The effects of the "Dutch Employment and Security Act (WWZ)" on Dutch labor market outcomes

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Abstract

This paper aims to evaluate the effectiveness of the "Dutch Employment and Security Act", referred to as the WWZ from here on, that was implemented on January 1st, 2015. The effectiveness is measured in terms of differences in effects of the type of contract of employees, over time, and between different groups, on multiple labor market outcomes. The LISS panel data is used, which provides data for the years before (2013, 2014) and after (2015 up to and including 2019) the reform. A difference-in-difference analysis is applied where the treatment group is defined as employees in 2014 with flexible contracts, and the control group as employees in 2014 with permanent contracts. The main finding, the effect of the WWZ on the type of contract employees receive, is that the WWZ implementation leads to a higher chance for the group that is defined as 'outsider' in the period before the implementation, to receive a permanent contract and therefore can be defined as 'insider' in the period after implementation. The other analyzed labor market outcomes that are affected by the WWZ are job duration and employment.

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1. Introduction

Policymaking does not always enforce the desired effect among the target group. Moreover, unintended effects can occur as a result of certain policy implementations. Within the past decades, lots of expectations about development within the Dutch labor market have been made by scientific researchers (Gründemann, 2018). More specifically, in the context of flexibilization of the labor market, growth in flexible contracts was expected, at least until 2020. However, as a consequence of the economic crisis that started in 2008, this growth in flexibilization turned out to be much stronger than anticipated, whereas the number of employees with a permanent contract dropped sharply. Only 64% of the Dutch population had a permanent contract in 2016, while this was still 80% in 2000 (CBS Statline, 2018). The Rutte II cabinet attempted to improve the labor market positions of employees with flexible contracts by implementing the WWZ in 2015, a reform of the former Dutch employment protection legislation. The aim was to enable flex workers to move on to positions with permanent contracts, among others by making the dismissal law simpler, and less costly. Also, dismissed employees have become entitled to a transition payment. These measures are predominantly focused on the employers behavior in terms of hiring. Hence, it has become easier for employers to dismiss employees, and therefore to hire new permanent employees. However, the reform has not yet led to the desired outcomes (Gründemann, 2018).

1.1 Background

The Netherlands knows an extensive history of employment protection legislation, with the implementation of the WWZ in 2015 and subsequently the implementation of the 'Balanced Labour Market Act', referred to as the WAB from here on, in 2020 (Rijksoverheid, n.d.; Heerma van Voss, 2001; Ministerie van Sociale Zaken en Werkgelegenheid, 2019). This has led to some important implications for certain groups within the Dutch labor force. There are numerous shortcomings attached to the WWZ, especially for older employees (Pennings & Sprengers, 2020). First of all, due to the fact that the severance payment is higher for older employees, because they are less likely to be hired again because of their old age, a negative tendency occurred among employers, to not hire old-aged employees at all, in order to prevent paying this large severance payment in case of a dismissal. Another limitation is the widening of the gap in job security between insiders (workers with a permanent contract) and outsiders (fixed-term employment and flex workers) (Pennings & Sprengers, 2020). This is illustrated by measures from 2018, which show that the share of permanent contracts has increased slightly, but the share of flexible contracts has increased more in comparison (CBS Statline, 2022). Therefore, even though it is still early to draw conclusions, based on this data the WWZ can be considered as not yet successful.

However, according to Bouwens (2016), the WWZ also has positive effects on employees. The possibilities for employers to use temporary contracts for structural work have become limited (Bouwens, 2016). In addition, a lack of grounds for dismissal can no longer lead to actual dismissal, regardless of the financial resources that employers would like to use to compensate. It seems like more social security duties have become a responsibility of the employer. However, since a larger burden is now associated with permanent employment contracts, and since self-employed persons enjoy substantial benefits compared to regular employees, permanent contracts are under pressure. Therefore, the net effect is relative; on the one hand, the effect is positive because job security for employees receiving a permanent contract will grow, but on the other hand, the effect is negative because the WWZ implementation might result in negative consequences for Dutch employers in terms of higher risks for providing permanent contracts. Since employees enjoy more job security, employers should follow more strict rules or pay higher fees to make dismissals more difficult.

1.2 Research question

Since the aim of this research is to evaluate the WWZ in terms of labor market outcomes, the central question that will be answered within this research is:

"What are the effects of the "Dutch Employment and Security Act" on labor market outcomes in the Netherlands, and what are the potential disparities in effects between the group of insiders and outsiders?"

The WWZ entails three important changes: Dismissal law, the positioning of flex workers on the labor market, and unemployment benefits (Heyma et al., 2020a). The labor market outcomes that will be analyzed are the development of the number of temporary contracts, the hourly wages, the job duration of workers, and the overall employment. A difference-in-difference analysis enables to look at the effects between different groups on the labor market, comparing insiders to outsiders before and after the implementation of the WWZ.

1.3 Academic and societal relevance

The existing scientific and academic knowledge can be expanded by using a difference-in-difference method as a tool for policy evaluation, specifically the evaluation of the WWZ. Numerous researchers already examined the implications of the WWZ (Bouwens, 2016; Van Zanten-Baris, 2014; Engelsman & Van Slooten, 2015; Heyma et al., 2020b). The evaluation by the Foundation of Economic Research (SEO), written by Heyma et al., focused mainly on the efficiency and effectiveness goals, in terms of balancing flexibility and job security, activating dismissal laws and unemployment benefits, and in terms of achieving legal certainty and justice (Heyma et al., 2020b). This paper will contribute to the evaluation by investigating the effects of the WWZ implementation on labor market outcomes, in terms of employment contracts, wages, job duration, and employment. This means that the balance between permanent and temporary workers is examined again, but the scope focuses extensively on the effect on the Dutch employees and the consequences for their income and job security.

The relevance for society here is that policymakers are able to steer employers' behavior to affect the current situation in the labor market, which can be described as a 'booming' economy. The specific market failure that the Dutch government aims to solve is a growing dichotomy within the labor market: Low-educated people with flexible employment contracts versus highly educated people with permanent jobs; a dichotomy between outsiders and insiders. The employers have the market power to provide permanent contracts, which makes it the task of the government to influence the employer's behavior through policymaking. However, an unintended consequence of the WWZ implementation might be that employers will dismiss employees with flexible contracts, or that flex workers will be much harder to find (Van Vliet, 2019). The two main stakeholders here, the employees and employers, have different needs (Van der Wiel, 2010): The employers claim that they are incapable of adapting to current economic circumstances due to the high costs of firing employees, whereas the employees complain about the increased firing risk they are facing. It is up to the Dutch policymakers to accommodate both groups through policy. Their aim is to increase the security offered by employment contracts, especially for flexible employees, without increasing the burden for the employers. If the policy appears to work successfully, this could be beneficial for both the employees and the employers. The employees will experience less uncertainty and will be offered a better future perspective, whereas the employers benefit from fewer long dismissal procedures. The problem this policy aims to solve is a smoother transition from unemployment to finding a job. Through evaluating this policy, it will become clear whether the 'WWZ'

succeeds or whether it needs improvements. Important to note is that the effects measured in this paper, are solely the effects on the labor market outcomes, and therefore the effects on employees.

The WWZ has already been evaluated before (Heyma et al., 2020b). The main conclusion in this report is that the implementation led to an increased flow of employees with temporary contracts to permanent contracts, but solely for the group of high-educated employees and elderly. Youngsters and low-educated employees are moving on to permanent contracts at the same pace as before the implementation of the WWZ. It is interesting to analyze whether the harm done to the latter group exceeds the gain for the first group. In the analysis, the effects on these different groups are taken into consideration. However, since the WWZ implementation, the number of people starting a job based on a flexible contract has increased. The share of this group is also increasing because the share of starters who immediately receive a permanent contract is decreasing for some years already (CBS Statline, 2022). This might be a problem since independent and flexible workers experience a lack of social protection (Vonk & Jansen, 2017). According to in-depth interviews with employers, executed by the SEO researchers, it became clear that in general, employers are not yet willing to immediately offer new employees a permanent contract, despite the reforms brought by the WWZ. According to the outcomes of the interviews, this is mainly due to the new transition payment.

The results of the evaluation are based on existing studies that examined the effectiveness of the WWZ measures regarding dismissal, unemployment, and flexible employment. The report consists of three main sections; the effects of the flex measures within the WWZ (Van der Werff et al., 2020), the effects of the dismissal measures (Heyma et al., 2020a), and the effects of the unemployment law (WW) and the law that provides income for older unemployed (IOW) (Lammers et al., 2020). The evaluation report states that there is a greater flow from flexible to regular labor contracts, based on CBS-microdata statistics.

This paper introduces the use of data from the LISS panel dataset. It focuses on the effects of these different measures on the type of contracts among Dutch employees. In contrast with the evaluation from 2020, this paper examines the effect on consequences for employees in terms of four different labor market outcomes. Therefore, the paper will enrich current existing knowledge, and it will add value to the 2020 assessment by zooming in on possible causal relationships between the WWZ and specific labor market outcomes. The labor market outcomes provide an indication of the job security that employees experience under the WWZ reform.

1.4 Outline

To emphasize the deductive nature of the research, this paper starts with a literature review in chapter two. There are multiple internationally oriented studies that focused on the effect of employment protection legislation on different types of outcomes. Furthermore, as mentioned in the previous paragraphs, there is a Dutch policy evaluation that has been executed in 2020, which provides important insights into the effects of the WWZ on specifically Dutch employees and employers. This paper complements the evaluation from 2020. At the end of chapter two, two Hypotheses are formulated. Subsequently, in chapter three of this paper, the literature review is complemented by the data analysis. Based on panel data from the LISS database, a regression analysis is executed in chapter four, to verify whether there is in fact a difference in effects on different groups within the labor market, as is hypothesized in chapter two (LISS panel, n.d.). The results of the analysis are discussed as well in chapter four. Whereas the evaluation of the SEO claims that the flow from flexible contracts to permanent contracts differs

per group, differentiated based on age and educational attainment, the outcome of the empirical analysis of this paper shows the opposite. In the fifth chapter, the final conclusion based on the literature review and the data analysis is formulated. In this case, the conclusion of this paper partly agrees with the existing knowledge, but new evidence is found as well. Based on the conclusion one of the hypotheses will be rejected. A recommendation for further research is to shift the focus from employees to employers and look at ways in which the burden of giving out permanent contracts can be diminished.

As stated by the evaluation of the SEO, the flow of employees with flexible contracts towards permanent contracts increased after the WWZ reform (Heyma et al., 2020b). In contrast, the number of starters receiving flexible and fixed-term contracts increased. This increases inflow into temporary contracts has increased further, also because the inflow into permanent contracts is decreasing for some years already. Therefore, the evaluation of SEO is not as positive about the effectiveness as other research claimed (Bouwens, 2016). These mixed results make it more interesting to examine the effects of the WWZ based on recent panel data, thus adding valuable knowledge to existing scientific empirical evidence.

2. Theoretical framework

Multiple theories define the effects that employment protection legislation might have on different labor market outcomes. The decision to give an employee a fixed- or permanent contract lies with the employer, but this decision could be influenced up to a certain degree by governmental policy, such as employment protection legislation. For instance, in a cross-country analysis of 17 OECD countries, the relationship between employment protection legislation and economic growth is analyzed (Belot et al., 2007). The authors find a non-linear relation between employment protection legislation, which indicates that at low levels of employment protection, an increase in protection leads to a growth in welfare, whereas at high levels of employment protection, additional protection will be harmful to economic growth. The optimal level of employment protection depends on other labor market features as well, among others bargaining power and wage rigidities are important determinants. This chapter examines which specific outcomes are influenced by the implementation of employment protection legislation in different contexts.

2.1 Effect on type of contract; the insider-outsider theory

The labor market exists for two different types of workers, based on their contracts. On the one hand, there are workers with flexible and fixed contracts, who are hired by firms for a specific period of time. This group is identified as outsiders. On the other hand, there are workers with permanent contracts. This is the group identified as insiders. These contracts are concluded for an indefinite period of time. According to Lindbeck & Snower (2002), the insiders experience benefits in terms of protection by labor turnover costs (LTCs). These LTCs are the costs for employers associated with the dismissals and for training new potential employees. The outsiders do not benefit from this protection, which makes the burden for employers to dismiss this second group lower (Lindbeck & Snower, 2002). The insider-outsider theory explains how these labor turnover costs give the insiders their market power and subsequently how this power is affecting their own job security, how it is affecting the outsiders' job security, and how it is affecting macroeconomic activities, such as employment, unemployment (among different market segments), inflation and wages. The insider-outsider theory is relevant for this research since it is determining the effect that employment protection legislation could have on employee's types of contracts. When there are high LTCs, employers are less likely to dismiss their current employees, and therefore they are less likely to hire new permanent contracts. As a consequence of the implementation of the WWZ, these LTCs are lowered to create an incentive among employers to hire more permanent workers.

According to the literature, employment protection legislation affects these groups differently and influences their social status (Lindbeck & Snower, 2002). Since one of the main goals of the WWZ is to further the equality of rights, it would be interesting to test whether the implementation of the WWZ affects the group of outsiders differently than the group of insiders (Pennings & Sprengers, 2020). While the advocates of the insider-outsider theory state that job security regulation is especially beneficial for one of the parties and not so much for the group already experiencing job security, Emmenegger (2009) states that it might be equally beneficial for both groups (Emmenegger, 2009; Rueda, 2006). The simplicity of comparing the difference between insiders and outsiders with the difference between unemployed and employed workers is too crude. The conclusion is that the two groups, and especially the outsiders, should be carefully considered and defined when distinguishing them from the group of insiders. Rueda does this by distinguishing an additional group besides the insiders and outsiders, namely the upscale group (Rueda, 2006). This latter group identifies as independent workers, for instance, freelancers or independent professionals. It is important to make this distinction, since this group does not have a contract under a specific employer, and therefore cannot be subdivided

under one of the two groups (insiders or outsiders). The upscale group described by Rueda is therefore left behind.

2.2 Wage effects

The empirical evidence of the effects of employment protection on wages is limited. The effects that employment protection legislation could have on wages becomes clear from an experimental study within the Italian labor market (Leonardi & Pica, 2013). This research is conducted as a consequence of the 1990 reform indicating unjust dismissal costs for small firms. The research states that there is an effect of employment protection on wages, but it is mediated by the relative bargaining power of workers and firms. They found a negative effect between employment protection legislation and wages. However, the research differentiates between groups in terms of 'blue-' and 'white-collar' workers, age, bargaining power, and employment, instead of insiders and outsiders. The negative effect is stronger for young blue-collar workers, workers with low-bargaining power at the low end of the wage drift distribution, and workers in regions with low employment rates. This suggests that the degree to which employers are able to shift dismissal costs onto their wages depends on the bargaining power of employees. The experiment is executed in Veneto, a large and rich region with small-sized firms, which is comparable to other regions within Europe, and therefore the results are generalizable.

2.3 Effects on job duration

Job duration is related to the type of contract individuals have since the job duration of employees with flexible and fixed contracts is limited (Karabchuk, 2020). The preference for employment protection comes with a trade-off between lower living standards since employment protection maintains employees in less productive jobs, and longer job duration (Saint-Paul, 2002). According to other scientifical findings, employment protection inevitably leads to a decrease in job flows, and therefore longer job duration (Wolfers, 2005).

2.4 Employment consequences

Besides the effect on the type of contract that employees tend to receive as a consequence of the WWZ reform, another labor market outcome of interest is employment. The empirical evidence about the effect of employment protection on employment is however mixed. The research of Skedinger claims that while more stringent employment protection legislation leads to less turnover and job reallocations, the effects on overall employment remain uncertain (Skedinger, 2011). Moreover, the research concludes that especially the labor market prospects of the youth and other marginal groups seem to become worse as a result of more stringent employment protection legislation. For the youth can be stated that they have lower opportunity costs than for instance the elderly, since continuing their education is a realistic and acceptable alternative. However, for other marginal groups such as migrants and disabled individuals, this is not the case. The question asked there is to what extent the weakening of the labor market position of these groups can be tolerated. Therefore the authors recommend incentives for employers to substitute temporary employees for permanent employees. This link is found in another article as well, where the authors look for a link between the Employment Protection Legislation (EPL) index and the youth unemployment rate (Potuzáková, & Bílková, 2022). Their calculations show a very strong link between these two variables, which is in line with the conclusion of Skedinger. This link is confirmed by the article of Khan as well (2007), which found international microeconomic evidence for the impact of employment protection. Mandates on demographic temporary employment patterns. In this article, more stringent employment protection legislation leads to higher unemployment among low-skilled, youth, native women, and immigrant women (Khan, 2007).

Despite multiple scientific results that show a negative link between employment protection legislation and employment, other researchers found fewer concrete results. One article examines the effect of employment protection legislation on aggregate and youth unemployment in advanced economies during the period from 1980 to 2009, but this did not lead to clear results (Avdagic, 2015). The conclusion of the author is that tackling unemployment by implementing employment protection legislation will not be sufficient let alone effective. In line with this result, Heimberger (2021) finds an average effect of EPL on unemployment of zero (Heimberger, 2021).

2.5 Contradictory findings

Not all research concludes that employment protection legislation could lead to efficient labor market outcomes. In the article of Holmlund (2014), it is stated that despite employment protection legislation reducing labor and job turnover, there is not a clear effect on overall employment and productivity. The presence of labor turnover costs is important to consider when measuring the effects of employment protection on wages and employment (Holmlund, 2014). High labor turnover costs give the employees a more powerful bargaining position, which might lead to better wages and overall employment may decrease. However, as mentioned, employment and productivity in itself might not increase as a consequence of the implementation of employment protection legislation. Employers will be more hesitant to dismiss their employees, which is positive for overall employment. However, employers are also more hesitant to hire new employees since there is less outflow. This is confirmed by the fact that employment protection increases youth unemployment relatively more than unemployment among adults. The net effect of these two mechanisms will be analyzed in the empirical Analysis in chapter four.

The fact that labor market policies affect certain groups within a society differently becomes clear from the research of Baranowska & Gebel (2010). They studied the impact of labor market institutions on the youth relative temporary employment probability in 23 European countries (Baranowska & Gebel, 2010). The results imply that neither employment protection of regular contracts nor protection of temporary contracts significantly affects the relative risk of these young people. Contrarily, they find a positive association between the collective bargaining power and this group's relative temporary employment risk. This risk of insecure and inferior employment is mainly attributable to the youth, while the core workforce is relatively well protected. There remains however a cross-country variation among the results, which can be explained by macro-structural and labor market institutional factors (Esping-Andersen, 2000; Breen, 2005).

2.6 Hypotheses

The hypotheses to be tested in this paper are twofold.

H_0: There is no difference in WWZ effects on labor market outcomes between the group of insiders and outsiders.
H_1: There is a difference in WWZ effects on labor market outcomes between the group of insiders and outsiders.

Based on the research of Högberg et al., it is assumed that the implementation of the WWZ will not affect the group of insiders, since they already experience more job security because of the indefinite period of their contract (Högberg et al., 2019; Lindbeck & Snower, 2001).

The theoretical framework consists of the potential effects of employment protection legislation on different determinants of labor market outcomes. The insider-outsider theory, which claims that the labor market position of insiders substantially differs from the position of outsiders, could determine the degree to which employment protection legislation leads a certain type of contract. This depends on the LTCs and the employer's decision, which can be influenced by government policies. Furthermore, there exist some clashing predictions when it comes to the effect of employment protection on wages and employment. Job duration is related to the type of contract that employees have and is therefore expected to show similar effects as the types of contract variable. The empirical analysis in chapter four will provide more specific information about the effects on each of the labor market outcomes in the Dutch context.

3. Research design

The ideal design for evaluating a policy is a difference-in-difference design, where the situation before and after the implementation is analyzed, as well as the implications for different groups. This analysis assumes that the effect of the WWZ on different labor market outcomes might be less substantial for the group of insiders, than for the group of outsiders, since it is especially the group of outsiders who need employment protection in the first place (Bentolila et al., 2012). The group outsiders have a more fragile attachment to their job, since they have less employment protection and consequently suffer more from high turnover rates. This difference in effect is tested by creating two groups, differing in the type of contract, and looking at the effects over time.

3.1 Institutional setting in the Netherlands

The three main goals of the WWZ, compared to the initial employment protection legislation, are to make employment protection legislation less complex and less costly for employers, to reduce the need for litigation and to further the equality of rights, and lastly to improve the functioning of the labor market (Pennings & Sprengers, 2020). This paper focuses on the latter goal and therefore evaluates the WWZ with regard to labor market outcomes. The concrete changes, and their assessed effects on employers and employees, that came along with the WWZ are extensively explained in the evaluation by the SEO (Heyma et al., 2020b). The first adjustment concerns the rule that determines when successive fixed-term contracts change into permanent contracts. After the WWZ reform, this is the case after three fixed-term contracts if a period of two years is exceeded. Before, this was a period of three years. Other relevant consequences of the WWZ reform are among others, the transition payment, and the extension of the interval in which contracts must succeed each other. These are reforms that aim to steer employers' behavior toward the hiring of permanent employees (Heyma et al, 2020b). The evaluation by the SEO concludes the same findings as Gründemann (2018), being that the inflow of flexible workers increased continuously in the period from 2014 to 2018. This pattern is linked to the fact that the share of permanent workers has been declining for years now. However, another trend is an increased flow of employees with temporary contracts toward permanent contracts.

3.2 Data

The data being used for the empirical analysis is from the LISS Panel Data Archive surveys, collected between 2013 and 2019 (LISS panel, n.d.). This period is well suited as the WWZ was implemented in 2015, whereas the next reform (WAB) was implemented in 2020. By focusing on the interval that starts two years before the WWZ was implemented, and the five consecutive years in which the WWZ was solely in force, the policy can be evaluated without potential interference from other employment protection legislation. The data used for measuring the pre-WWZ effects are from the period April-May of 2013 and 2014 (since the WWZ is implemented on January 1st of 2015), whereas the post-WWZ measurement is based on data from April-May 2015, until 2019. LISS' panel data is based on survey results that provide an annual snapshot of Dutch respondents' opinions and attitudes but also provide background information such as age, income, education level, and more (LISS panel, n.d.). The WWZ implementation is used as an exogenous shock that affects different labor market outcomes. However, there could exist confounding factors that might influence the four labor market outcomes as well. This is controlled for in the regression in chapter four.

For the analysis, three different data modules are used. These modules contain information on individuals/household members over the time period from 2013 up to and including 2019. The treatment and control groups are made time constant by using contract information measured

in the year 2014, the pre-WWZ period. This means that, when a certain individual belonged to the treatment group in 2014 (because he or she owned a flexible contract), but this same individual receives a permanent contract in 2017, he or she stays in the treatment group. This is to prevent changing groups over time, which would inevitably lead to a bias. The treatment group consists of employees that had a flexible or fixed-term contract in 2014, whereas the control group consists of employees with a permanent contract in 2014.

3.3 Method of analysis

This paper uses a difference-in-difference method because this quasi-experimental approach can compare the different outcomes in multiple situations; it compares different outcomes between the two groups and over time (before the policy implementation and after). Furthermore, the analysis is quantitative and deductive. The quantitative panel data enables to analyse the potential effects on a large scale and therefore enables to generalize the results to the Dutch population. Since there are multiple existing theories that predict certain effects of the implementation of employment protection legislation, this paper builds on these findings and aims to gain new knowledge about effects in the Dutch context.

The research question will be answered by analyzing data on Dutch labor market outcomes pre-WWZ and post-WWZ. In both periods, two groups are distinguished based on the type of contract the employees have. The treatment group is shaped by the outsiders, whereas the control group is shaped by the insiders, assuming that there is no effect of the implementation of the WWZ on this latter group.

3.4 Key dependent variable

There are four key dependent variables used in the regression analysis, all four can be classified as labor market outcomes. The specific outcome variables are the temporary contract, hourly wage, job duration of employees, and employment. Temporary contract is a dummy variable with a value of 1 corresponding to individuals with fixed-term and flexible contracts, and a value of 0 corresponding to individuals with permanent contracts. In other words, 1 for outsiders, 0 for insiders. The insiders are defined as ‘employees in permanent employment’ (LISS panel, n.d.). The outsiders are defined as an ‘employee in temporary employment’, an ‘on-call employee’, and a ‘temp-staffer’. The remaining group of self-employed freelancers, independent professionals, directors of limited liability or private limited companies, and majority shareholder directors do not fall under insiders or outsiders and are therefore excluded from the sample of analysis.

The second dependent variable, hourly wage, is measured as a log of the gross hourly wage of employees. By looking at percentual changes, it is easier to compare wages, and it is possible to reduce the issue of potential outliers. The choice for including gross wages can be explained by the fact that changes in taxes could influence the net wage of workers which yields misinterpretation of the results. To find the gross hourly wage per worker, the gross wage per year of a specific respondent is divided by the total amount of hours worked per year of the same respondent. The mean hourly wage among the 19.406 observations is 22 euros (Table 1).

The third dependent variable is job duration, which shows in which year an employee entered into employment with its current employer. The job duration is calculated by subtracting the year of employment from the year under observation, which results in a period in which the employee is working for its current employer. This question is only answered by the respondents that were actually employed under an employer at that time, so the self-employed,

etc. are also not included here. The descriptive data shows that the biggest group of employees (10.09%) is employed for over one year with their current employers (Table 1).

Finally, the last dependent variable is employment. Employment is measured by asking respondents what their primary occupation is. The first three categories, “paid employment”, “works or assists in the family business”, and “autonomous professional” respectively, fall under the group of employed individuals. The remaining categories include among others job seekers, individuals with a working disability, individuals who perform voluntary work, and individuals who are studying. This group is defined as non-employed, which includes unemployed individuals as well. According to the national definition of ‘being unemployed’ used by the CPB, an individual should work less than 12 hours a week, should actively look for a job of at least 12 hours a week, and must be immediately available for this (Euwals & De Graaf-Zijl, 2014). Therefore, the category of job seekers can be identified as unemployed.

3.5 Independent variables and covariates

The Dutch employment protection legislation was implemented in January 2015, and therefore the independent variable is operationalized by looking at the effects before 2015 (the pre-period) and the effects after 2015 (the post-period). A potential difference in effects can then be attributed to the WWZ. As described in the theoretical framework, a distinction can be made between different types of employees within the Dutch labor market. The conclusion of Emmenegger (2009), which states that the different types of employees, especially the outsiders, should be carefully considered and defined, is considered by distinguishing the groups per type of contract, and by excluding the upscale group.

Rueda explains this distinction between the three different groups very well (Rueda, 2006). The group of upscale workers consists of self-employed and managers. Insiders are employees with permanent/fixed-term jobs, and outsiders are employees with temporary jobs. In this research, the distinction between these groups is based on their contract type in 2014. The contract type as an independent variable is made time constant since the division between control and treatment groups should remain constant over time. The insiders are defined as employees in permanent employment. The outsiders are the employees in temporary employment, on-call employees, and temp staffers. Finally, the upscale group is defined as self-employed/freelancers, and independent professionals, but this group is not included in the regression because the goal is to focus on the effect of the WWZ in terms of change in contracts between solely insiders and outsiders. This is in line with the hypothesis, that predicts that the WWZ especially influences the employees with flex and fixed-term contracts, where the group with a permanent contract is used as a control group.

Furthermore, there is a set of demographic characteristics serving as control variables that need to be incorporated into the regression analysis. These are gender, age, education level, and trade union membership. Research by Chkalova et al. shows that gender might be determining the type of contract up to a certain degree since women have more often flexible employment relationships than men (Chkalova et al., 2015). Flexible jobs, for instance, internships, short-term contracts, temporary jobs, and self-employment, are usually assigned to young people, women, new entrants, immigrants, and unskilled workers (Barbieri, 2009). The job competition theory and the Helpman model indicate that education level could be decisive in terms of employees having specific types of contracts. High-educated workers more often have permanent contracts and fall under the group of insiders. This effect exists next to the effect of a potential employment protection legislation and might be affecting the eventual outcome (Helpman et al., 2010). In the data, multiple education levels are defined. *Wo* is the highest,

which equals a university education. Subsequently, the levels from high to low are *hbo*, *mbo*, *havo/vwo*, *vmbo*, and *primary school*. Finally, the importance of accounting for the effect of union membership is stated by Berglund and Furåker, who conclude that labor union membership in combination with employment protection legislation, is an important determinant of employment outcomes (Berglund & Furåker, 2016). Looking at the relationship between employment protection and trade unions on the one side, and tenure of employment on the other side, an association between both the strictness of employment protection legislation and the coverage of bargaining with a longer tenure of employment is revealed. Therefore, information about labor union membership is included in the analysis, to control for heterogeneous effects.

3.6 Empirical model

By means of a difference-in-difference model, the effect of the implementation of the WWZ on different outcomes can be measured by using recent panel data from the Dutch database LISS. The model below shows the group effect (B1), the time effect (B2), and the treatment effect (B3). It is especially the latter effect that answers the research question. This specific method enables to differentiate between two groups, through which potentially different effects can be found. The treatment effect gives more information about the relation between the interaction effect, in this case, being an outsider in the pre-period, and the specific labor market outcome. The empirical model is

$$Y = B0 + B1*TREATED_i + B2*POST_{it} + B3*TREATED_i*POST_{it} + \alpha_i + A_i + T_i + \varepsilon$$

where Y stands for one of the four labor market outcomes (temporary contract, wages, job duration, employment). The subscripts *i* and *t* denote the individual and the year respectively. The covariates are included and denoted as α_i. The individual fixed effects are denoted by A_i, and T_i stands for the year fixed effects. The difference in outcome variables is captured by B3, which is the parameter of the interaction term, which shows the interaction between the TREATED and the POST variables. The variable TREATED is time-constant and equals one for employees with a flexible contract in the year 2014. The variable POST equals one for the post-WWZ period, which is equal to the years 2015 to 2019 since the WWZ was implemented on January the first 2015. The base and omitted categories of the variables TREATED and POST are the insiders and the pre-WWZ period respectively.

3.7 Reflecting on validity and reliability

Using a difference-in-difference method based on panel data in the Dutch context, this paper aims to find the effects of the WWZ on specific labor market outcomes. When the specific conditions are met, using the correct datasets and selecting the correct variables, this analysis can be replicated and subsequently, it will lead to the same conclusion. Therefore, the reliability of the research is substantial. The outcome of this research is valid to the extent that the difference in effects can be attributed to the WWZ. By controlling for multiple different external factors and by using a fixed effects regression, potential biases are attempted to be ruled out. The fixed effects are used as a robustness check in order to control for omitted variable bias when there are time-constant unobservable differences among observations. However, the certainty of each relation between x and y differs per labor market outcome and depends on the level of significance.

This chapter explained the methods and the key concepts that will be used to measure the effects of the WWZ. Overall, the effects on four key labor market outcomes will be measured and analyzed based on panel data from LISS. The effects before and after the ‘shock’, so to say, the

WWZ implementation, are measured and compared, as well as the difference in effects between the group of treated and controls. As a robustness check, additional covariates and individual fixed effects are applied in the regression as well. The fixed effects regression controls for time-constant unobservables such as ability and preferences of employees, and the difference-in-difference model controls for the time-varying data.

4. Analysis

In this chapter, the results of the empirical analysis are provided and interpreted. First, the descriptive data is shown in Table 1. Here, a distinction is made between the group of treated and controls to be able to get a first impression of differences in wages, job duration, employment, and the control variables between the two different groups. The treated are employees with a flexible or fixed-term contract in 2014, and the controls are employees with a permanent contract in 2014. These differences are shown in Figure 1. Subsequently, the regression models are shown for the four dependent variables. Table 2 shows the results for effects on the temporary contract, and Table 3 shows the coefficients for the remaining three labor market outcomes. Table 4 shows the results for the temporary contract but for different groups. These groups are distinguished based on their age and education level since the literature claims that effects are different when we discriminate for these factors. All results are interpreted in the analysis.

4.1 Results

Table 1 shows the descriptive statistics for the group of treated and controls separately. For the group of controls, the average job duration is approximately 14 years, whereas, for the group of treated, this is approximately three years. Another difference can be identified in the hourly wage. This is slightly higher for the group of controls than for the group of treated. This can be explained by the fact that permanent contracts often offer more certainty and better working conditions, including a higher salary (Lindbeck & Snower, 2002).

Table 1 Individual characteristics of treated and controls

	Controls		Treated (=1)	
	Mean	St. Dev.	Mean	St. Dev.
Hourly wage (log)	22.65	145.51	18.71	43.78
Job duration	13.69	10.89	2.93	6.73
Employment (=1)	0.88	0.33	0.51	0.50
Female (=1)	0.52	0.50	0.60	0.50
Age	45.18	12.39	34.07	15.38
Education	4.02	1.37	3.70	1.56
Trade union member	0.22	0.41	0.09	0.28
N	17,495		4,547	

Note: Characteristics are provided in the period 2013 to 2019.

Building on the descriptive statistics shown in Table 1, the four labor market outcomes are illustrated in Figure 1 on the next page. The effects on the first three outcomes, temporary contract, hourly wage, and job duration, are distinguished for the two groups. The difference between these groups, the group effect, is substantial in all figures. The pre-treatment trends for both groups are parallel in most graphs, which indicates that despite the difference in starting levels, the situation before the WWZ affected both groups equally. The time effect is less significant, especially in the case of temporary contracts and job duration. The starting point (2013) of the treatment group is not very different from the final point (2019). For the wages an upward trend can be noticed, this could be caused by inflation. Figure 1D shows the development of employment between the period 2013 and 2019. Since both treated and controls can be defined as employed, the distinction is not considered. The developments in employment fluctuate and there seems to be no shock from 2015 onwards. The regression model will provide more information in terms of statistical proof of the effects shown in the figures.

Consequently, the results of the difference-in-difference regression are shown in Table 2, where the first column shows the outcomes for the simple regression, the second column shows the outcomes when the covariates are included, and the third column shows the outcomes when fixed effects are used. In Table 2 the outcome variable is the temporary contract of respondents varying over time, which means, between 2013 and 2019. This is especially interesting for the time and treatment effect, which predicts the effect that working in a certain period, in this case after the WWZ reform, has on the type of contract an employee owns, compared to the period before the reform.

In Table 3 the effects on the three remaining outcome variables are shown. The structure of the table is the same here, column (i) shows the simple regression, column (ii) shows the regression with covariates, and column (iii) shows the regression with covariates and fixed effects. Finally, in Table 4 the effects on the temporary contract for the elderly, the youngsters, the high-educated, and the low-educated are presented. The outcomes are interpreted in the analysis.

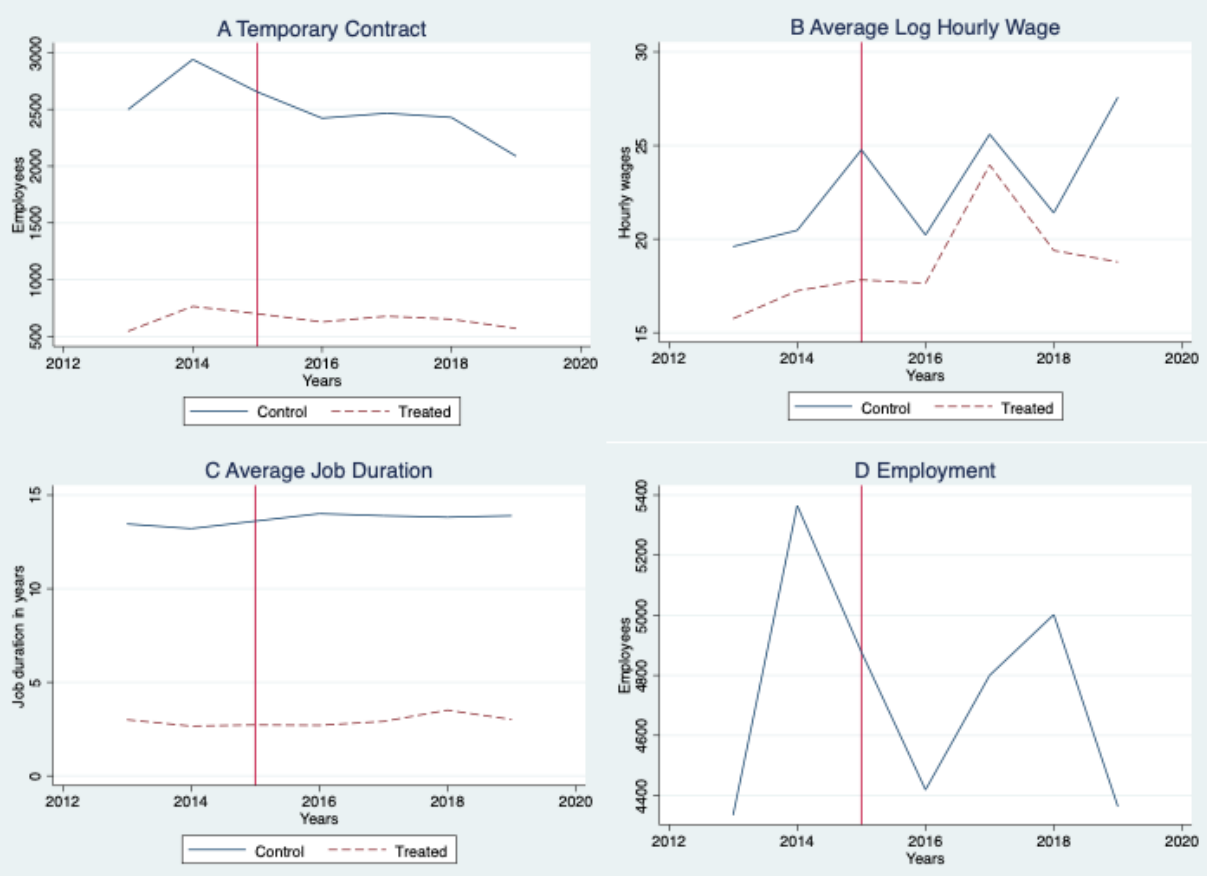

Figure 1 Time-dependent effects on Temporary Contract (A), Average Log Hourly Wage (B), Average Job Duration (C), and Employment (D).

4.2 Analysis

Table 2 shows the effects of multiple indicators on the likeliness that the respondent has a flexible or fixed-term contract (temporary contract = 1). The table shows results that indicate that, compared to the group of controls in 2014, over the period after the WWZ reform, which entails 2015 to 2019, the group that was identified as treated in 2014, is less likely to still have a fixed-term contract in the post period. A negative significant relation of -0.40 is estimated which indicates that employees in the post-period, who used to have a fixed-term contract in the pre-period (2014), experience a loss of 40 percentage points in receiving a fixed-term contract in the post-period. This negative effect is consistent with the expectations mentioned in the literature (Lindbeck & Snower, 2002).

Table 2 Estimation results for temporary contract

	(i)	(ii)	(iii)
TREATED	0.95***	0.93***	(omitted)
	(0.01)	(0.01)	
POST	0.05***	0.03***	0.02***
	(0.40e-2)	(0.01)	(0.01)
TREATED * POST	-0.40***	-0.40***	-0.37***
	(0.02)	(0.02)	(0.02)
Female	-	-0.40e-2	-
		(0.01)	
Age (25-30 = base)	-		-
30-35		-0.02	
		(0.02)	
35-40		-0.03*	
		(0.02)	
40-45		-0.03*	
		(0.02)	
45-50		-0.03*	
		(0.02)	
50-55		-0.03*	
		(0.02)	
55-60		-0.03**	
		(0.02)	
60-65		-0.02	
		(0.02)	
65-70		0.10**	
		(0.03)	
Education (primary school = base)	-		-
Vmbo		0.44e-3	
		(0.02)	
Havo/vwo		-0.57e-2	
		(0.02)	
Mbo		-0.44	
		(0.02)	
Hbo		-0.01	
		(0.02)	
Wo		0.01	
		(0.02)	
Trade union member	-	-0.01*	-
		(0.01)	
Year (2013 = base)	-		
2014		-0.01	-0.01***
		(0.46e-2)	(0.01)
2015		0.03***	0.03***
		(0.01)	(0.01)
2016		0.02*	0.02**
		(0.01)	(0.01)
2017		0.02*	0.02**
		(0.01)	(0.01)
2018		0.35e-2	0.01
		(0.01)	(0.01)
2019		(omitted)	(omitted)
Intercept	0.01***	(0.10)***	0.18***
	(0.15e-2)	0.02	(0.48e-2)
R^2	0.55	0.54	0.19

Note: Standard errors, which are clustered at the level of individuals, are shown in parentheses
*/**/*** indicate significance at the level of 10%/5%/1%

In Tables 3, 4, and 5 the three remaining outcome variables, hourly wage, job duration, and employment are measured. For hourly wages, there are no significant interaction effects to be found. This means that being part of the group treated in 2014 is not significantly influencing wages in the post-period compared to the group of controls varying over time, or the group treated in the post-period.

For job duration, we see a slightly negative significant relation in the first column (-0.65). This indicates that the overall job duration for the group treated in 2014 is shorter after the WWZ reform, compared to other groups in the labor market.

Finally, the treatment effects on employment are positive and significant for all regressions. This means that employment increased for the group treated in 2014, after the WWZ reform. This is a surprising result since the literature stated that there is no relation (or a negative relation) to be found between employment protection legislation and employment. On the contrary, it is logical that the treated in 2014 are more likely to be employed in the post-period since the WWZ consists of policies that pledge a faster transition from fixed-term contracts to permanent contracts.

4.3 Robustness checks

By adding regressors in terms of covariates, the outcomes of the first regression do not really change (Table 2). When covariates are included in the regression the treatment effect remains the same, whereas by including the fixed effects, the effect becomes slightly smaller, but overall the effect is robust. This increases the certainty in which can be stated that there is a significant relationship between the implementation of the WWZ and the type of contract that employees receive. Within the included covariates, 'Age' and 'Trade union member' show significant effects. For the age variables, small negative effects are shown fir the group aged between 35 and 60, whereas a small positive effect is shown for the group 65-70. This indicates that older individuals are more likely to have a temporary or fixed-term contract, compared to the group of younger individuals. For the trade union variable, a negative significant coefficient is found, with a significance level of 10%. This means that when individuals that are a member of a trade union, are more likely to receive a permanent contract. This is in line with the literature (Berglund & Furåker, 2016). For some of the years, a small but significant positive effect can be found. This is the case for 2015, 2016, and 2017. In these years, respondents in general, regardless of the distinction between treated and controls, are more likely to own a flexible/fixed-term contract.

Looking at the regression of wages, there is no significant effect in the regular regression (Table 3). Adding covariates or using fixed effects does not lead to a significant effect, therefore it can be stated that there is no effect of the implementation of the WWZ on the hourly wages of employees, regardless of which contract they own. Almost all covariates show significant results. Female is negatively correlated with wages, and age and education are positively correlated. The years 2015, 2016, and 2018 show significant negative results. This implies that after the WWZ reform, the hourly wages decreased compared to the base year.

The regression of job duration shows remarkable results, namely when covariates are added to the equation, the effect becomes insignificant (Table 4). Although it may seem that the WWZ has an effect on the job duration of employees, the robustness checks show that this is not the case. However, when fixed effects are added, the treatment effect becomes significant but less strong. Almost all covariates show significant coefficients. Female is negatively related to job duration, age is positively related to job duration, education is negatively related and trade union

membership is positively related. Most of the years show significant results as well, in 2014 there was a positive effect, but from 2015 onward, these effects became negative, with the exclusion of 2018 and 2019.

Finally, the regression of employment leads to three significant outcomes (Table 5). This indicates, similar to the temporary contract, that the relation between the WWZ implementation and employment is robust. Females are less likely to be employed compared to males, as well as older people are less likely to be employed compared to younger people. Higher education levels and trade union memberships increase the chance of being employed. The effects corresponding to the years are all very small but substantial. In 2014, the effect on employment was negative, but in the following years the effect is positive. This means that employment compared to 2013 decreased in 2014, but then increased after the implementation of the WWZ.

Table 3 Estimation results for hourly wage

	(i)	(ii)	(iii)
TREATED	-2.71	-1.46	(omitted)
	(2.38)	(1.98)	
POST	1.37***	3.83***	3.82***
	(0.32)	(0.35)	(0.31)
TREATED * POST	1.05	1.11	0.57
	(1.85)	(1.21)	(1.07)
Female	-	-3.75	-
		(0.58)	
Age (25-30 = base)	-		-
30-35		1.91**	
		(0.95)	
35-40		3.55***	
		(1.02)	
40-45		4.37***	
		(1.08)	
45-50		5.12***	
		(1.06)	
50-55		5.50***	
		(1.17)	
55-60		7.24***	
		(1.26)	
60-65		10.63***	
		(1.59)	
65-70		40.77***	
		(11.34)	
Education (primary school = base)	-		-
Vmbo		0.76	
		(1.86)	
Havo/vwo		3.46*	
		(1.83)	
Mbo		2.92	
		(1.81)	
Hbo		9.45***	
		(2.13)	
Wo		14.13***	
		(1.92)	
Trade union member	-	0.01	-
		(0.58)	
Year (2013 = base)	-		
2014		0.59	0.48***
		(0.52)	(0.18)
2015		-2.75***	-2.87***
		(0.43)	(0.30)
2016		-2.45***	-2.44***
		(0.34)	(0.26)
2017		-1.27***	-1.50***
		0.49	(0.31)
2018		-0.96***	-0.78***
		(0.27)	(0.21)
2019		(omitted)	(omitted)
Intercept	20.23***	10.42***	19.30***
	(0.35)	(2.21)	(0.21)
R^2	0.19e-2	0.13	0.16e-2

Note: Standard errors, which are clustered at the level of individuals, are shown in parentheses
*/**/*** indicate significance at the level of 10%/5%/1%

Table 4 Estimation results for job duration

	(i)	(ii)	(iii)
TREATED	-10.41***	-7.85***	(omitted)
	(0.30)	(0.41)	
POST	1.36***	2.81***	3.00***
	(0.16)	(0.29)	(0.21)
TREATED * POST	-0.65***	-0.10	-0.55***
	(0.24)	(0.33)	(0.19)
Female	-	-0.86**	-
		(0.38)	
Age (25-30 = base)	-		-
30-35		1.43***	
		(0.39)	
35-40		2.84***	
		(0.46)	
40-45		3.82***	
		(0.47)	
45-50		6.82***	
		(0.57)	
50-55		9.50***	
		(0.63)	
55-60		13.93***	
		(0.75)	
60-65		13.22***	
		(0.91)	
65-70		9.94***	
		(2.21)	
Education (primary school = base)	-		-
Vmbo		-0.44	
		(1.28)	
Havo/vwo		-1.23	
		(1.37)	
Mbo		-0.54	
		(1.21)	
Hbo		-1.54	
		(1.21)	
Wo		-3.14**	
		(1.23)	
Trade union member	-	3.61***	-
		(0.49)	
Year (2013 = base)	-		
2014		0.42***	0.59***
		(0.12)	(0.07)
2015		-1.76***	-1.80***
		(0.25)	(0.17)
2016		-1.29***	-1.22***
		(0.24)	(0.16)
2017		-0.88***	-0.73***
		(0.21)	(0.14)
2018		-0.20	-0.19*
		(0.18)	(0.11)
2019		(omitted)	(omitted)
Intercept	13.41***	7.26***	11.28***
	(0.21)	(1.22)	(0.09)
R^2	0.12	0.31	0.01

Note: Standard errors, which are clustered at the level of individuals, are shown in parentheses
*/**/*** indicate significance at the level of 10%/5%/1%

Table 5 Estimation results for employment

	(i)	(ii)	(iii)
TREATED	-0.43***	-0.26***	(omitted)
	(0.02)	(0.02)	
POST	-0.07***	-0.16***	-0.09***
	(0.01)	(0.01)	(0.01)
TREATED * POST	0.18***	0.13***	0.18***
	(0.02)	(0.02)	(0.02)
Female	-	-0.07	-
		(0.01)	
Age (25-30 = base)	-		-
30-35		0.03*	
		(0.02)	
35-40		0.03	
		(0.02)	
40-45		0.01	
		(0.02)	
45-50		0.01	
		(0.02)	
50-55		-0.01	
		(0.02)	
55-60		-0.08***	
		(0.02)	
60-65		-0.35***	
		0.03	
65-70		0.72***	
		(0.03)	
Education (primary school = base)	-		-
Vmbo		0.02	
		(0.04)	
Havo/vwo		0.01	
		(0.04)	
Mbo		0.04	
		(0.03)	
Hbo		0.08**	
		(0.03)	
Wo		0.10***	
		(0.03)	
Trade union member	-	0.02*	-
		(0.01)	
Year (2013 = base)	-		
2014		-0.05***	-0.02***
		(0.01)	(0.01)
2015		0.07***	0.02**
		(0.01)	(0.01)
2016		0.06***	0.02**
		(0.01)	(0.01)
2017		0.04***	0.01*
		(0.01)	(0.01)
2018		0.02***	0.01*
		(0.47e-2)	(0.47e-2)
2019		(omitted)	(omitted)
Intercept	0.87***	0.99***	0.80***
	(0.01)	(0.04)	(0.01)
R^2	0.09	0.25	0.03

Note: Standard errors, which are clustered at the level of individuals, are shown in parentheses
*/**/*** indicate significance at the level of 10%/5%/1%

The evaluation of the SEO concluded that the implementation of the WWZ led to an increased flow of temporary contracts to permanent contracts. However, this is only the case for the group of high-educated employees and the elderly. Therefore, Table 4 shows the regression results for the four different groups; elderly, high-educated, youngsters, and low educated. The elderly is defined as all respondents 50 years and older. Youngsters are defined as younger than 50 years. The high-educated group are respondents with a level of education of hbo or wo, whereas the low-educated group is defined as the respondents with a lower level of education, or no education at all. In Table 4 we see significant negative effects for all groups. This is remarkable since the evaluation of the SEO claimed that youngsters and low-educated employees are moving on to permanent contracts at the same pace as before the WWZ implementation. Therefore, these findings are inconsistent with the previous evaluation, and based on this data, differentiating between age and education is not necessary when it comes to measuring the influence of the WWZ. Important to note, however, is that the difference in results could be due to the use of different data, using different time periods, or due to a difference in labeling the target groups.

The main conclusion here is that the regression effects differ through the years. Especially the results from Table 2 show interesting results, namely that the treated from the pre-period are more likely to receive a permanent contract in the post-period, compared to the group of controls. The difference between periods and groups both shows significant results, which leads to a significant treatment effect. Furthermore, it is interesting to see that for most outcome variables, the years incorporated in the regression show a turning point between 2014 and 2015. If the effect was positive in the pre-period, it becomes negative in the post-period, and the other way around. To conclude, the main finding is the negative treatment effects on the temporary contract. This significant effect indicates that treated in the pre-period are more likely to receive a permanent contract in the post-period, compared to other groups within the labor market.

Table 6 Estimation results for temporary contract; distinguished age group and education level

	Elderly		High-educated		Youngsters		Low-educated	
	(i)	(ii)	(i)	(ii)	(i)	(ii)	(i)	(ii)
TREATED	0.94***	(omitted)	0.95***	(omitted)	0.95***	(omitted)	0.95***	(omitted)
	(0.02)		(0.01)		(0.01)		(0.01)	
POST	0.04***	0.04***	0.05***	0.04***	0.06***	0.06***	0.05***	0.05***
	(0.49e-2)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
TREATED *	-0.27***	-0.22***	-0.43***	-0.36***	-0.44***	-0.40***	-0.39***	-0.36***
POST	(0.04)	(0.04)	(0.03)	(0.03)	(0.02)	(0.20)	(0.02)	(0.02)
Intercept	0.35e-2***	0.07***	0.01***	0.16***	0.02***	0.24***	0.01***	0.18***
	(0.13e-2)	(0.43e-2)	(0.24e-2)	(0.47e-2)	(0.23e-2)	(0.40)	(0.19e-2)	(0.37e-2)
R^2	0.52	0.24	0.49	0.19	0.54	0.16	0.58	0.19

Note: Standard errors, which are clustered at the level of individuals, are shown in parentheses

*/**/*** indicate significance at the level of 10%/5%/1%

5. Conclusion

The WWZ implementation in 2015 negatively affected different aspects of the labor market. In this paper, the effects on the temporary contract, wages, job duration, and employment have been examined, based on Dutch panel data from the LISS archive over the years 2013 up to and including 2019 (LISS, n.d.). The reform not only has significant effects on the temporary contract, job duration, and employment but also differs in effect when employees are differentiated based on their type of contract.

5.1 Summary

The conclusion is fourfold since there are four outcomes measured in terms of influence from the WWZ implementation. Based on the first regression analysis (Table 2 and Table 3), it can be concluded that the outsiders in the period before 2015, are more likely to receive a permanent contract in the period after 2015. This is logical since the group of insiders in 2014 already has a permanent contract in the post-period. This result is in line with the evaluation of the SEO, which showed an increased flow of employees with temporary contracts to permanent contracts. It is also in line with the argument of Lindbeck & Snower (2002), who state that employment protection legislation affects groups of insiders and outsiders differently (Lindbeck & Snower, 2002). According to these results, the claim that employment protection might be equally beneficial for both groups can be rejected, and therefore also the null hypothesis (Emmenegger, 2009).

The effect on hourly wages is not significant, adding covariates or fixed effects to the regression does not change this. This is in accordance with the literature since limited evidence can be found about the relation between employment protection and wages. Only the Italian paper claimed that there is a negative relation between employment protection and wages, but it does distinguish between groups with different types of contracts (Leonardi & Pica, 2013). Therefore, this outcome is also in line with the (lack of) literature.

For the effects of job duration, there are significant effects for the first regression (i) and the fixed effects regression (iii). This indicates that there is an effect, but the effect is smaller than the simple regression leads to believe. When comparing the two groups, this outcome shows that the overall job duration for respondents that were outsiders in 2014, is shorter after the WWZ implementation than the job duration of insiders. The explanation for this is that job duration is related to the type of contract employees own (Karabchuck, 2020). Therefore, it is consistent with the hypothesis that the outsiders in 2014 have on average a shorter job duration in the post-period, than the insiders in 2014. The insiders are defined as the group of employees with a permanent contract and are therefore not bound by a specific period in which their contract ends and therefore also their job duration.

Finally, the employment variable shows exclusively significant effects. This means that employment grows for the group of outsiders in 2014, compared to the group of insiders in 2014. The literature on the relationship between employment protection and employment shows mixed results. However, there seems to be a negative effect of employment protection legislation for specific groups, such as youngsters, migrants, and the disabled (Skedinger, 2011; Putozáková & Bílková, 2022; Khan, 2007). The effects found through the difference-in-difference analysis, therefore, provide new insights into the effect of employment on insiders and outsiders. This positive effect could be explained by the fact that among the group of insiders in 2014 there is less job turnover and reallocation, while among the group of outsiders in 2014, more respondents received a permanent contract as a consequence of the WWZ (Skedinger, 2011).

However, the results in Table 6 are not in line with the conclusion drawn by the SEO. In the period after the WWZ implementation, outsiders are more likely to receive a permanent contract. This effect can be applied to different age groups and levels of education, but the negative effect remains the same. The strength of the effect is slightly different among groups, for the elderly for instance, the effect is less strong than for the other groups. Nevertheless, there is a significant effect on the low educated and youngsters as well, contrary to what the SEO evaluation claims (Heyma et al., 2020b). The argument by Pennings & Sprengers (2020) states that older employees are more often not hired because of their longer job duration, which corresponds with a higher transition payment might explain why the effect for older employees is less strong.

5.2 Answer to the research question

"What are the effects of the "Dutch Employment and Security Act" on labor market outcomes in the Netherlands, and what are the potential disparities in effects between the group of insiders and outsiders?"

There are effects on three of the four analyzed labor market outcomes, namely the type of contract that employees receive, their job duration under their current contract, and employment. Hourly wages are not affected by the WWZ reform. The effects of the contract are negative for outsiders, the control group in 2014. Therefore, in the post-period outsiders are more likely to receive a permanent contract than the group of insiders in 2014. The effects on job duration are negative as well, which means that the job duration for the outsiders in 2014 is shorter than the group of insiders in 2014. Finally, the effects on employment are positive, which means that there is a larger growth in employment among outsiders in 2014 than the insiders in 2014.

5.3 Discussion

There are some limitations to this research that need to be clarified. Since the WWZ is implemented in 2015 for all Dutch citizens, a realistic control group is hard to accomplish. Therefore, the control group in this paper, the employees with permanent contracts, might also be affected by the WWZ through spillover effects, for instance through the fact that employers give out permanent contracts less frequently. Therefore, the assumption made about the insiders being not so much affected by the Dutch EPL, might not hold in every situation. In the ideal scenario, the insiders would not be affected by the WWZ in any way, but this would only work in the context of an experiment. Furthermore, it cannot be stated with 100% certainty that the differences in effects over time are caused by the implementation of the WWZ. However, multiple covariates, fixed effects, and year-fixed effects are included in the regression to minimize the potential bias.

Another limitation concerns making the temporary contract variable time constant for the year 2014, in order to create two different immutable groups. That means that respondents remain part of the treatment group if they are outsiders in 2014 but have become an insider in 2016. This means that distinguishing two groups based on their type of contract is only accurate for the year 2014. The effects on the outcome variables in 2016 for instance, are based on the distinguishment made between groups in 2014. However, this division must be fixed since the treatment and control groups cannot change over time.

5.4 Recommendations

One of the articles described in the first part of the introduction claimed the implementation of the Dutch employment protection legislation to be successful (Bouwens, 2016). However, there is one challenge to overcome in order to be able to protect Dutch employees by providing them with a permanent contract. It is important to decrease the burden attached to employment contracts for employers, for instance by establishing a general basic insurance for all employees. This insurance would enable continued payment of wages in case of illness, without the employer being held accountable for this. Especially the position of the smaller businesses should be relieved, without negatively affecting the employee's position. Finally, further research is recommended. Whereas this paper specifically focused on the perspective of the employees, it is also important to raise attention to the employer's attitude since they are the actors directly acting upon the WWZ reform. The SEO paper already covered this in terms of depth interviews, but it might be interesting to collect quantitative data about the drivers of employers offering a permanent contract, in order to be able to generalize outcomes.

It can be stated that the impact of the WWZ reform influenced different groups in Dutch society in different ways. Especially when groups are differentiated based on their type of contract. Distinguishing between age and education does not lead to differences in the direction of effects, in contrast to what the SEO evaluation claimed. The suggestions for further research are to extend the focus toward the desires and needs of employers in order to influence their hiring decisions.

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