEILL, Laurent: Does the shadow economy raise observed aggregate efficiency? A cross-country comparison, July 2006.

0610 PROHL, Silika and SCHNEIDER, Friedrich, Sustainability of Public Debt and Budget Deficit: Panel cointegration analysis for the European Union Member countries, July 2006.

0611 BURGSTALLER, Johann: Bank income and profits over the business and interest rate cycle, July 2006.

0612 BÖHEIM, René and WEBER, Karin: The effects of marginal employment on subsequent labour market outcomes, July 2006.