



Labour Market Integration

On the multiple dimensions of immigrant
labour market integration

PHD DISSERTATION 2018 · JONAS FELBO-KOLDING

A large, abstract graphic at the bottom of the page features two faces in profile, one on the left and one on the right, facing each other. Between them is a large, stylized, circular shape composed of concentric arcs. The entire graphic is rendered in black and white with a halftone dot pattern.

A Plan for Escape

Labour Market Integration

On the multiple dimensions of immigrant labour
market integration

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TABLE OF CONTENTS

ACKNOWLEDGEMENTS	5
INTRODUCTION	7
1. RESEARCH QUESTIONS	8
2. THE LABOUR MARKET INTEGRATION OF CEE IMMIGRANTS	9
3. THE EMPIRICAL CONTEXT OF THE DISSERTATION – THE DANISH LABOUR MARKET	10
4. THE ARTICLES OF THE DISSERTATION	11
5. THEORETICAL FRAMEWORK	15
6. DATA AND METHODS	26
7. CONTRIBUTIONS AND LIMITATIONS OF THE DISSERTATION	37
REFERENCES	43
ARTICLE ONE: LIVING HOURS UNDER PRESSURE: FLEXIBILITY LOOPHOLES AND THE DANISH IR-MODEL	
1. INTRODUCTION	51
2. SECURING A LIVING WAGE IN PRIVATE SERVICES – A LITERATURE REVIEW	53
3. METHODS AND USED DATA SETS	55
4. REGULATING LOW-WAGE WORK IN DENMARK: THE DANISH IR-SYSTEM AND COLLECTIVE AGREEMENTS ON WAGES AND WORKING TIME	56
5. ACTUAL HOURLY WAGES AND YEARLY INCOME LEVELS – FULL-TIME WORKERS AND PART-TIME WORKERS COMPARED	57
6. CONCLUSION AND DISCUSSION	61
REFERENCES	63
ARTICLE TWO: LABOUR MARKET SEGMENTATION BY REGION OF ORIGIN: THE CASE OF INTRA-EU MIGRANTS IN THE UK, GERMANY AND DENMARK	
1. INTRODUCTION	70
2. LABOUR MARKET SEGMENTATION OF IMMIGRANTS IN WESTERN EUROPE: THEORETICAL EXPLANATIONS AND HYPOTHESES	72
3. DATA AND METHODS	76
4. RESULTS: SEGMENTATION BY REGION OF ORIGIN?	79
5. DISCUSSION AND CONCLUSION	86
REFERENCES	90
APPENDIX	95
ARTICLE THREE: THE UNIONISATION OF IMMIGRANT WORKERS – LONG-TERM CENTRAL AND EASTERN EUROPEAN IMMIGRANTS IN DENMARK	
1. INTRODUCTION	100
2. UNIONISATION AMONG WORKERS	101
3. DATA AND METHODS	104

4. RESULTS	111
5. DISCUSSION AND CONCLUSION	120
REFERENCES	123
<i>ARTICLE FOUR: DECOMPOSING THE NATIVE-IMMIGRANT EARNINGS GAP – LONG-TERM CENTRAL AND EASTERN EUROPEAN IMMIGRANTS IN DENMARK</i>	
1. INTRODUCTION	129
2. APPROACHES TO NATIVE-IMMIGRANT EARNINGS GAPS	132
3. DATA AND METHODS	136
4. DESCRIPTIVE STATISTICS	140
5. RESULTS	143
6. DISCUSSION AND CONCLUSION	154
REFERENCES	158
APPENDIX	163
<i>DANSK RESUMÉ</i>	167
<i>ENGLISH SUMMARY</i>	169

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INTRODUCTION

Over the last few decades, the integration between economies and labour markets across the globe, and especially within the European Union (EU), has increased. As a result, immigrants' labour market integration is one of the major challenges facing Western European states today, not least because of the increasing migration flows coming from Central and Eastern Europe (CEE) and countries outside the EU. On the positive side, labour immigrants may, for example, through targeted recruitment efforts, be a source of labour to alleviate employers' short-term demands during periods of economic boom, thereby positively affecting the state budget through the taxation of firms' profit and individual workers' labour market income. Immigrants may also be part of a more general longer-term solution to structural shortages of labour due to demographic challenges. On the negative side, if immigrants fail to integrate successfully into the receiving labour markets, it undermines the fiscal basis of the state and challenges the individual immigrant's and later generations' broader social integration and welfare.

Labour market integration, at an overall societal or political level, is often defined in binary terms as integrated if employed and not integrated if not employed. However, such a simplistic understanding misses the multidimensionality of labour market integration. Over the last two to three decades, labour markets across the Western world have experienced an overall process of flexibilisation that has led to a general increase in atypical or non-standard forms of employment (Castells 1996; Kalleberg 2009, 2011; Standing 2011).¹ As a result, labour market integration currently takes on a multitude of forms. In order to understand more fully the labour market integration of natives and immigrants today, we first need to focus on the multiple dimensions of integration (earnings, working hours, employment stability, hourly wages, unionisation, etc.). Second, we need to distinguish the experiences of different groups in order to understand their degrees of integration and the processes that led to integration. Third, we need to focus on the factors that influence both the degree of integration and the process leading to it.

The rest of the introduction is structured in the following manner. First, I present the overall research questions guiding the dissertation. Second, I focus on the labour market integration of CEE immigrants. Third, I present the primary empirical context of the dissertation, i.e. the Danish labour market. Fourth, I briefly present each of the four articles with a focus on how it contributes to answering the overall research questions. Fifth, I present the overall theoretical framework of the dissertation with a focus on the concept of labour market integration in different strands of literature and the factors

¹ Throughout the dissertation, I choose to primarily use the terms atypical or non-standard forms of employment instead of, for instance, the frequently used term precarious employment (Kalleberg 2009).

influencing it. Subsequently, I present the data and methodological basis of the articles. Finally, the introduction ends by drawing up the overall contributions and limitations of the dissertation and possible ways forward.

1. RESEARCH QUESTIONS

Despite the fact that each of the four articles which, together with this introduction, make up the dissertation have their own separate research questions, they all, in one way or another, engage with some, or all of, the same four overall research questions. At the overall level, the dissertation investigates the question:

- 1. *What constitutes labour market integration in modern Western states, with a particular focus on CEE immigrants in Denmark?*

Long-term CEE immigrants' labour market integration in Denmark is the empirical focal point of the dissertation; however, the ambitions extend beyond the specific case. The overall thrust of the dissertation is that, by studying the different dimensions of labour market integration for long-term CEE immigrants relative to other groups at different levels, we obtain a more nuanced understanding of the labour market integration process of, not just long-term CEE immigrants, but also of different immigrant groups overall. The second research question is therefore:

- 2. *What are the differences in labour market integration between different immigrant groups?*

Research question 2 is the empirical application of the first question and covers both the question of immigrants' degree of labour market integration relative to other groups as well as the process leading to it. The degree and process of labour market integration are influenced by a range of factors. The third research question is therefore:

- 3. *Which factors influence different immigrant groups' degree and process of labour market integration?*

The overall strategy of the dissertation is that, by comparing the labour market integration of different groups and the factors influencing it, it will be possible to distinguish the factors specific to long-term CEE immigrants from the more generic factors influencing either the labour market integration of immigrants in general or even broader labour market integration regardless of origin.

Finally, as a methodological consequence of the overall question, the fourth question is:

- 4. *How do we best study the labour market integration (process) of different groups and the factors that influence it?*

As a consequence of the multidimensional concept of labour market integration, the dissertation includes multiple measures of labour market integration that are investigated for different groups at different levels of analysis.

2. THE LABOUR MARKET INTEGRATION OF CEE IMMIGRANTS

The focus of this dissertation is on immigrants' labour market integration. More specifically, the dissertation investigates the topic by studying the labour market integration of immigrants from CEE in the Danish labour market. Below, I therefore briefly present the case of CEE immigrants. Following the enlargement of the EU, the unprecedented migration flows from CEE countries pose a number of empirical and theoretical questions to the understanding of labour market integration more generally, and for immigrants specifically. Because of the common market and the ensuing legal equality, the larger CEE migration flows, on a practical level, hold a potential key to the future challenges of labour shortages in Western Europe. The successful integration of long-term CEE immigrants into the receiving Western European labour markets will signal a breakthrough for the creation of an actual single European labour market within the EU. If the CEE immigrants, however, prove to be unable to integrate successfully, but still choose to stay long term, then what at first would seem to be a resource might actually turn out to be a burden on the fiscal stability of the welfare state and particularly in the universal welfare states of the Nordic countries.

On a theoretical level, immigrants' labour market integration poses a number of questions about the role of labour market institutions, the transferability of human capital, and the role of discrimination. In the case of intra-EU immigrants, given their equal rights as citizens of the EU, their cultural similarity as Europeans, and the relatively short geographical distances, CEE immigrants' labour market integration success, or lack thereof, therefore provides a test of the openness of the European labour markets. At the start of the project in 2014, the CEE migration flows had received a great deal of interest from scholars, politicians and the media. The focus had primarily been on what was considered to be the short-term nature of this migration flow (Black et al. 2010; Drinkwater & Garapich 2015; Favell 2008), the immigrants' broader migration patterns (Düvell & Vogel 2006), their socio-cultural integration (Recchi & Favell 2009; Recchi 2015), and the consequences for the receiving labour markets (Cremers et al. 2007). Collectively, the studies painted a picture of a new migration regime (Burrell 2009) primarily different from previous ones because of the short-term nature made possible by the freedom of movement.

The new migration regime has been thought to embody the economic logic of the European single market, in which labour immigrants gravitate towards areas of demand only to move on

to the next area once demand changes. After the economic boom, however, the first signs that perhaps the ‘new’ migration regime is not completely different from previous ones began to show, as considerable numbers of CEE immigrants have stayed in the receiving countries despite rising unemployment rates (Friberg 2012; Janicka & Kaczmarczyk 2016). The longer-term character of a considerable share of the CEE immigrant cases poses new questions to the labour market integration of long-term CEE immigrants and, not least, the process of it scarcely addressed in the literature. Are long-term CEE immigrants able over time to integrate beyond the jobs at the lower rungs of the labour market occupied by short-term CEE immigrants, or are they, despite accumulating host-country-specific working experience, stuck in these jobs in the long term?

3. THE EMPIRICAL CONTEXT OF THE DISSERTATION – THE DANISH LABOUR MARKET

With the exception of the comparative analysis in article three, the primary context of this dissertation is the Danish labour market. As noted, the ambitions of the dissertation stretch beyond the study of long-term CEE immigrants’ labour market integration to the wider dynamics related to labour market integration. However, since the empirical context of the studies is the Danish labour market, below I briefly present its main features.

The Danish labour market has a number of distinct characteristics. First, employers’ easy access to hire and fire workers results in a high job turnover compared to other OECD/EU countries, in which one in five jobs are being separated every year (OECD 2016). This statistic reveals that it is not uncommon for workers to experience shorter periods of unemployment; however, this high turnover is unique compared to other countries, in that the so-called “flexicurity model”, by way of relatively high benefits combined with activation and training, successfully helps workers quickly gain re-employment, avoiding long-term unemployment. Second, the labour market generally has a highly compressed wage structure (Dahl et al. 2013), where few workers, native or immigrant, receive a significantly higher or lower wage compared to the average worker (OECD 2017). This is especially the case in the areas of the labour market covered by the standard rate system (“normallønssystemet”), such as industrial cleaning and transportation. Here, wages are set in the sectoral collective agreements with no or little room for subsequent negotiations at the workplace level (Ilsøe et al. 2017). However, over the last 20-25 years, wage equality in Denmark has been challenged (Andersen et al. 2014) and studies have found comparatively low wages among CEE workers in selected sectors (Andersen & Felbo-Kolding 2013; Arnholtz & Andersen 2016; Arnholtz & Hansen 2009). Third, Denmark has one of the highest overall employment rates among both men and women in the OECD (OECD 2017). Perhaps because of the

high overall employment rates, and especially the high employment rates among women, a comparatively large share of workers work part time (Statistics Denmark 2017). Fourth, wage and working conditions of workers are primarily regulated through collective agreements signed by social partners at sectoral and company level in a highly voluntaristic system. However, union densities, collective agreement coverage and workplace representation vary considerably across sectors and occupations.

Denmark experienced an economic boom in the 2004-2007 period of EU enlargements leading up to the outbreak of the global Financial Crisis of 2008. During the expansion period employment increased by more than 200,000 and unemployment dropped from around 8% to a historically low level of around 2% (Ministry of Industry, Business and Financial Affairs 2013). The rapid development created substantial labour shortages in parts of the private sector that were partly alleviated by a large inflow of new CEE immigrants in industries such as agriculture and construction (Andersen & Felbo-Kolding 2013). In 2008, the Financial Crisis hit the Danish economy hard and unemployment levels rose. As the overall demand for labour dropped, the inflow of new CEE immigrants also dropped considerably. The stock of CEE immigrants on the Danish labour market, however, remained stable throughout the Crisis, as a large share of the CEE immigrants chose to stay long term (Felbo-Kolding 2016). During the first few years of the Crisis, the unemployment rates among the largest CEE groups (Poles, Romanians, and Lithuanians) were at a similar level to, or below that of, native workers, but surpassed natives by 2011-2012, as unemployment among native workers dropped (Statistics Denmark 2017). It would thereby seem that the employers primarily reacted to the Crisis by reducing their use of short-term (CEE) immigrant labour, who then returned home, while a considerable group chose to stay long term.

4. THE ARTICLES OF THE DISSERTATION

In the following, I briefly present each of the four articles of the dissertation. All articles are aimed at, or already published in, a variety of peer-reviewed academic journals. This entails that the length, style and formatting varies depending on the requirements of the specific journal. As stressed in the introduction and the research questions, the dissertation focuses labour market integration and particularly on immigrants' labour market integration in Denmark. The broader focus on labour market integration is stressed in article one, which sets the scene for the study of immigrants' socio-economic labour market integration in articles two and four. With a broad focus on labour market integration in three separate industries in the private service sector, article one stresses the need to go beyond a singular focus on hourly wages and look at multiple dimensions of labour market integration. The article thereby sets up the central point of labour market integration's multidimensionality. Article two contributes to the overall

dissertation by providing a comparative cross-national perspective on immigrants' labour market integration in the form of labour market participation and hourly wages against which to investigate the generalisability of immigrants' labour market integration in Denmark. Whereas the three other articles in the dissertation all focus on different socio-economic dimensions of labour market integration, article three, in a panel data setup, focuses on unionisation as a different dimension of labour market integration. The socio-economic integration dimensions are instead included as factors that might explain differences in long-term CEE immigrants' propensity to unionise. Finally, article four picks up on and further develops the point concerning labour market integration's multidimensionality from articles one and two. In so doing, the article uses a panel data setup by decomposing the native-immigrant earnings gap into each of the dimensions of working hours, employment stability and hourly wages separately for high-, middle- and low-earners.

4.1 Article one: Living hours under pressure: flexibility loopholes in the Danish IR-model

The article is co-written with associate professors Anna Ilsøe and Trine P. Larsen. The article was published in the summer of 2017 in *Employee Relations* in a special issue on the literature on low pay and living wage entitled 'Low pay and the living wage – an international perspective'. Building theoretically on the critique of the one-sided focus on hourly wages in the living wage literature (Ilsøe 2016), the article argues that it is necessary to include a focus on working hours by investigating the effects of part-time work on absolute earnings. Using documents on collective agreements and monthly cross-sectional administrative register data on all workers in three selected private service sector industries – industrial cleaning, retail, and hotels and restaurants – the article focuses on hourly wages and working hours as two dimensions of labour market integration. The article shows that hourly wages have, on average, increased in the three sectors since the Financial Crisis, indicating both the existence of a sufficient hourly wage and an absolute improvement in the workers' labour market integration. While, in this way, the workers seem to be integrated into the labour market in terms of hourly wages, the investigation of working hours and annual earnings leave a different picture. A majority of the workers in the three sectors work part time, and, consequently, their annual job-related income is well below both full-time workers and the poverty threshold. The analysis shows that there are considerable differences across the three industries, and we argue that the differences are related to differences in the collective agreements. The collective agreements thereby create flexibility loopholes for the employers to gain flexibility and thereby set different boundaries for the labour market integration of workers.

4.2 Article two: Labour market segmentation by region of origin: The case of intra-EU migrants in the UK, Germany and Denmark

The article is co-written with associate professor Janine Leschke and postdoctoral research fellow Thees Spreckelsen. The article was submitted to the Journal of Ethnic and Migration Studies in the autumn of 2017 and was recommended for publication following minor revisions in February 2018. In the article, the attention is turned more specifically to the labour market integration of CEE immigrants. The article investigates the labour market integration status of different groups of recent intra-EU immigrants across three different countries of destination: Denmark, Germany and the United Kingdom (UK). The article contributes to the growing literature on post-enlargement CEE immigrants' labour market integration by adding a double comparative focus to the previous single-country studies, primarily on the UK (Tubergen et al. 2004). The three countries are chosen because they represent distinctly different migration trends and labour market and welfare configurations. Using a combination of labour force survey data for the UK, microcensus data for Germany, and administrative register data for Denmark, the article compares the labour market integration of four recent intra-EU immigrant groups (EU8, EU2, EU-South and EU-West/EEA²) relative to that of the native workers in the three countries. The article employs two overall measures of labour market integration: labour force participation and hourly wages.

The article finds that, despite minor differences between the countries, a consistent pattern of labour market segmentation emerges among recent intra-EU immigrants along occupational and industry lines across the three receiving countries, suggesting a more general division of labour among natives and different immigrant groups. EU-West/EEA immigrants out-perform both natives and all other immigrant groups in terms of wages. EU8 and EU2 immigrants have high employment propensities, but also lower wages. EU-South immigrants have lower wages and lower employment propensities. Based on previous research, the article suggests that the division of labour is driven by a combination of three mechanisms: First, a positive selection process of EU immigrants in general. Second, the selection process plays out differently across different home-country environments depending on wage levels and cushioning welfare benefits that likely affect the migration groups' reservation wages differently. Third, differences in racial visibility to employers and the resulting differences in employer discrimination and recognition of skills lead to variations in the jobs that the different immigrant groups are considered to be eligible for and can thus take up.

² The EEA countries encompass Switzerland, Norway, Lichtenstein and Iceland.

4.3 Article three: The unionisation of immigrant workers – Long-term Central and Eastern European immigrants in Denmark

The article is single-authored and designated to be submitted to the British Journal of Industrial Relations. It has, however, not yet been submitted, as I wish to maximise the likelihood of publication by having the article reviewed one final time by an expert in the field of unionisation before submission. The article analyses how rates of unionisation among long-term CEE immigrants in Denmark develop over the course of the first five years of migration and what factors explain the propensity of this group to unionise. The article finds that, after five years of migration, more than half of long-term CEE immigrants have unionised and that most do so within the first two years of migration. This indicates that long-term CEE immigrants over time do become an integrated part of the Danish labour market organisations.

The article adds to the understanding of what factors influence labour market integration by focusing specifically on factors at the workplace level. The results show that union density at their primary workplace and the union status of a possible partner are the main factors explaining immigrants' propensity to unionise, thereby apparently confirming the key role of social customs. However, these findings are called into question by an analysis of what types of union they join, which reveals they are just as likely to join "yellow unions"³ as red unions. As the effect of workplace union density is similar for both traditional red and alternative yellow unions, it is not possible to conclude that what is at play is social customs.

4.4 Article four: Decomposing the native-immigrant earnings gap using longitudinal data – Long-term Central and Eastern European immigrants in Denmark

The article is single-authored and designated to be submitted to the International Migration Review (IMR), because it is one of the top field journals within migration studies more generally and, specifically, the study of immigrants' labour market integration. Additionally, it accepts articles of the complexity and length of article four. As the journal is highly interdisciplinary with a definite bias towards economists, the plan is to have the article reviewed by an economist who has already had several articles published in the journal prior to submission in order to maximise the likelihood of publication. The article pulls together and further develops several of the ideas and dimensions of labour market integration from articles one and two. While the other articles, in different ways, look at working hours, hourly wages and annual earnings, article four primarily seeks to contribute to the literature on native-immigrant earnings

³ The term "yellow union" refers to ideologically alternative trade unions that are not part of the traditional peak organisations. Typically, they are distinguishable from traditional trade unions by not acknowledging the existence of a fundamental conflict of interests between employers and workers and by having no or only few collective agreements.

gaps by decomposing the gap in annual earnings into the contribution of each of the three components: working hours, hourly wage and employment stability. As previous studies have found significant differences in native-immigrant earnings gaps across the earnings distribution, the article decomposes the earnings gap separately for low-, middle- and high-wage earners. The article additionally contributes to the understanding of the labour market integration *process* by adding a longitudinal perspective. This is achieved by studying the labour market integration of long-term CEE immigrants over the course of the first seven years of settlement relative to that of a comparable group of native Danish workers.

The article finds that long-term CEE immigrants across the earnings distribution, on average, experience an improvement in their socio-economic labour market integration over the seven-year period relative to their own starting point. The native-immigrant earnings gap, however, increases over the same period as native workers' earnings improve even more. The results of the decomposition show that, while the earnings gap at the top is almost exclusively explained by differences in hourly wages, the picture is very different at the bottom, where the native-immigrant differences in hourly wages are considerably smaller, but where immigrants trail their native counterparts in terms of employment stability and working hours. The results suggest that, at the bottom of the earnings distribution, a group of long-term CEE immigrants are unable to find stable employment despite years of host-country-specific working experience. The regression analyses find that, whereas occupational segmentation explains the majority of both the overall earnings gap and the gap in hourly wages at the top of the earnings distribution, the picture is less clear further down the distribution. At the lower end of the earnings distribution, differences in union characteristics, on the other hand, explain much of the differences in both hourly wages and employment stability, suggesting that the bottom segment of long-term CEE immigrants are unable to move into stable jobs that are often found in highly unionised workplaces. It thereby seems that long-term CEE immigrants across the earnings distribution sort into different segments of the labour market than their native counterparts.

5. THEORETICAL FRAMEWORK

The purpose of this section is to rise above the specific issues addressed in the four articles and sketch out the main theoretical discussions that frame contemporary studies of labour market integration broadly speaking and, specifically, my study of immigrants' labour market integration. In so doing, I place myself within a theoretical landscape primarily shaped by industrial relations literature and the wider immigrant integration literature. The structure of the section mirrors the sequence of the research questions. First, I will very briefly outline the current landscape of modern segmented labour markets, within which labour market integration plays out, to set the scene. Second, I will define the overall

concept of labour market integration used throughout the dissertation in order to frame the study of immigrants' labour market integration. Third, I briefly sketch out the relativity of immigrants' labour market integration process. Fourth, I will briefly review the different levels of factors previously found to influence the labour market integration of immigrants.

5.1 Modern labour markets

Modern labour markets across the Western world are structured into more or less separate segments that differ in terms of the composition of the workforce and the conditions they offer workers (Piore 1979; Reich et al. 1973). In Piore's original dual labour market theory, labour markets are thought to be divided into a primary and capital-intensive sector and a secondary and labour-intensive sector (1979). Both sectors are thought to be further divided into separate and subordinate sectors or segments with different wage and working conditions or degrees of labour market integration. The largest and most significant differences, however, exist between the primary and secondary sector. Segmentation may take on various forms depending on, for example, the institutional context: occupational, industrial, or workplace level. Although more recent studies have stressed the need to distinguish between more sectors than these two, the central tenets of classic segmentation theory persist – that different segments exist on the labour market and that they differ in wages and working conditions and hence workforce composition (Peck 1996).

Jobs in the primary and secondary sector differ in a number of important ways (Piore 1979). Jobs in the primary sector usually require specific sets of skills or prior training, while jobs in the secondary sector are unskilled, menial and repetitive. In the secondary sector, jobs are unstable and workers often change jobs involuntarily depending on changes in demand following the business cycle. In the primary sector, jobs are stable and workers change jobs less frequently and hence accumulate firm- and job-specific skills through long-term working experience and formal on-the-job training. In the top part of the primary sector, workers are in positions of high responsibility and may advance on the career ladder. In contrast, in the lower part of the primary sector, jobs do not provide the same career opportunities, but are covered by collective agreements and occupied by trade union members. In the lower parts of the primary sector, earnings may start out lower than in the secondary sector due to lack of firm-specific training. As time passes, higher returns to human capital in the primary sector will result in steeper earnings profiles in the primary sector, resulting in higher earnings than in the secondary sector (Constant & Massey 2005). While earnings are closely tied to productivity in the primary sector, the number of working hours is the primary factor in earnings in the secondary sector.

Over the last two to three decades, labour markets across the Western world have experienced an overall process of flexibilisation, with great consequences for employment conditions across the traditional secondary and primary sectors (Castells 1996; Kalleberg 2009, 2011; Standing 2011). The process of flexibilisation has led to an increase in atypical or non-standard forms of employment, such as temporary employment, temporary agency work, ambiguous employment relationships, solo/self-employment, and part-time employment (Kalleberg 2011). These types of employment are all, in some way or another, atypical or non-standard compared to the dimensions of the traditional core worker in a full-time permanent dependent position – the so-called standard employment relationship (SER) (Bosch 2004). The labour market has always known non-standard or atypical forms of employment in the secondary sector, whether it be day labourers, women working part time to supplement the primary income of the male ‘breadwinner’ or young people working either part of the year or when they were not in school. What is new is, therefore, not employment relationships other than full-time year-round employment, but rather the magnitude of the phenomenon in terms of the share of workers affected and the fact that it increasingly affects areas of the labour market that used to be considered to be a part of the stable primary sector.

Temporary employment has for long been a common, or even the typical, form of employment for immigrants (Durand et al. 2001)⁴ and young people due to study and training activities (Berglund et al. 2017). However, the increase in, for example, agency work and fixed-term contracts in industries previously dominated by the standard employment relationship has meant that new groups now also find themselves in atypical employment (Kalleberg 2009). Over the last decade or so, this trend has only been further fuelled by technological innovations and the emergence of new forms of flexible work organisation embodied, not least, by the rise of digitalisation, which has accelerated job losses and changes of work processes (Ford 2015; Hill 2015; Rifkin 2014). For a comprehensive review of how the nature of work has changed over the last few decades or how digitalisation is currently reshaping the landscape of employment relations with a focus on Denmark, see Ilsøe (2017).

Although full-time year-round dependent employment is still the primary form of employment relationship in many sectors, atypical or non-standard forms of employment relationships are widespread. This realisation needs to have fundamental implications for our study and understanding of labour market integration, in particular for studying that of immigrants.

⁴ A classic example of immigrants’ temporary employment relationships was the Bracero Accord of 1942. The Bracero Accord arranged for the temporary import of Mexican contract workers into the United States to work short term in agriculture (Durand et al. 2001).

5.2 Defining labour market integration

Issues relating to labour market integration have featured highly on the political and academic agenda for decades. The specific term used to denote the phenomenon in different strands of literature, however, differs. Some write of labour market incorporation, attainment or assimilation, while others write in terms of labour market outcomes.⁵ Common to all, however, is the overall understanding that an individual is integrated on the labour market in absolute terms when that person is part of a formal employment relationship. By this definition, individuals who are outside the labour market are, for whatever reason, not integrated on the labour market. A formal employment relationship exists when an individual performs a job under a certain set of conditions in return for remuneration.

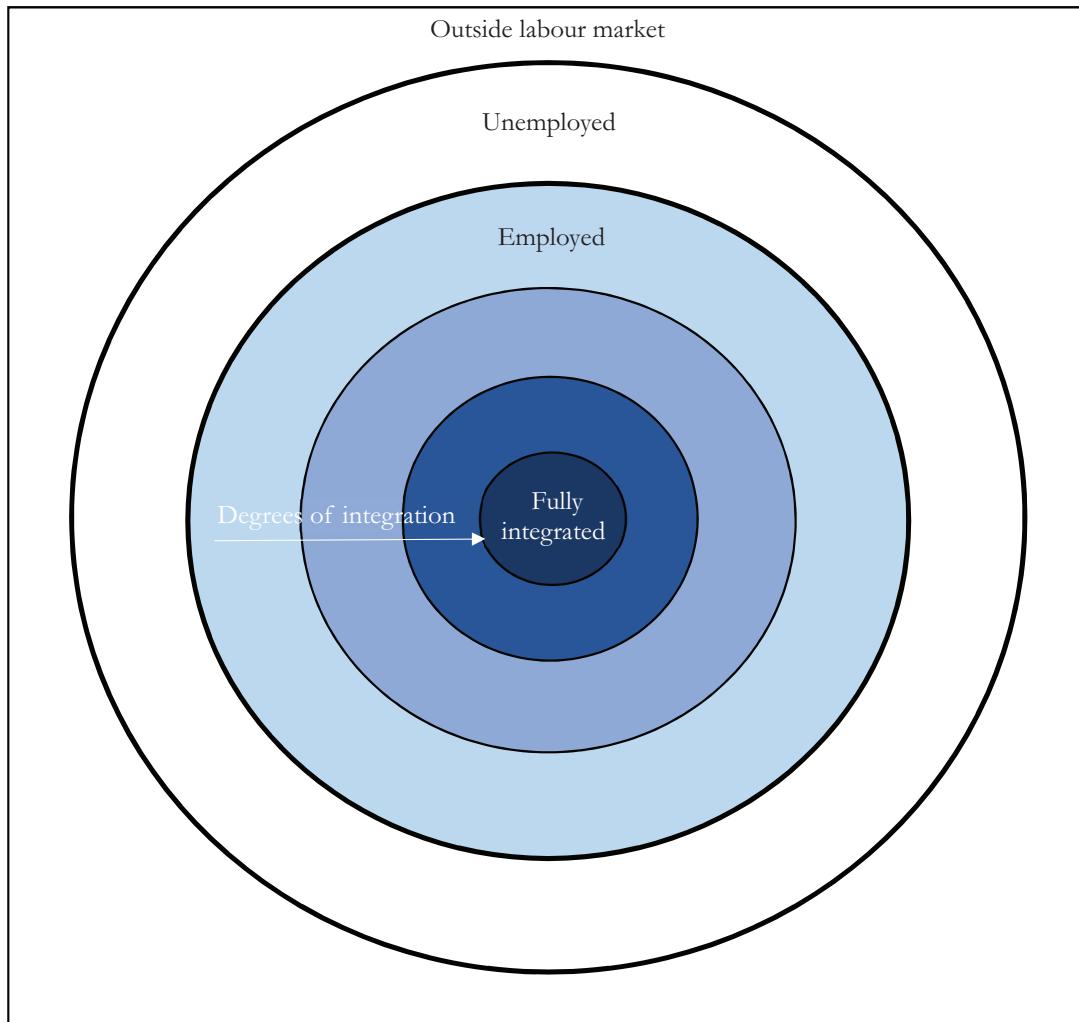
The distinction between individuals who are integrated into the labour market and those who are not is illustrated in the stylised model of labour market integration below (Figure I), where all individuals within the outer circle are integrated while individuals outside are not. The distinction between individuals inside and outside the labour market features prominently in much of the research on labour market integration as a focus of employment rates in immigrant studies (e.g., Amuedo-Dorantes & De La Rica 2007) and in cross-country studies of labour markets (see, e.g., Kogan 2006; Fleischmann & Dronkers 2010). The definition of labour market integration offered is, in some cases, also defined as labour market participation in that it defines a state where an individual participates in the labour market or labour force (Constant & Massey 2005).

As is illustrated in the stylised model, labour market integration can be further divided into individuals who are employed and unemployed, which is illustrated in the model by individuals in the outer ring participating in the labour force but being unemployed, while individuals inside the inner circle are employed. This distinction between employed and unemployed is, however, secondary in this dissertation. Nonetheless, it illustrates the fact that, although labour market integration can be, and often is, viewed in a binary fashion as being part of an employment relationship or not, a nuanced understanding and study of labour market integration needs to further distinguish between different degrees of labour market integration. Of course, this can, and has, been achieved in several ways. However, within both the living wage literature and much of the literature on immigrants' labour market integration, the focus has been almost solely on hourly wages and, to a lesser extent, annual earnings as

⁵ In the broader literature on immigrant integration, the term 'assimilation' has primarily been used in the US while the term 'integration' has mostly been used in the European context. Assimilation is, by some scholars, thought to denote a more encompassing process than integration, where immigrants are required to give up cultural traits associated with their home country in order to fully integrate into the destination country (Alba & Foner 2015; White & Glick 2009). Within the labour market integration literature, the two terms are used interchangeably; however, in this dissertation I predominantly used the term integration.

the primary measure of different degrees of labour market integration (for the living wage literature, see, for example, Prowse et al. 2017; for hourly wages in the immigrant integration literature see, for example, Chiswick 1978; Hum & Simpson 2000). The literature on the use of hourly wages and earnings in the study of immigrants' labour market integration is extensively reviewed in article four.

Figure I: Degrees of labour market integration



Note: The Figure represents a stylised model of different degrees of labour market integration and the size of the different circles therefore do not represent the actual share of individuals in each circle on the labour market.

In this dissertation, I focus on several of the socio-economic dimensions of labour market integration that are directly or indirectly related to individuals' consumption possibilities: earnings, working hours, employment stability and hourly wages. By focusing on the different dimensions and degrees of integration and their interrelations, it is my ambition to shed light on the finer nuances of labour market integration of different groups, not least that of immigrants. In the stylised model of labour market integration, the different degrees of integration are illustrated by how close an individual is to the centre of the circle – the closer they are, the more fully integrated. It is easy to say that individuals who are in full-time year-round employment are more integrated than individuals in unstable or part-time employment and that their hourly wages describe different degrees of integration. While the standard employment relationship requires both full-time employment and a permanent year-round contract, and thereby employment stability, the different elements of labour market integration are not necessarily simultaneously present in the non-standard or atypical forms of employment. In this case, degrees of labour market integration are determined by a combination of the different dimensions. A selection of alternative scenarios presented below illustrates this point. Each of the different dimensions of labour market integration is presented in more detail in the data and methods section of this introduction and, not least, in the articles, most comprehensively in article four.

5.2.1 Who is more integrated?

Consider three individuals. One, a 45-year-old native woman who is an educated kindergarten teacher who currently works, and has, for more than 15 years, worked as such on a permanent 32 hours a week year-round contract covered by a collective agreement. She is a member of a trade union and an unemployment insurance fund and has secured social protection in case of either her own or a child's sickness.

Two, a 26-year-old man from Romania who holds a master's degree in engineering from his home country but has worked as a manual labourer in agriculture since arriving in the Denmark a year and a half earlier. Since arriving, he has, on average, worked three out of every four months. He has worked on average 40 hours a week during his periods of employment, in some periods for one employer and in others for two, all on temporary contracts, and none of them covered by a collective agreement. He is a member of a yellow trade union but not of an unemployment insurance fund.

Three, a 30-year-old native woman who graduated from university with a master's degree in comparative literature last year and has, since then, worked periodically being employed on zero-hour contracts as a translator for different firms. She sometimes works considerably more than full-time hours, and, at other times, does not work at all or only for a few hours a week. She has no permanent contracts, and over the last year, she has only worked for eight out of the twelve months. However, due to the

excess amount of hours worked, and the much higher hourly wages she receives as a translator, she has managed to earn as much over the last year as a translator as the woman working part time as a kindergarten teacher. She is not a member of a trade union, but is a member of an unemployment insurance fund and, as such, collects unemployment or supplementary unemployment benefits during periods of unemployment.

These three scenarios are hypothetical; however, they nonetheless reflect different variations commonly found on the Danish labour market and, as such, are also represented in different ways in the four articles. All three must be termed employment relationships; however, at the same time, none of them qualify as standard employment relationships since they are either not full time or permanent year-round positions. As such, they represent different degrees of labour market integration, or, perhaps more precisely, different combinations of dimensions of labour market integration. The point is therefore not that it is possible to judge which one of the three is more integrated than the others, but more that they, in different ways, exemplify some of the different forms of labour market integration that have become more widespread with the flexibilisation of the labour market (Kalleberg 2009). While the three individuals contribute equally to the state budget, their different combinations of labour market integration provide very different conditions for their wider social integration.

5.3 The relativity of labour market integration

In this dissertation, regardless of whether there is an explicit focus on immigrants or a broader focus on workers in general, labour market integration is viewed in a *relative perspective*. An individual or a group is always more or less integrated than some other individual or group. In this section, I briefly detail how the different parts of the literature discuss labour market integration in a relative perspective, either comparing different groups or the same group across time.

In the living wage literature, the definition of a living wage indirectly distinguishes between groups below the level of the living wage defined in a specific context who are considered less well integrated than groups who are above that level (Anker 2011). The relative perspective in labour market integration takes on a different form within the immigrant integration literature. Although immigrants' integration might be studied in terms of being part of an official employment relationship or not, in more qualitative terms, immigrants' labour market integration is (almost always) understood in relation to the native or majority population (Alba & Nee 2005; White & Glick 2009). White and Glick write of labour market integration or assimilation “[...] assimilation is the decline in predictive power of nativity and generation. [...] when labor market earnings are predicted by family background and educational achievement, but not by the fact that the worker is first or second generation.” (2009: 33). From this

perspective, immigrants integrate into an already established labour market hierarchy and are thereby viewed as integrated on the labour market once they have become indistinguishable from some average sample of the majority population.

In the wider literature on immigrants' integration, this fact has spurred debates about how to define or determine the 'mainstream' or 'majority population' into which immigrants integrate (Alba & Nee 2005). The debates have primarily concentrated on the social, and, not least, cultural aspects of how to define the mainstream, where it was first argued in an American context to consist of "the middle class cultural patterns of, principally, white Protestant, Anglo-Saxon origin (Gordon 1964: 72). More recently, however, it has been argued that the widespread heterogeneity in the native or majority population makes it hard to define a mainstream (Alba & Nee 2005). Studies on labour market or economic integration have previously focused less on how to define the mainstream, and more on empirically studying the integration process. However, the overall development in the labour markets across the Western world outlined above has led to a growth of economic inequality between individuals inside and outside the labour market, as well as between the top and bottom parts of the labour market (Alba & Foner 2015; Kalleberg 2009, 2011). Likewise, the flexibilisation process has led to an expansion of the low-wage sectors of the workforce and an increase in marginal forms of employment in the form of part-time and short-term jobs (Alba & Foner 2015). As the heterogeneity on the labour market increases, the question of what to compare immigrants' labour market integration to becomes more relevant. Is it still appropriate to compare immigrants' integration to the average of the native workforce as has been the common approach? (Yuengert 1994) Or, alternatively, do we need to look closer at the labour market integration of different groups of immigrants depending on their position in, for instance, the earnings distribution? (Butcher & DiNardo 2002; Chiswick et al. 2008).

Immigrants' labour market integration is normally compared to that of the native or majority population; however, when this is performed within a cross-sectional framework it ignores the fact that integration is a process (Fuller 2015; Kogan 2007). It is, therefore, necessary to view immigrants' integration in relation to the native population at a given point in time and in a dynamic perspective relative to their own previous position or to their own relative position vis-à-vis the native population at an earlier point. In a process perspective, it is important to distinguish between the starting point of integration and the subsequent trajectory (White & Glick 2009). Immigrants may suffer an initial disadvantage vis-à-vis the native population (in whatever way it is defined), due to, for example, the less than perfect transferability of skills across borders. However, over time, immigrants' labour market integration is expected to converge to that of the native population (Chiswick 1978; Chiswick & Miller 2009). In acknowledging that immigrants' labour market integration is not a fixed state, the literature has

long turned its attention to how the subsequent trajectory or process of integration is related to the immigrants' length of stay (Amuedo-Dorantes & De La Rica 2007; Chiswick 1978; Jensen & Pedersen 2007).

From this perspective, what is important is both how immigrants perform initially, but also, and perhaps even more so, how they perform over time. Are immigrants' initial jobs stepping stones from where they move on to better jobs and improve their labour market integration in terms of, for example, earnings, union membership or employment stability over time? (Parutis 2014; Scherer 2004) Or, in contrast, are these 'any jobs' as Parutis calls them traps in the secondary labour market from which they, even over time, struggle to move? (Parutis 2014; Piore 1979; on the role of ethnic niches, see also Waldinger 1994) Similar questions can, naturally, be raised when considering the large contingency of young workers often active students in certain parts of the private service sector.

5.4 The factors that influence immigrant groups' labour market integration

Following the theory of segmented labour markets, below I briefly outline the different levels of segmentation and the factors thought to shape the segmentation and thereby the labour market integration of individuals.

5.4.1 Macro-level factors – destination and origin effects

Segmentation theory normally focuses on the segmentation *within*, primarily, national labour markets. However, a different but related strand of literature focuses on how national labour markets differ from each other at the national level. The overall idea is that macro-level factors affect opportunities for labour market integration for different groups (natives and immigrants) (Tubergen et al. 2004). The literature distinguishes between destination or host-country effects and origin effects both thought to affect labour market integration.⁶ *Destination effects* refer to macro-level effects at the national level of the destination countries that affect the labour market integration opportunities of immigrants regardless of origin and individual-level characteristics (Esping-Andersen 1990; Hall & Soskice 2001; Model et al. 1999; Portes & Böröcz 1989). The overall assumption in both strands of literature is that different destination countries offer different labour market opportunities to natives and immigrants. *Origin effects* refer to macro-level effects at the national level, where the country or region of origin is thought to affect the labour market integration of different immigrant groups irrespective of the countries of destination. The overall idea is that, on the one hand, wage differences or differences in labour market opportunities between country of origin and country of destination will have implications regarding which wage and conditions the

⁶ In other parts of the immigration literature, scholars refer to context of reception effects, which can, however, also refer to more local contexts of reception than the national level (see, e.g., Portes & Böröcz 1989)

migrant will be ready to accept. However, on the other hand, the composition of different immigrant groups in terms of educational level, language skills, transferability of skills, relevant labour market experience, motivation differ across different countries or regions of origin (Tubergen et al. 2004). The overall thesis is that this selection process at the national or regional level affects the composition of the respective immigrant groups, which, in turn, affects their labour market integration in the destination country.

5.4.2 Sector-level factors – labour market institutions

As mentioned, one of the factors highlighted in the literature is the effect of national labour market configurations on labour market integration, which implicitly assumes a homogeneous set of labour market institutions within a country. This is, however, by no means the case, and, within the industrial relations literature, the last two decades have seen a growing acknowledgement that considerable intra-national variation exists across different industries or sectors (see, e.g., Brandl et al. 2012; Katz & Darbishire 2000). From this perspective, different sectors or industries offer different conditions for labour market integration depending on both the institutional setup in terms of, for example, collective agreement coverage and content etc., and the overall competitive conditions in the sector. These differences frame the strategic choices of employers and groups of workers and thereby moderate the overall segmentation trends on the labour market (Ilsøe et al. 2017).

5.4.3 Workplace-level factors

Just as there are differences between countries and sectors that affect the labour market integration of different groups, there are also differences at the workplace level. As not all workplaces or firms are covered by collective agreements, there will inevitably also be differences between workplaces within the same sector. In this dissertation, I show that the effects of these workplace differences play out differently across the earnings distribution and for different measures of labour market integration. In the literature, the focus is on how factors such as workplace size, the gender and ethnic composition of the workforce and the social norms at the individual workplace affect workers' (native or immigrant) propensity to join unions (Turner et al. 2008; Schnabel 2013) or the socio-economic dimensions of labour market integration (Card 1996).

5.4.4 Individual-level factors – employer and worker strategies

Finally, several factors at the individual level of employers and workers have been found to interact with the factors mentioned above to affect the labour market integration of individual workers. On the *employer side*, several studies have pointed out that more or less conscious decisions affect individuals' integration possibilities (see, e.g., Fossati et al. 2017; Friberg & Midtbøen 2017; Kingston et al. 2015). On the

conscious side, employer recruitment strategies regarding the composition of their workforce are influenced by the overall economic development. In situations of labour shortages, employers are faced with the choice of turning to the recruitment of immigrant workers, raising their productivity through other means, or attempting to mobilise alternative sources of native labour (Piore 1979). These decisions are affected by a number of factors: employers may discriminate between workers based on a notion of a more or less conscious ethnic hierarchy (Fossati et al. 2017; Fox et al. 2015; Friberg & Midtbøen 2017; Kingston et al. 2015). On a more positive side, employers' more or less conscious notions of the skills and traits of different groups of workers may, for instance, place groups of immigrant, young, or female workers in a privileged position in terms of being hired for specific jobs, although the same notions may place them at a disadvantage in regards to other jobs (Hopkins & Dawson 2016; McCollum & Findlay 2015). These hierarchies may be based on notions of language barriers, work ethic, lack of skills, and sometimes as a result of insufficient knowledge, and therefore recognition, of skills obtained abroad (Chiswick & Miller 2007).

On the *workers' side*, the literature also points to a number of factors that may play a role in their labour market integration (for a review on individual factors in unionisation, see Toubøl & Jensen 2014; for a review on factors affecting immigrants' labour market integration, see Massey et al. 1993). One of the factors found in the literature is groups of workers' willingness to accept jobs that other workers will not (Piore 1979; Waldinger & Lichter 2003). Within the immigrant integration literature, immigrants with a short-term perspective on their stay have been found to have a different frame of reference that makes them willing to accept, for instance, lower wages or poorer working conditions because these are, compared to their home country, still relatively acceptable (Bruzelius et al. 2017; Drinkwater & Garapich 2015; Piore 1979). Immigrants in the beginning of their stay often have to settle for 'any job' (Parutis 2014). These jobs offer highly unstable employment and immigrants who intend to stay long term will attempt to move on to 'better' jobs (Parutis 2014). To some extent, this frame of reference can be extended to also explain how young workers in, for example, the private service sector, end up in low-wage jobs with a low number of working hours. For many of them, the job is a means to supplement their student allowance and, as such, their frame of reference is not the full-time employment of adult workers.

Finally, the human capital literature focuses on how labour market integration is determined by the individual's level of (host-country-specific) human capital (Becker 1962; Borjas 1987; Chiswick 1978). The central claim is that individual labour market integration is determined by factors such as formal educational credentials, working experience and language skills that employers recognise and reward in different ways. Immigrants' human capital constitutes a special case, as human capital is,

in general, context-specific and therefore not immediately transferable across borders (Chiswick 1978; Chiswick & Miller 2009). The literature explains the less than perfect transfer of human capital by, for example, a lack of language skills, a lack of employer recognition of skills, and knowledge of the destination labour market (Chiswick 1978). However, over time, immigrants accumulate human capital specific to the destination country either directly through deliberate investments in, for example, language courses or formal educational credentials or indirectly through the accumulation of knowledge of the destination labour market and working experience. In line with the human capital perspective, these improvements in human capital are expected to yield returns in the overall labour market integration process.

6. DATA AND METHODS

The empirical work of this dissertation is founded on two main data sources, a custom-made survey targeting long-term labour immigrants from the two main CEE countries of origin, namely Poland and Romania, and Danish administrative registers. Administrative register data are generally limited to information on individuals within the boundaries of the nation state and on what individuals (citizens and non-citizens alike) have done within the boundaries of the state. Therefore, as good as the administrative register data are as a foundation for answering questions of labour market integration, they are equally insufficient as the exclusive foundation for answering questions regarding long-term migrants' pre-settlement qualifications or their subjective views on labour market integration. For example, the authorities have no information on educational qualifications or labour market experience obtained outside their country unless migrants choose to apply to have their pre-settlement educational qualifications officially recognised, which few do (Liebig 2007).⁷

In the following sections, I first briefly present two of the three main sources of data informing the empirical analyses in the dissertation: the targeted survey of long-term CEE labour immigrants and Danish administrative register data. The comparative data on Germany and the UK represent the third source of data and will not be presented here as they are already presented in article two. Second, I present the importance of sampling in the study of labour market integration. Finally, I conclude the section by presenting the main research methods of the dissertation.

⁷ A notable exception to this rule has been the systematic attempt by the Rockwool Foundation's Research Unit and Statistics Denmark in 2016-2017 to collect data on 176,126 immigrants' education obtained outside Denmark. The data collection has used both self-reported information from a survey developed specifically for the project and information collected from existing administrative registers on educational levels (Rockwool Schultz-Nielsen & Skakse 2017). At a later point in time, these data will be added to the official registers.

6.1 Survey data

In order to obtain reliable data on the pre-settlement qualifications, experiences, characteristics and expectations of long-term intra-EU labour migrants, a considerable part of this project was dedicated to the design and subsequent collection of a customised targeted survey of 1,778 long-term Polish and Romanian labour migrants. The data are used directly in article three in order to account for, for instance, the importance of intentions of length of stay. With the extensive use of administrative register data, I was able to overcome the challenge of obtaining a representative sample of migrants, which is a problem encountered in most studies of this type (Erens 2013). The population of CEE migrants, from which a representative sample was drawn, is defined by the following criteria. First, as I am interested in the labour market integration of post-enlargement CEE immigrants, only migrants who had settled in Denmark after May 1, 2004 (for Poles) and January 1, 2007 (for Romanians) were included. Second, in order to target labour migrants, only migrants who had worked at least 50 hours during either November or December 2014, the months immediately prior to the sampling, were included. Third, only migrants who were of working age (20-60 years) at the time of settlement were included. Fourth, only migrants with an official address in Denmark were included in order to target migrants who had chosen to settle in Denmark. Fifth, only migrants who had settled in Denmark at least three years prior to sampling were included, as the overall interest of the project was to study the long-term labour market integration of CEE migrants. Sixth and finally, only citizens from Poland and Romania matching the criteria above were sampled due to budgetary constraints.

Poland and Romania were chosen among the CEE member states since these two nationalities not only represent by far the two largest CEE populations in their home countries overall, but also constituted the two largest groups of CEE migrants living in Denmark at the time. Second, Poles and Romanians represent two different rounds of enlargements. Third, Poland and Romania represent two different socio-economic points of departure at the point of becoming members of the EU. Data from Eurostat show that, on the one hand, the average gross annual income in Poland was lower than in Denmark by a factor of around six, while the equivalent number for Romania was ten (Eurostat 2010). However, on the other, the unemployment rate in Poland in 2005 was 17.9% (compared to 4.8% in Denmark at the time), while the unemployment rate in Romania in 2007, the year of entry in the EU, was 6.4% (compared to 3.8% in Denmark at the time). Fourth, Poles and Romanians working in Denmark overall find employment in different sectors of the labour market (Jobindsats.dk).

A number of initiatives were taken in order to overcome the challenges of surveying migrants (Font & Mendéz 2013). The survey data were collected during a three-week period in the spring of 2015 by Statistics Denmark. A sample of 1,700 long-term Polish labour migrants and 1,700 long-term

Romanian labour migrants first received a letter from Statistics Denmark at their home address containing a username and a password and urging them to go online to participate in the survey. The survey covered around 60 questions⁸ structured around the following themes: pre-settlement (e.g., qualifications, motives for immigration, intentions of length of stay), post-settlement experiences on the Danish labour market, views on the Danish labour market and their own integration so far, along with their future plans and expectations regarding their settlement and labour market integration. A week later, all respondents who had not yet completed the questionnaire received another letter once again urging them to answer the questionnaire before bilingual interviewers started to contact them by telephone.

By the time the telephone interviews were concluded, interviewers had attempted to contact all respondents at least four times by telephone before they were considered out of reach. When the telephone interviews were concluded, 958 Romanians (equivalent to a response rate of 56%) and 820 Poles (equivalent to a response rate of 48%) had answered the questionnaire. A small underrepresentation of male Polish migrants due to a lack of telephone numbers in this group was the only bias in the final dataset.⁹ In addition to the use of the survey data in article three, the insights from the survey have very much informed the basic understanding in the project of the motivation and background of long-term CEE immigrants in Denmark and thereby the analyses in the dissertation. The survey data were initially thought to play a prominent role in article four on the decomposition by contributing information on what went before the long-term CEE immigrants' settlement in Denmark. However, this proved not to be feasible, as, due to outmigration, only a few of the respondents in the survey met the sampling criteria, the data. Although not included in the dissertation, the data from the survey additionally play a prominent role in a paper on the role of social networks in shaping the labour market entry and subsequent integration of CEE immigrants.

6.2 Administrative register data

The empirical analyses of this dissertation all draw heavily on administrative register data gathered by Statistics Denmark from multiple public authorities and linked together at an individual level using the personal identification number (CPR). The register data, along with the principal dependent and independent variables, are presented in each of the articles. However, the article format does not allow room to properly present the data sources in more detail or how Statistics Denmark statistically processes the data before it is made available for research purposes.

⁸ The exact number of questions the individual immigrants had to answer differed depending on their answers to a number of filter questions.

⁹ The descriptive statistics for this group of long-term CEE immigrants are presented in the fourth article of the dissertation on the unionisation of immigrant workers.

Since 1968, every citizen in Denmark has been assigned a personal identification number at birth, which has made it possible for Statistics Denmark, from the 1970s onwards, to build an extensive collection of data that are made available to Danish research environments following approval of the environment by Statistics Denmark. Researchers are given access to de-identified microdata, i.e. data at an individual personal or corporate level (identified with a CVR number). Data from other sources, such as the survey in this PhD project can also be linked to administrative register data from Statistics Denmark using the CPR or CVR numbers thereby merging the different data sources. Most of the registers available to researchers date back to the 1980s, which makes them highly relevant to longitudinal research projects.

Although this dissertation draws on data from a number of different sources, data from the register *Employment statistics for employees* (ESE) are at the centre of each of the articles in the dissertation. Below, I will therefore briefly present this register in more detail. The ESE register documents the short-term development in the employment of employees in Danish enterprises. The collection of the statistics started on January 1, 2008 when the Act on an Income Register came into force and, so far, the register covers the period of 2008-2016. The basis of the data are income data reported to the Income Register of SKAT the Danish Customs and Tax Administration by the individual employers. According to the Act, all public and private employers are, at least once a month, required to report detailed information about, for example, employees' individual salary payments, their place of work and their number of working hours. The register contains information on all employment relationships, for native and immigrant employees alike, in Danish companies, regardless of whether or not the individuals reside in Denmark. Since the register is based on filings from individual employers, the unit counted is not individuals but rather individual employment relationships defined as an individual's relationship to a workplace during a specified period (one month). An individual may be part of employment relationships at different workplaces simultaneously and will, in that case, appear with as many records in the register in the given period. The focus on employment relationships instead of individuals means that it is possible to investigate different forms of labour market integration and strategies in more detail than that which is otherwise possible in registers where, for instance, only the primary employment relationship is registered. This is important for the presented work, as it allows me to gauge the extent to which employees (native and immigrant) in the private service sector hold multiple jobs simultaneously in order to accrue a sufficient total income to live off. As the ESE is collected on a monthly basis, it is possible to see precisely when individuals are employed and thereby to obtain a precise measure of the stability of their different employment relationships, something that is usually impossible when working on data collected annually.

By merging multiple yearly datasets, this resulted in a rich set of final data. For some variables, the dataset covers the entire post-enlargement period of 2004–2015, whereas for variables pertaining solely to the labour market, the dataset covers the 2008–2015 period. While the variables in the ESE register are collected on a monthly basis, most of the variables in other registers are collected on an annual basis, and either indicate the value at the start of the year or by the end of November.

6.3 Sampling

As discussed, although it is possible to define more or less absolute measures of overall labour market integration – outside the labour market or active on the labour market – the concept of labour market integration naturally implies something relative, a comparison. This means that the sampling of both the group of interest, in this case, for instance, post-enlargement CEE immigrants, and the comparison groups, becomes of great importance to the conclusions drawn in terms of the differences in labour market integration between different groups. Although the exact sampling criteria vary slightly throughout the dissertation, here, the rationale behind the overall sampling criteria, focusing on how to sample the group of long-term CEE immigrants and a comparison group and whether or not to include students in the analyses, is briefly described.

6.3.1 Long-term CEE immigrants

As already discussed, the project started with a narrow focus on long-term CEE labour immigrants who immigrated to Denmark after the eastward enlargements of the EU in 2004 and 2007. Long-term immigrants were targeted at first in order to be able to study the process of labour market integration. However, as is also described in the two longitudinal articles of the dissertation, i.e. articles three and four, it is not sufficient to ‘only’ focus on long-term immigrants. In order to overcome the problems of selection bias in the analyses, which are otherwise a considerable problem in integration studies (Constant & Massey 2003), it is also necessary to sample a panel of long-term immigrants who have settled and lived in Denmark (at least officially) throughout the study period. In this way, it is possible to study the labour market integration process without fear of selection bias during the study period due to outmigration. The problem of outmigration was the primary reason why the decomposition of the earnings gap in article four does not include data from the survey since only a few of the respondents in the survey met the sampling criteria.

By only sampling long-term CEE immigrants who have stayed and been active on the labour market every year throughout the study period, the results of the group of long-term CEE immigrants will be an upper bound estimate for expectations regarding the larger groups’ labour market integration, as this group has continuously accumulated host-country-specific human capital (Chiswick

1978). The possible implications of this fact, of course, need to be taken into consideration when generalising the results of the labour market integration to the wider group of immigrants. In article one, immigrants are included on equal terms regardless of length of stay or time of settlement. In article two, we chose to only include recent immigrants who had, on the one hand, not settled within the last year, in order to exclude short-term immigrants, but who, on the other, had stayed no longer than five years. In this way, we wanted to add to the literature on the labour market integration of intra-EU immigrants by focusing on longer-term immigrants. Since the data do not allow us to separate possible cohort effects from length of stay effects, the cut-off point of five years allows us to focus solely on immigrants who had settled after the onset of the Financial Crisis.

6.3.2 Active students and educational qualifications

An important sampling criteria that varies across the dissertation is the question of whether or not to include students in the analyses. In articles one and two, we include the active students because the focus of the articles is the relationship between working hours, hourly wages and earnings, which is a challenge also confronting students, which is clearly illustrated by the large number of students working multiple jobs. In articles three and five, active students and retirees are excluded from the analyses as they distort the comparison, as long-term CEE immigrants primarily originate as labour immigrants (Felbo-Kolding 2016). Not excluding them would, therefore, result in long-term CEE labour immigrants being compared to a group of native workers of whom a large contingent, due to the young average age of CEE immigrants, would be active students.

The aim when sampling the comparison group is to create two groups as comparable as possible based on what we know about the population. In the case of immigrants, the task, however, is complicated, since administrative register data lack information on what went on before settlement, which means that only limited information is available to sample. The challenges are perhaps nowhere as evident as in the decomposition in article four, where long-term CEE immigrants are compared to a comparison group of native workers. Since there is no information on educational qualifications obtained abroad in the registers, and only 6% of the long-term CEE immigrants have a recognised Danish education registered, it is impossible to take differences in educational qualifications into account in the sampling.

As a result, it is only possible to sample the native comparison group based on information on the combined age group and gender distribution among the CEE immigrants. As described in the article, the long-term CEE immigrants' young age profile had a considerable impact on the earnings gap analyses, as the young age profile of the comparison group of native workers meant that they experienced a considerable improvement in their labour market integration over the study period. However, as is

explained in detail in the article, the article focuses on the earnings gap between CEE immigrants and natives, and the vast improvements of the comparison trump the improvements of the CEE immigrants relative to their starting point, thereby increasing the earnings gap.

6.4 Research methods

The dissertation attempts to add small pieces to the overall puzzle of labour market integration by approaching the phenomenon from multiple angles in the four articles. In line with the overall research questions, the ambition is to add pieces to the puzzle of what constitutes (immigrant) labour market integration by investigating different dimensions of the concept. At the same time, the multi-level strategy attempts to investigate the labour market integration of different immigrant groups and the effect of different factors at different levels of analysis. It does so using three intertwined overall research strategies: First, the articles employ multiple measures of the dimensions of labour market integration. Second, the articles focus on multiple levels of analysis. Third, the articles employ a combination of cross-sectional and panel data structures. Below, I will briefly present each of the three research strategies. I end the section by summarising the different measures, levels, data structures and groups used in each of the four articles in Table I.

6.4.1 Multiple measures of dimensions of labour market integration

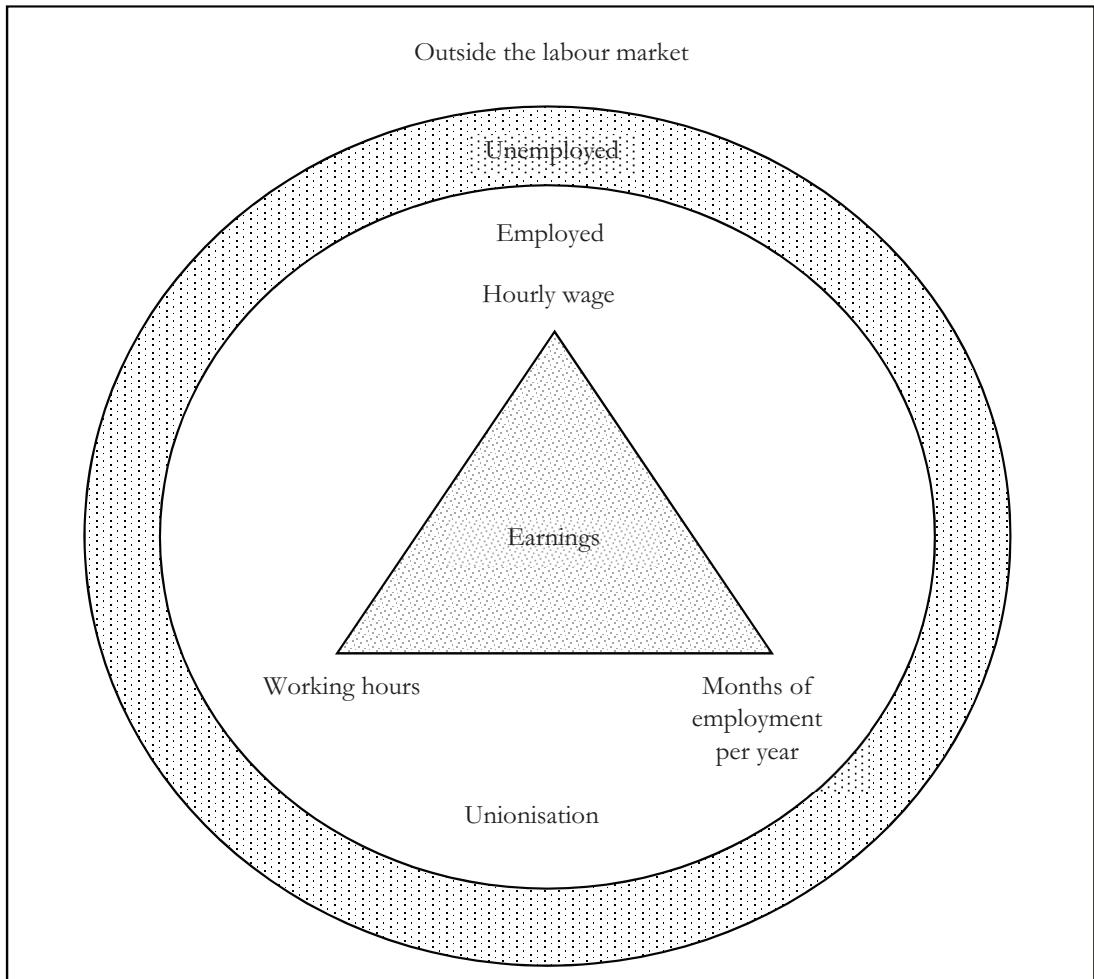
Despite the multidimensionality of labour market integration, the strategy of operationalisation in empirical studies has been relatively consistent across different strands of literature. In the living wage literature, the overwhelming focus has been on the factors influencing whether hourly wages are sufficiently high for workers to live off and not on whether the problem in fact is one of (overly) low hourly wages or of problems of other forms of labour market integration (Bell & Machin 2016; Bosch 2009; Manning 2016). In the literature on immigrants' labour market integration, the focus has been either on employment rates or as in the earnings gap literature on hourly wages (Chiswick 1978; Hum & Simpson 2000). However, as flexibilisation has swept over the labour markets of the Western world over the last few decades (Kalleberg 2009), using only employment or hourly wages as a proxy of labour market integration has become still more problematic as the assumption of full-time employment falters (Anker 2011; Warren 2015). The operationalisation approach in the dissertation is therefore to embrace the multidimensional character of labour market integration illustrated in the theoretical model in Figure I and, consequently, investigate labour market integration using multiple measures.

Figure II below illustrates the different measures used in the four articles to operationalise the insights from the theoretical model. The measures are intended to capture different dimensions or degrees of labour market integration. Starting from the outside, the model illustrates the different steps

of integration. First, an individual may become part of the labour force as the binary distinction active/inactive. This is illustrated in the model by the difference between being inside or outside the outer circle. Second, once an individual is part of the labour force, the next step is to gain an actual attachment by moving from unemployment to employment, illustrated by the move from the outside circle to the inside one. Third, once they have achieved an attachment to the labour market through actual employment, it is important to acknowledge that labour market integration has different dimensions. While article two uses the active-inactive distinction and hourly wages in a double comparative study of three destination countries and five different regions of origin, article one moves beyond the classic measures and studies hourly wages, annual earnings and working hours, while article four goes the furthest to embrace the multi-dimensionality of labour market integration. Although article four, in line with the earnings gap literature, uses annual earnings as the primary measure of labour market integration, the overall intention is to analytically illustrate the multiple dimensions of labour market integration (annual earnings, employment stability, working hours and hourly wages) and the contribution of each of them to the native-immigrant earnings gap.

The measures of different socio-economic dimensions of labour market integration used in three of the four articles (one, two, and four) are supplemented in article three by the separate measure of *unionisation*. The logic is that, in particular, in a highly unionised labour market setting such as in Denmark, the rate of unionisation describes a form of labour market integration that is different from the purely socio-economic one, but is, at the same time, closely tied to socio-economic integration (Card 1996). In line with the human capital theory (Becker 1962; Chiswick 1978), immigrants are thought to bring more or less transferable human capital with them when they migrate, but also to invest in host-country-specific human capital in order to succeed on the new labour market. In keeping with this logic, union membership may be thought of as a human capital investment in which immigrants invest, hoping that it yields returns in improved labour market integration. The importance of unionisation for immigrants' socio-economic labour market integration is illustrated in article four, where it is used to explain native-immigrant differences. It may also, however, represent a process less guided by individual goal-oriented rationality and more by social norms at the workplace. Immigrants' increasing rates of unionisation may thereby represent an increased occupational integration in which immigrants are, over time, more likely to join highly unionised workplaces and thereby be exposed to the social norm of unionisation.

Figure II: Model of measures of labour market integration



The relationship between unionisation rates and immigrants' labour market integration illustrates the interconnectedness between different dimensions of labour market integration. While the analysis might be able to statistically link different dimensions, the specific relationship between them is often harder to define. Does union membership secure an individual, native or immigrant, higher wages? Or, alternatively, are individuals with higher wages more likely to join unions? Do lower hourly wages prompt immigrants to compensate by working more hours? Or do immigrants receive lower wages because they are in unstable jobs with variable hours? A further illustration of the unclear causal relationship is the role of *occupational attainment*. While other studies have focused specifically on what

factors explain native-immigrant segmentation in occupational attainment outcomes and, specifically, issues of over-education among immigrants (Constant & Massey 2003; Khattab & Fox; Nielsen 2011), throughout the dissertation I decided not to model occupational attainment separately, but instead to include it as a primary explanatory variable. By using occupational attainment as an explanatory variable, the intention is to underline that a considerable part of the differences between natives and immigrants in labour market integration stem from occupational segmentation. The logic is that the conditions of the occupation or job – hourly wages, working hours and employment stability – are tied to the individual job and that there is no clear one-way causality in terms of type of occupation.

6.4.2 Multiple levels

As stated above, the second part of the research strategy to the study of immigrants' labour market integration is to employ a multi-level strategy across the articles in the dissertation. The logic is that, by employing both multiple measures of labour market integration and a multi-level strategy, it is possible to more clearly envisage the most important dimensions of labour market integration and, not least, the factors explaining differences in these different dimensions between different immigrant groups. By studying the same phenomenon from different angles, it becomes clear what explanatory factors are tied to the specific national or sectoral context in which they are studied, and what factors hold a more general cross-national or cross-sectoral explanatory power. As illustrated by Table I, article two focuses on the comparative cross-national level and, in particular, on the factors explaining differences in labour market integration between different groups of intra-EU immigrants in the different destination countries: Denmark, Germany and the UK. At the comparative cross-national level, the focus is on whether a clear hierarchical segmentation in terms of labour market integration outcomes exists across different national welfare and labour market configurations. The logic is that, if a labour market integration hierarchy is consistent among the same immigrant groups across the different configurations, explanations for this cross-national hierarchy must logically be found at levels other than the country of destination.

Moving from comparative cross-national level to the national level, article four, among other factors, looks at how the dense wage distribution on the Danish labour market affects the native-immigrant earnings gap. Moving further down to the sectoral and industry level, article one specifically looks at how differences in collective bargaining regulation across three private service industries affect the working hour distribution and the composition of workers across the three industries. Article three likewise, by focusing on the importance of the collective bargaining system across industries within the same sector that share a large number of characteristics, contributes to the understanding of the role of industry regulation in labour market integration. Moving on to the workplace level, articles three and four study the effect of workplace arrangements (e.g., workplace unionisation rates, workplace size, workforce

composition) on the probability of CEE immigrants' unionising and the native-immigrant earnings gap. Finally, all four articles focus on explanatory factors at the individual or household level, including long-term CEE immigrants' pre-settlement education, their intentions for length of stay, the number of dependent children in the household, or their partner status. Several of the articles include several of the levels, however, it is only by analytically covering all levels within the same dissertation that it is possible to reveal what factors affect immigrants' labour market integration more broadly.

6.4.3 Multiple data structures

The third and final part of the multi-angle research strategy employed in this dissertation is the combination of different data structures. While the articles all except one (article one) employ a more or less conventional statistical regression framework, they differ on a number of other points. The first two articles of the dissertation employ a cross-sectional framework, where the focus is on differences in labour market integration between different contexts (sectors and countries) for different groups. The ambition has been to focus on interrelated but specific dimensions of labour market integration in each article. The 'simple' cross-sectional framework allows the inclusion of considerable variation through multiple cases and thereby the comparison of different groups' labour market integration – in article one in the form of three separate industries, and, in article two, in the form of five different immigrant groups across three separate destination countries.

As noted, labour market integration is a process that develops over time. Instead of being a permanent state, (immigrant) labour market integration changes over time, necessitating the need to study labour market integration from a process perspective. Within the migration literature, scholars have long stressed the importance of time in understanding migrants' integration into a new labour market (Amuedo-Dorantes & De La Rica 2007; Chiswick 1978; Jensen & Pedersen 2007; Nannestad 2004). The reasoning in this strand of literature is that immigrants' integration into the destination labour market will gradually improve with the passing of time as they accumulate host-country-specific human capital through conscious and unconscious efforts (Chiswick 1983; 2003). In order to analyse how their labour market integration evolves over time, a time dimension in the data is required. The administrative register data that form the foundation of the articles, however, make it possible to analytically employ a panel data framework. By studying the same group of individuals across time, it is possible to see how the labour market integration process unfolds over time. This allows me to follow a particular group of immigrants and study the degree to which they integrate into the labour market.

Table I: Measures, levels, data structures and groups in the articles in the dissertation

	<i>Article I</i>	<i>Article II</i>	<i>Article III</i>	<i>Article IV</i>
<i>Measures</i>	Annual earnings Hourly wages Working hours	Active/inactive Hourly wages	Unionisation	Annual earnings Employment stability Working hours Hourly wages
<i>Levels</i>	Sector (private service sector) Three industries: Cleaning, retail and hotels and restaurants Individual	Comparative cross-national: Three destination countries: Denmark, Germany and the UK Individual	Industry Workplace Individual and household	Workplace Individual and household
<i>Data structures</i>	Cross-sectional	Cross-sectional	Panel data	Panel data
<i>Groups</i>	All workers in the selected industries	Natives (Danish, German, British), EU-West/EEA, EU-South, EU8, EU2, Third country nationals	Long-term CEE immigrants	Native Danes, long-term CEE immigrants

As illustrated in Table I, in article three, this is achieved by comparing long-term CEE immigrants' propensity to unionise over time. In article four, this is achieved by comparing the labour market integration of long-term CEE immigrants relative to a group of comparable native Danish workers over a seven year period.

7. CONTRIBUTIONS AND LIMITATIONS OF THE DISSERTATION

In this final section, I present the main theoretical, empirical and methodological contributions of the dissertation to the study of immigrants' labour market integration. This section thereby naturally complements the more detailed conclusions of the four separate articles. I conclude by reflecting on the limitations of my study as well as potentially rewarding directions for future research.

7.1 Theoretical and conceptual contributions

This dissertation makes three substantial theoretical and conceptual contributions to the study of (immigrant) labour market integration. First, at the overall level, the dissertation contributes conceptually to the broader literature on labour market integration by stressing the need to pay attention to the

multidimensionality of labour market integration in order to understand: 1) what constitutes labour market integration, 2) the differences in the process of integration for different groups, and 3) the different degrees of labour market integration. Previously, the literature on immigrants' labour market integration has principally focused on whether immigrants are more, or less, likely than natives to be part of the labour force and, if employed, whether a native-immigrant wage gap exists. However, such a simple understanding misses the multidimensionality of labour market integration. Over the last two to three decades, an overall process of flexibilisation has led to a general increase in atypical or non-standard forms of employment in labour markets across the Western world (Kalleberg 2009, 2011; Standing 2011). As a result, labour market integration today takes on multiple forms and degrees. In order to understand the current labour market integration of natives and immigrants more comprehensively, we need to focus on the multiple dimensions of integration, and how they combine at different points in the integration process in different degrees of integration. In this dissertation, I have proposed to look at the following dimensions: employment, earnings, working hours, employment stability, hourly wages and unionisation. The studies of these dimensions complement each other and allow me to ensure a better understanding of labour market integration, including the differences between groups.

Second, the dissertation argues that studies of labour market integration need to pay more attention to the very different experiences of integration between different groups of immigrants in two main ways. The first way in which it achieves this is by contributing to the discussions within the earnings gap literature on the need to decompose the native-immigrant earnings gap (Butcher & Di Nardo 2002; Chiswick et al. 2008). It does so by drawing attention to how differences in employment stability, working hours and hourly wages each contribute to the overall earnings gap at the top, middle and bottom of the earnings distribution. The article shows that, while differences in hourly wages, which have previously been used as a single measure of different degrees of labour market integration, explain almost all of the native-immigrant earnings gap at the top, the picture is much more complex at the bottom. The results suggest the need to separate the experiences of different immigrant groups depending on their place in the earnings distribution. Additionally, along the same lines, the dissertation contributes to the discussions on the racialisation of intra-EU immigrants, by adding more recent evidence that different immigrant groups, despite legal equality, experience very different opportunities across the receiving labour markets (Favell & Nebe 2009; Diehl et al. 2015). The dissertation thereby stresses the need to separate the experience of different subgroups of CEE immigrants and, not least, the experience of EU-South immigrants.

Third, focusing on unionisation as an integral dimension of labour market integration, the dissertation contributes to the literature on unionisation by drawing attention to the important role of

social customs at the workplace and the unionisation status of their partners in the unionisation of immigrants. Scholars within the literature on social customs theory assume that, if workplace union density is high, then the reputational effects of non-union membership are considerable, given that many union members take part in the policing and sanctioning of the custom of unionisation (Booth 1985; Checchi & Visser 2005). However, they have not previously tested whether this is also the case among immigrant workers. By focusing specifically on immigrant workers, I thereby add to both the overall literature on unionisation and to the more specific literature on immigrants' integration. In addition, this dissertation adds to the literature by challenging this overall assumption of social customs by showing that high union density in the workplace, both of red and yellow unions, increases the propensity of immigrants to join unions. This throws into question the proposition that social customs are operating as the underlying mechanism, as they would only be present in workplaces with a high density of red union members.

7.2 Empirical contributions

Empirically, this dissertation has primarily focused on the labour market integration of long-term CEE immigrants. However, as a consequence of the strategy of comparing immigrant groups to both each other and natives at different levels and across different contexts, the empirical contributions extend beyond the group of long-term CEE immigrants. This dissertation makes three substantial empirical contributions to the understanding of CEE immigrants' labour market integration and the factors influencing it.

First, the dissertation contributes to the UK-centred literature on CEE immigrants' labour market integration, by showing that a division of labour has developed across the three different labour market and welfare configurations in Denmark, Germany and the UK. In this division of labour, EU-West/EEA immigrants come out on top followed by natives and EU South immigrants who, in the aftermath of the Crisis, seem to take up a position closer to that of CEE immigrants than that of nationals or EU-West/EEA immigrants. EU8 immigrants have established themselves in the destination labour markets in terms of finding employment, and employers see this group as a reliable and flexible source of labour, especially for low-paid, low-skilled jobs (Hopkins & Dawson 2016; McCollum & Findlay 2015). At the same time, EU8 immigrants have managed to establish social networks that facilitate entry into the labour market, albeit with uncertain qualitative outcomes (Waldinger & Lichter 2003). The different density of social networks and different transitional arrangements might also account for EU2 immigrants' poorer performance.

Second, the dissertation contributes to the literature on CEE immigrants' labour market integration by adding a specific focus on the experiences of long-term CEE immigrants. Focusing on the native-immigrant earnings gap between native Danes and long-term CEE immigrants, the dissertation adds to the currently very limited literature on CEE immigrants' longer-term labour market integration by showing that a considerable earnings gap exists between native workers and post-enlargement CEE immigrants even after more than seven years of settlement (Bratsberg et al. 2014; Friberg 2015). Despite improvements in CEE immigrants' absolute earnings, the earnings gap increases over the seven-year study period. The decomposition in article four further shows that, at the overall aggregate level, the earnings gap is primarily explained by differences in hourly wages and only to a lesser extent by differences in working hours. Decomposing the earnings gap across the earnings distribution, however, reveals that the contribution of differences in hourly wages to the overall earnings gap differs considerably. While the earnings gap between long-term CEE immigrants and natives at the top is almost entirely explained by differences in hourly wages, moving down the distribution, the effect of differences in working hours and employment stability increases. The results further reveal that occupational segmentation explained much of both the overall earnings gap and the gap in hourly wages at the top of the earnings distribution, but also that the picture was considerably less clear further down the distribution.

Third, the dissertation contributes to the sparse literature on the unionisation of CEE immigrants by showing that, after five years of settlement, more than half of the long-term CEE immigrants in Denmark have unionised, and most of them within the first two years of arriving. The unionisation rate among long-term CEE immigrants is thereby considerably higher than that predicted by the literature. It is, however, still around 10 percentage points lower than for native workers. Additionally, the dissertation shows that, contrary to what might be expected from the literature, neither long-term CEE immigrants' intentions regarding their length of stay, nor the overall economic conditions at the time of their arrival, play any significant role in whether or not they choose to unionise.

7.3 Methodological contributions

Recognising the need to study multiple dimensions of labour market integration from multiple angles and drawing on multiple sources of data (comparative cross-national, administrative register data and a customised survey), this dissertation contributes methodologically in two main ways. First, the dissertation contributes by using multiple measures of labour market integration simultaneously, something not otherwise possible, thereby making it possible to investigate their interrelations. The contribution of this strategy is most obvious in article four where, as noted, the double strategy of: 1)

decomposing the annual native-immigrant earnings gap, and 2) performing it separately for high-, middle- and low-earners reveals very different patterns of labour market integration. The strength of using multiple measures of labour market integration is also evident in articles one and two. In article one, the focus is on how a one-sided focus on hourly wages in the living wage literature risks concealing underlying challenges related to working hours. In article two, the multiple measures strategy makes it possible to conduct a two-stage analysis in which the selection into the labour force is investigated, followed by an investigation of the differences in hourly wages among the employed immigrants.

Second, the dissertation contributes to the study of labour market integration by studying multiple levels (macro, sectoral, workplace and household/individual). While most studies of labour market integration only focus on one level of analysis, this dissertation looks at both the macro level using a double comparative cross-national strategy in article two (Tubergen et al. 2004), at the sectoral level comparing different industries, at the workplace level comparing immigrants' unionisation depending on workplace characteristics and at the household or individual level. By studying labour market integration at different levels, it becomes clear what explanatory factors are tied to the specific national or sectoral context in which they are studied, and what factors hold a more general cross-national or cross-sectoral explanatory power.

7.4 Limitations and future research

I conclude this introduction by highlighting a few important limitations of my study that point to future avenues of research. First, the dissertation is highly focused on the reality of CEE immigrants' labour market integration into the Danish labour market. Although article two compares immigrant groups' labour market integration in Denmark, Germany and the UK, CEE immigrants' integration into the Danish labour market remains the primary context of the analyses. Given the unique possibilities in Danish administrative register data, this context provides invaluable opportunities to investigate questions of general interest concerning, for example, immigrants' unionisation and the role of different dimensions in the earnings gap. However, it also leaves questions about the broader generalisability of the conclusions. Although the consistent division of labour among intra-EU immigrants across Denmark, Germany and the UK found in article two indicates some degree of generalisability, further research is needed. In this regard, potential questions may be: Do differences in each of the dimensions of labour market integration contribute in the same way to the overall native-immigrant earnings gaps at the top, middle and bottom of the earnings distribution in less highly regulated labour markets than the Danish and for other immigrant groups? And how do the unionisation patterns of long-term CEE immigrants play out in labour markets with weaker trade unions and lower union densities at the workplace?

Second, this dissertation stresses the point that labour market integration is, in essence, a process that changes over time. Within the immigrant integration literature, the focus is often on labour market integration changes over longer periods of time or how later generations of immigrants perform on the destination labour markets (see e.g. Chiswick 1978; Portes & Rumbaut 2001). However, due to the focus on post-enlargement CEE immigrants, along with the combination of the relatively short period since the first eastward enlargement in 2004 and limited data availability, it has only been possible in this dissertation to analyse a five- and seven-year period respectively (article three and article four). It is therefore, based on the dissertation, only possible to draw conclusions concerning the first seven-year period of long-term CEE immigrants' settlement. As time passes, future research may therefore fruitfully continue the study of CEE immigrants' labour market integration in order to determine whether, for example, the increase in the native-immigrant earnings gap continues from a longer perspective or if the trend changes. Likewise, it would be of benefit in future studies to compare the labour market integration of short- and long-term immigrants more systematically.

Third, also in a process perspective, future research may further investigate the processes that lead to different forms of labour market integration based on administrative register and survey data. This dissertation has shown how the unionisation status of the partner and social customs at the workplace level apparently influence immigrants' propensity to unionise; however, the analyses also indicate that social customs play out differently than has previously been assumed. As such, this study calls for more qualitative research to understand why CEE immigrants choose to join different types of trade unions, and the role played by social customs at home and at the workplace, but which also allows us to explore more instrumental considerations. Delving deeper into the decision-making process will allow us to disentangle the role of different factors at different points in the migration process. In much the same manner, it may be worthwhile to use qualitative methods to delve deeper into the processes that lead to the occupational segmentation that emerge as the primary explanation of labour market integration differences between natives and immigrants.

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Article 1:

Living hours under pressure: flexibility loopholes in the Danish IR-model

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INTERNATIONAL Living hours under pressure: flexibility loopholes in the Danish IR-model

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Abstract

Purpose – The purpose of this paper is to investigate the effect of part-time work on absolute wages. The empirical focus is wages and working hours in three selected sectors within private services in the Danish labour market – industrial cleaning, retail, hotels and restaurants – and their agreement-based regulation of working time and wages. Theoretically, this analysis is inspired by the concept of living hours, which addresses the interaction between working hours and living wages, but adds a new layer to the concept in that the authors also consider the importance of working time regulations for securing a living wage.

Design/methodology/approach – The paper builds on desk research of collective agreements and analysis of monthly administrative register data on wages and working hours of Danish employees from the period 2008–2014.

Findings – This analysis shows that the de facto hourly wages have increased since the global financial crisis in all three sectors. This is in accordance with increasing minimum wage levels in the sector-level agreements. The majority of workers in all three sectors work part-time. Marginal part-timers – 15 hours or less per week – make up the largest group of workers. The de facto hourly wage for part-timers, including marginal part-timers, is relatively close to the sector average. However, the yearly job-related income is much lower for part-time than for full-time workers and much lower than the poverty threshold. Whereas the collective agreement in industrial cleaning includes a minimum floor of 15 weekly working hours – this is not the case in retail, hotels and restaurants. This creates a loophole in the latter two sectors that can be exploited by employers to gain wage flexibility through part-time work.

Originality/value – The living wage literature usually focusses on hourly wages (including minimum wages via collective agreements or legislation). This analysis demonstrates that studies of low-wage work must include the number of working hours and working time regulations, as this aspect can have a dramatic influence on absolute wages – even in cases of hourly wages at relatively high levels. Part-time work and especially marginal part-time work can be associated with very low yearly income levels – even in cases like Denmark – if regulations do not include minimum working time floors. The authors suggest that future studies include the perspective of living hours to draw attention to the effect of low number of weekly hours on absolute income levels.

Keywords Living hours, Low-wage workers, Private services, The Danish IR-model, Working time regulation
Paper type Research paper

Introduction

The scholarly debate around living wages and minimum wages have regained momentum in the last few decades as western economies have witnessed a rapid growth in low-wage work, earnings inequalities, in-work poverty and contracts other than full-time employment, particularly in private services (Garnero *et al.*, 2014; Parker *et al.*, 2016). However, much of the literature focusses on Anglo-Saxon countries – primarily the UK and the USA, where the living



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wage debates often are organised around various wage-indicators, particularly the effects of minimum wages and national wage-setting systems on employment (Manning, 2016), low-wage work (Bosch, 2009), earnings inequalities, including gender gaps (Rubery *et al.*, 2005) and businesses practices (Bell and Machin, 2016). Less researched is the situation in the Nordic countries and the importance of variables other than pay such as weekly working hours and working time regulations for securing living wages. Indeed, most living wage calculations are based on the assumption of full-time work, even if recent research emphasises that full-time employment is no guarantee for many workers (Anker, 2011; Warren, 2015).

Based on monthly administrative register data on all Danish employees from the period 2008–2014, this paper offers new insights into the effects of working time, including working time regulations, on annual earnings in low-wage private services such as industrial cleaning, retail, hotels and restaurants. We built on the concept of living hours (Ilsøe, 2016) since it considers not only the hourly wage, but also the number of weekly working hours as important when evaluating employees' ability to uphold living wage. However, similar to other living wage research, the national working time regulations tend to be overlooked by Ilsøe (2016), although it seems just as pivotal as national wage-setting systems regarding employees' ability to secure living wages. Most national working time regulations, besides setting a strict threshold for the maximum length of the working week, also encounter various regulations on work scheduling and distribution of working time, but rarely include a minimum threshold for working hours (Berg *et al.*, 2004; Seifert, 2005).

Our analysis demonstrates that although the Danish collective bargaining system ensures a certain wage floor – often above the minimum hourly wages elsewhere in Europe – (Grimshaw *et al.*, 2014); a growing share of Danish private service workers struggle to secure a yearly income above the poverty line – defined as less than 60 per cent of the national median of gross hourly wages (Bosch, 2009). Their short hours and marginal part-time employment often force such employees to hold multiple jobs; and although part-time work is often considered a strategy to facilitate work-life balance among mothers in particular (O'Reilly *et al.*, 2014), this rarely is the case in Danish private services. Unlike young people, Danish parents, including mothers, are less likely to work within retail, hotels and restaurants compared to elsewhere in the Danish labour market, and if they do, parents often hold full-time positions or part-time contracts of longer hours. The working time regulations and wage-setting systems seem pivotal as to the incidence of marginal part-time work and the number of young people within Danish private services. Unlike industrial cleaning, the sectoral agreements within retail, hotels and restaurants fail to secure a threshold for minimum weekly working hours and furthermore they differentiate wages according to age with the agreed hourly wages for young people being nearly half of their older co-workers. This appears to contribute to increased segmentation and polarisation within Danish private services. Employers seem to exploit the various loopholes within the IR-system to curb costs and secure flexibility by offering contracts of limited hours and replacing older workers for cheap young labour – employment practices also seen elsewhere in Europe (Walsh, 1990; Grimshaw *et al.*, 2014; Schulten, 2016). Therefore, our paper calls not only for adding working time and national working time regulations to the discussions on what constitutes a living wage. It also points to that even in highly regulated labour markets with generous collectively agreed wage floors like Denmark, wide sector variations exist, even within private services regarding employee's ability to accrue enough work hours to secure a sufficient income. This indicates that similar to wage-setting systems, working time regulations play a key role in determining living wages.

The next section briefly engages with contemporary literature on living wages with a specific focus on studies stressing the importance of working time and sectoral institutions for securing living wages. We then present the data sets and methods used before outlining

the key features of how wages and working conditions are regulated in Denmark. Thereafter, the effects of part-time work on earnings in the selected private services industries – industrial cleaning, retail, hotels and restaurants – are examined and compared to the rest of the private labour market in Denmark. Finally, we discuss the findings in relation to concepts of low-wage work used in studies of other western economies.

Securing a living wage in private services – a literature review

Distinct strands of literature have documented that industrial cleaning, retail, hotels and restaurants are highly labour intensive industries dominated by fierce price competition, and employers' needs for a highly flexible workforce to match demands (Walsh, 1990; Bosch, 2009; Kalleberg, 2011; Schulten, 2016). Studies also point to a deterioration of employment conditions with a rapid growth in contracts other than full-time employment and low-wage work – characterised by wages significantly below average wages on the labour market (Bosch, 2009; Larsen and Mailand, 2014). The risks of employees struggling to secure a living wage seem greater within the aforementioned sectors than elsewhere on the European labour markets, even if the concept of living wage is highly contested and often vary depending on the national context, the theoretical, the methodological and the empirical approach (Parker *et al.*, 2016; Anker, 2011). In this context, living wages are often defined as a country-specific measure, which calculates the hourly pay rate that a full-time employee needs to earn to support a family of four at the poverty line (Anker, 2006, 2011). However, such calculations tend to concentrate mainly on wage-setting indicators, particularly minimum wage levels and national wage-setting systems' importance for securing living wages (Grimshaw *et al.*, 2014). Variables other than pay such as weekly working hours and working time regulations are often ignored in such calculations as they typically are built around the notion of full-time work, although early living wage research and more recent studies, stress that full-time employment is no guarantee for many workers (Rubery, 2015; King and Rueda, 2008; Anker, 2011; Warren, 2015). Likewise, much working time literature concentrate on long work hours, whilst the effects of too "few hours" are less researched, even if it may have just as severe implications for the individual in the short and long term (Warren, 2015, p. 194).

Living hours

To encounter these shortcomings within the literature, we seek in this paper to build on the concept of living hours by Ilsøe (2016). The concept of living hours draws on the ideas by King and Rueda (2008) who argue that there exist two types of low-wage work; standard (open-ended full-time employment) and non-standard (part-time, temporary employment). Employers in a given national setting will often rely on one or the other type of low-wage work with countries such as the USA and the UK demonstrating a high incidence of standard cheap labour. By contrast, Nordic countries like Denmark display similar, or even higher levels of non-standard low-wage work in parts of the labour market such as private services work compared to the UK and the USA (Ilsøe, 2016, p. 43; King and Rueda, 2008). Therefore, the concept of living hours by Ilsøe (2016, p. 43) considers not only the hourly wage, but also the number of weekly working hours and suitable work schedule – i.e. unsocial work hours – as important when evaluating employees' ability to secure a living wage. In this context, although overlooked by Ilsøe (2016), the national working time regulations can be argued to play equally as an important role as national wage-setting systems in employees' ability to secure living wages. Most national working time regulations, besides setting a strict threshold for the maximum length of the working week, also encounter various regulations on work scheduling and distribution of working time, but often fail to include a minimum floor for the number of weekly working hours (Berg *et al.*, 2004; Seifert, 2005; Grimshaw *et al.*, 2014).

Institutional factors: working time and wage regulations

The living wage literature often deals with working time in relation to how minimum wages affect employment with some studies reporting of reduced earnings inequalities, particularly for part-timers and low-wage workers (Rubery *et al.*, 2005; Garnero *et al.*, 2014) and limited negative effects on employment (Manning, 2016). Others document that employers' adjust employment and business practices to counteract minimum wage increases by relying on contracts of limited hours (Schulten, 2016) casual employment (Arpaia *et al.*, 2017), outsourcing of services (Grimshaw *et al.*, 2014; Bell and Machin, 2016), cheaper young labour and migrants rather than older workers (Neumark and Wascher, 2006) and/or being less generous with aspects of the employment contract, which are open for interpretation such as fringe benefits and further training, etc. (Croucher and White, 2010). Such research suggests a close link between wages and working time. However, the impact of national working time regulations on living wages is rarely researched, but seems pivotal as such regulations may add another layer of institutionalised polarisation and segmentation on the labour market. Indeed, working time regulations may lead to some employees struggling to secure a living wage, particularly as working time – similar to wages – are regulated differently across European countries (Eichhorst, 2017; Eurofound, 2016; Grimshaw *et al.*, 2014).

The role of working time outcomes for employees' wages highly depends on the institutional settings for regulating working time. Eurofound (2016) identifies four types of national working time regimes based on the role of legislation, scope of collective bargaining and agreements, the decentralisation of bargaining powers to lower institutional levels and the importance of individual employers in determining working time standards. Denmark belongs to the so-called "negotiated working time regime", where working time is primarily regulated through collective agreements, which can be further complemented by company-based bargaining, although legislation also sets the legal framework for working time negotiations (Eurofound, 2016). Therefore, the Danish institutional setting gives social partners considerable latitude to adjust working time standards in terms of the length, scheduling and distribution of working hours at sectoral and company levels. In fact, unlike most national wage-setting systems, including the Danish, which set strict wage floors for the hourly pay rate, most national working time regimes rarely guarantee a minimum number of weekly working hours (Grimshaw *et al.*, 2014; Garnero *et al.*, 2014). Ample research reveals an increased fragmentation of the work day with a rapid growth in marginal part-time work, zero-hour contracts, unsocial work hours, various forms of casual employment along with a rescheduling of hours to when workers are most productive. This indicates that employers often exploit the loopholes in existing working time regulations to curb costs and secure flexibility to match demands with the inherited trade-offs that workers struggle to accrue enough hours to secure a living wage (Warren, 2015; Cornick and Jacobs, 1996; Heyes *et al.*, 2017; Rubery, 2015; Campbell and Price, 2016; Katz and Krueger, 2016). In addition, numerous work-life balance studies envisage part-time work as a strategy facilitating employees', especially mothers' and students' ability to organise work around care-giving or study activities during periods of childrearing or active student life (O'Reilly and Fagan, 1998; Price *et al.*, 2011; Warren, 2004). In this context, the national working time regulations attribute to employees' possibilities to work reduced hours as they provide different leeway for flexible working that may consider the needs of both employers and employees. Part-time employment is often considered beneficial to both sides of industry in terms of facilitating work-life balance for employees (Warren, 2004), whilst securing flexibility and cost curbing for employers. However, the inherited trade-offs may entail increased risks of precariousness for employees and for employers involve less committed workers, high employee turnover and difficulties in attracting qualified staff (Walsh, 1990; Grugulis and Bozkurt, 2011; Price *et al.*, 2011). Therefore, working time

regulations, including weekly working hours, appear pivotal to secure a flexible workforce and living wages, particularly in countries, where employers and employees opt for part-time work for various reasons.

In sum, four main questions arise from this brief literature review:

- (1) How are weekly working hours regulated in the collective agreements covering industrial cleaning, retail, hotels and restaurants in the Danish labour market?
- (2) What are the effects of weekly working hours – marginal part-time work in particular – on annual income levels within industrial cleaning, retail, hotels and restaurants?
- (3) Do we see different employment practices across the three selected sectors as to the incidence of part-time work and its implications for service workers' annual income?
- (4) To what extent do working time regulations affect part-time workers' annual levels within private services in Denmark?

Methods and used data sets

Our strategy of analysis is twofold. First, we examine the regulation of wages and working hours in the sector-level agreements covering industrial cleaning, retail, hotels and restaurants. Here, we compare minimum hourly wages, wage supplements for unsocial hours and minimum floors of working hours. The second part of our analysis builds on Danish register data covering everyone in the Danish labour market with any form of official taxable income in a Danish company; as such, it represents the entire population of workers in Danish companies in the Danish labour market. Drawing on information from the tax filings of the individual employers, data provide information on individuals' employment relationships at the level of the individual workplace in terms of, e.g. length of employment, monthly income and monthly working hours as well as on demographic characteristics, etc. Administrative register data are ideal for analysing labour market-related research questions as they contain detailed information on every employment relationship, an individual has had each month. Employment in specific sectors is often calculated based solely on the primary job, the number of employment relationships is therefore often underestimated. This is especially the case in private services, as a comparatively large share of the employees in the sector due to the low number of working hours hold more than one job. We, therefore, include the variable multiple job holdings in our analysis.

We define, service sector employment using the NACE classification as employment relationships in retail trade (47.00-48.99), hotels and restaurants (55.00-56.99) and industrial cleaning (81.21-81.23).

Total labour market-related income in private services is measured as the total income related to the individual's job(s) in the specific sector.

Working hours' categories are defined using the average weekly working hours in industry job(s) in periods of employment which is measured as the total number of working hours in one or more jobs in the industry divided by the number of weeks worked.

Our strategy of analysis regarding the register data falls in four steps. First, we examine the development of the actual hourly wages since the crisis (2008-2014) in the three selected sectors compared to the private sector average. Second, we analyse the share of full-time (30+), part-time (16-30) and marginal part-time (0-15) workers in the selected industries in 2014. Third, we compare the actual hourly wage among full-time (30+), part-time (16-30) and marginal part-time (0-15) workers the three sectors in 2014. Finally, we calculate the yearly job-related income among full-time (30+), part-time (16-30) and marginal part-time (0-15) workers in the three sectors compared to the private sector

average. Finally, we compare our findings with the regulation of weekly working hours in retail, hotels and restaurants and cleaning to evaluate the effect of the regulations on working time practices and income levels.

Regulating low-wage work in Denmark: the Danish IR-system and collective agreements on wages and working time

The Danish retail, industrial cleaning, hotels and restaurant sectors differ in many respects from other parts of the Danish labour market, but share some commonalities with similar sectors in other European countries (Westergaard-Nielsen, 2008). The three sectors employ 18 per cent of the Danish workforce – most in retail – and are dominated by an overrepresentation of young people, women, migrants, low-skilled workers without any educational credentials and high levels of part-time work. The figures vary slightly across the three sectors, but are somewhat higher compared to the rest of the Danish labour market (Danish Statistics, 2017a). However, parents – both fathers and mothers – are less likely to take up employment within retail, hotels and restaurants compared to industrial cleaning and elsewhere in the Danish labour market (Danish Statistics, 2017a), indicating that the high incidence of part-time work in Danish private services may not necessarily be down to work-life balance concerns only.

Retail, industrial cleaning, hotels and restaurants are also highly labour intensive industries and are dominated by fierce price competition and small companies – notably self-employed and a few large players (Danish Statistics, 2017b). They also have a relatively high turnover among employees and companies and particularly industrial cleaning has witnessed an increased outsourcing of cleaning services to private contractors (DI, 2016).

The Danish collective bargaining model appears relatively weaker within private services as union densities, collective agreement coverage and shop steward presence are lower than in other sectors (Toubøl *et al.*, 2015; Larsen *et al.*, 2010). However, similar to other parts of the Danish labour market, wages and working conditions are regulated primarily by collective agreements signed by social partners at sectoral and company levels within private services. In areas of private services without collective agreement coverage or Danish labour law, wage and working conditions are regulated by the individual arrangements and practices of the private company and may not necessarily offer similar wage and working conditions as outlined in the collective agreements, which recent studies, court rulings and media reports also confirm (Larsen and Mailand, 2014; Korsby, 2011; Andersen and Felbo-Kolding, 2013).

The collective agreements within private services allow for company-based bargaining, but are rather detailed regarding wages and working conditions compared to other sectors such as manufacturing and construction (Ilsøe and Larsen, 2016). When looking at selected aspects of the wages and working time regulations, we find that the collective agreements within private services differ depending on the sector, type of contract and employee group under consideration. For example, the collectively agreed minimum wages are less generous in retail followed by hotels and restaurants and industrial cleaning. In addition, the collective agreements often differentiate wages according to age, where the agreed hourly wages for young people within retail, hotels and restaurants are nearly half of their older co-workers, whilst the wage gap is somewhat narrower within industrial cleaning (Table I).

Besides regulating wages, the collective agreements also include various working time regulations regarding the length (weekly working hours, part-time work, overtime, etc.), scheduling (shift work, weekend work, on-call duties, etc.) and distribution of work hours (flexi-time, varied weekly working hours, time-off, etc.). In this context, only industrial cleaning guarantee all employees, including young people, a minimum number of weekly working hours and secure overtime payment, even if it is voluntary and exceed

	Industrial cleaning	Retail	Hotels and restaurants
Union density	54	32	33
Collective agreement coverage (by number of companies)	40-50	57	—
Local bargaining	Yes	Yes	Yes
<i>Collective agreed minimum hourly wages</i>			
General	122.48 DKR	112.42 DKR	120.77 DKR
Young people	104.66 DKR	63.86 DKR	71.81 DKR
<i>Minimum wage supplements for unsocial hours</i>			
General	13.82 DKR	25.20 DKR	18.08 DKR
Young people	—	12.6-0 DKR ^b	12.99 DKR
Maximum weekly working hours	48 hours per week	45 hours per week	48 hours per week
Full-time work	30 hours per week	37 hours per week	37 hours per week
Possibilities for flexi-time	No specific rules	Yes – local bargaining	No specific rules
<i>Guaranteed weekly working hours</i>			
General	15 hours per week	None	2-4 hours per week
Young people			2 hours per day
<i>Thresholds for variable part-time work^a</i>			
General	15-37 hours	None	10-37 hours
Young people ^b			7.5-37 hours
Notes:	^a The threshold for weekly working hours are typically distributed over a four-week period; ^b young people defined as employees under 18 years – exception retail covers also students under 25 years with max. 15 weekly working hours		
Sources:	Toubøl <i>et al.</i> (2015), Larsen <i>et al.</i> (2010), Larsen and Mailand (2014), Horesta and 3F (2014a, b), DI, 3F and Serviceforbundet (2014) and Danish chamber of commerce and HK Retail (2014)		

Table I.
Minimum hourly wages and specific working time regulations in selected collective agreements covering industrial cleaning, retail, hotels and restaurants in Denmark

7.5 working hours per day. In retail, hotels and restaurants overtime payment only applies when induced by employers and when exceeding a specific threshold of weekly working hours, which is less restrictive than the one applied within industrial cleaning (Table I). These variations may, along with the wage differentials for distinct employee groups affect employment practices across the three sectors with employers having greater incentive to rely on part-time work within retail, hotels and restaurants and less industrial cleaning due to differences in the collectively agreed standards and thereby implicitly the institutional set-up.

Actual hourly wages and yearly income levels – full-time workers and part-time workers compared

When comparing collective agreements across the Danish labour market, it becomes evident that the three selected sectors for this study – industrial cleaning, retail, hotels and restaurants – have some of the lowest agreed hourly wages in Denmark (see previous section). This picture is repeated when comparing the actual hourly wages in the three sectors with the private sector in general. In 2014, the de facto average hourly wage in the Danish private sector was DKR212 (€28), but somewhat lower in industrial cleaning (DKR166 – €22) and lowest in retail, hotels and restaurants (DKR140 – €19), even if the average hourly wages are higher than the collectively agreed minimum wages within the three sectors (see Figure 1 and Table I). That the average hourly wages are higher than the collective agreed standards within private services is not surprising as the sectors are characterised by a preponderance of unsocial hours, which entitle workers to certain wage supplements (Ilsøe, 2016).

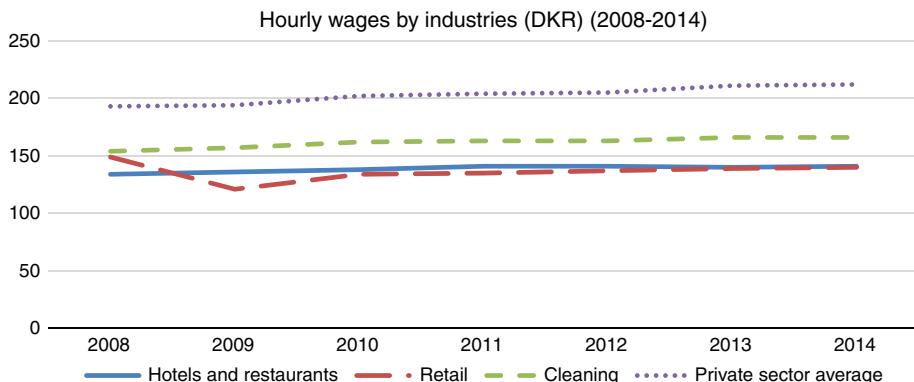


Figure 1.
Hourly wages (DKR) in selected industries in the Danish labour market (2008-2012)

Figure 1 also reveals that the de facto average hourly wage has increased in the private sector since the global financial crisis (GFC) hit the Danish economy in 2008/2009. Interestingly, this has also been the trend in industrial cleaning, retail, hotels and restaurants, which may be down to the annual wage adjustments dictated in the collective agreements that cover large parts of the three sectors as mentioned earlier (Figure 1). In addition, the employees not covered by collective agreements may have benefited from these moderate wage increases as collective agreements can act as norm setting, even for work not covered by collective agreement in low-wage private services.

Besides demonstrating moderate wage increases, Figure 1 also suggests that there hardly are any problems of non-compliance with the collective agreed minimum wages within industrial cleaning, retail, hotels and restaurants as employers often pay higher hourly wages than the collectively agreed standards. Therefore, it seems that even within low-wage private services the problems of working poor are almost non-existent when focussing solely on the de facto hourly wages. However, further analysis of the wage levels among distinct employee groups across the three service sectors, reveal that young people's actual earnings are lower than their older peers. The earnings gap is less severe within industrial cleaning (11 per cent) whilst young people under 18 years earn half of their older co-workers in retail (51 per cent), hotels and restaurants (49 per cent). This combined with the relatively high incidence of young people under 18, particularly within retail (21 per cent), hotels and restaurants (13 per cent) compared with industrial cleaning (7 per cent) indicate that the institutional settings, in terms of the differentiated collectively agreed wage levels, encourage distinct employment practices across the sectors. Danish employers appear more likely to opt for cheap young labour in retail, hotels and restaurants than industrial cleaning, where the collectively agreed wage difference between young people and their older co-workers is narrower (Table I). The importance of sectoral institutions seem even more evident when looking at the share of part-time work, which historically has been high in all three sectors (Bosch and Lehndorff, 2005; Walsh, 1990) and this continues to be the case in the Danish labour market (Figure 2). More than two-thirds of the workforce are part-timers with a working week of less than 30 hours within industrial cleaning and retail, whilst the share is even higher within hotels and restaurants (79 per cent). The largest group of workers within these sectors work less than 15 hours per week and this is particularly widespread within retail, hotels and restaurants, where more than half of the workers work marginal part-time hours (Figure 2). It is particularly young people that work part-time – typically on contracts of few hours. In total, 82 per cent of marginal part-timers in retail and 68 per cent in hotels and restaurants are young people that often work during their studies. The share of young people among marginal part-timers is considerably lower within industrial cleaning (35 per cent), where a

larger share of employees (27 per cent) reconcile a cleaning job with childrearing responsibilities for small children under 12 years compared to retail (22 per cent), hotels and restaurants (18 per cent). Further analysis also suggests that Danish employees – both fathers and mothers – are less likely to work within private services during periods of childrearing and if they do take up employment within private services, both fathers and mothers typically combine childrearing with a full-time position or long part-time contracts. This suggests that the high incidence of marginal part-time work seldom is to ease parents' work-life balance struggles.

That many service workers hold multiple jobs, particularly among marginal part-timers (64 per cent in retail, 67 per cent in industrial cleaning and 47 per cent in hotels and restaurants) but also among part-time workers with longer hours (51 per cent in retail, 47 per cent in industrial cleaning and 42 per cent in hotels and restaurants) suggest that the high incidence of part-time work is merely a necessity rather than a choice. The share of full-time employees with multiple jobs is somewhat lower across the three service sectors examined (27 per cent in retail, 33 per cent in industrial cleaning and 20 per cent in hotels and restaurants), but considerably higher than elsewhere in the Danish labour market (12 per cent). Such findings suggest that while private service employers seem to adhere to the collectively agreed minimum wages, they appear to utilise the fact that there are no guaranteed weekly working hours within the collective agreements covering retail, hotels and restaurants to secure a highly flexible workforce. The lower incidence of marginal part-time work within industrial cleaning may be attributed to the fact that the sectoral collective agreement set a threshold for minimum weekly working hours, but allows for derogations from the working time guarantee. This may also explain why we witness a large share of marginal part-timers within industrial cleaning.

The Danish working time regulations combined with the lower collectively agreed wages for young people seem to contribute to the high levels of marginal part-time work, particularly among young people in retail, hotels and restaurants. By contrast, the sectoral agreement covering industrial cleaning with its guaranteed minimum working hours and more generous wages for young people appears to cushion the spread of low-wage work and marginal part-time employment within the sector. Such findings also point to that although marginal part-time work may entail a "win-win" situation for both employers and employees – especially for young people in that it allows them to combine work with their studies whilst securing flexibility and cost curbing for employers – this may not always be the case. That the majority of service workers hold multiple jobs and parents are less likely to work within private services indicate the difficulties in securing a living wage from one service job alone and question the notion of part-time work being optional. In this context, the key question arise how these working time patterns affect wages – in particular how part-time work patterns affect not only the hourly wage, but also the absolute wages.

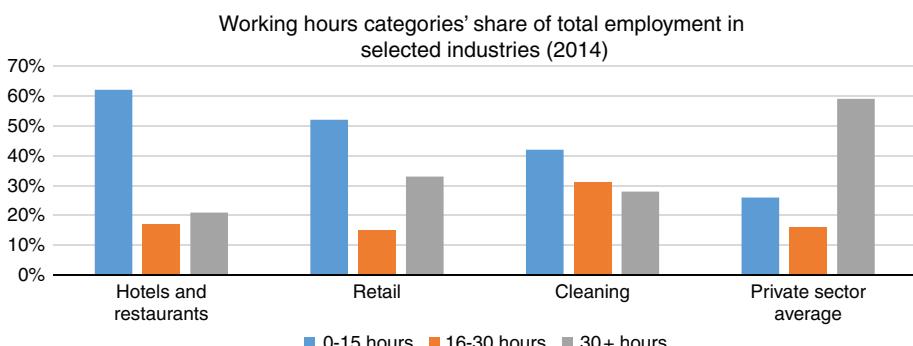


Figure 2.
Share of employment with full-time (30+),
part-time (16-30) and
marginal part-time
(0-15) weekly working
hours in selected
industries in the
Danish labour
market (2014)

Working part-time, and especially marginal part-time work, has severe implications for employees' hourly wages. Part-time workers are paid less by the hour than their peers in full-time positions, even if Danish collective agreements in principle guarantee part-time workers similar wages and working conditions (see Figure 3). This is true for both the private sector in general and private services in particular and may be attributed to the fact that young people often are overrepresented among part-time workers and are guaranteed a lower collectively agreed wage than their older peers, although variations exist across the three service sectors (Table I). These institutional differences may explain why the hourly wage gap between full-time and part-time workers is somewhat narrower in industrial cleaning (full-time workers earn 13 per cent more than part-timers and marginal part-timers), retail (17, 30 per cent), hotels and restaurants (15, 22 per cent) compared to the rest of the private labour market, where full-time workers earn 22 per cent more than part-time workers and 26 per cent more than marginal part-time workers (Figure 3).

Figure 3 also reveals that the average hourly wages for part-time workers and marginal part-time workers are above the so-called poverty line (Bosch, 2009). In this context, the institutional settings within the three service sectors, particularly the collectively agreed wage levels seem decisive for reducing the risks of in-work poverty. Industrial cleaners' actual hourly wages are considerably above the poverty line, even for marginal part-timers, compared to their peers in retail, hotels and restaurants – two sectors with highly differentiated collectively agreed wage levels for young people and older workers. Therefore, although the high incidence of marginal part-time work in private services often is associated with some degree of earnings penalties, most service workers' earnings are above the poverty line – even if cross-sector variations exist – when focussing solely on the average hourly wages. However, the picture changes significantly when using employees' annual income rather than their average hourly wages when analysing the effects of working time on service workers' earnings (Figure 4).

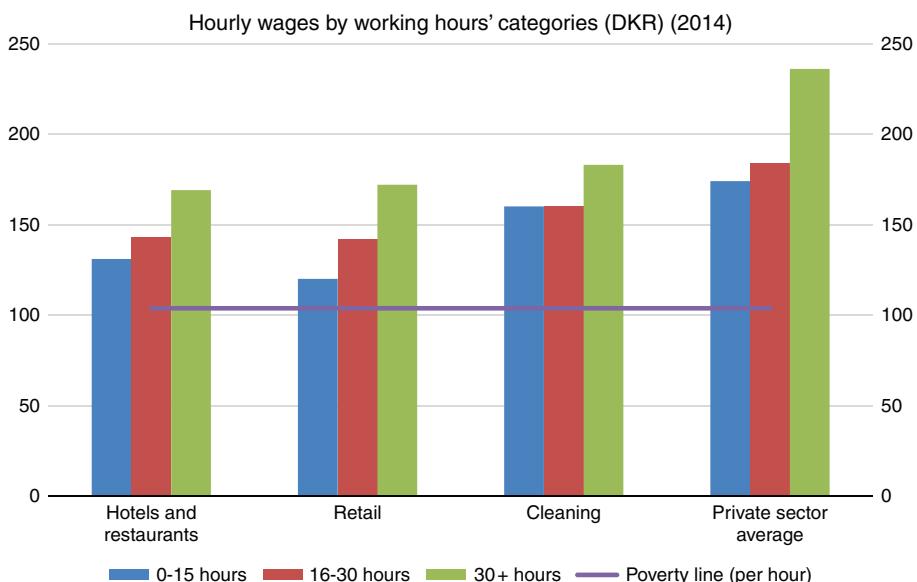


Figure 3.
Hourly wages among full-time (30+), part-time (16-30) and marginal part-time (0-15) workers in selected industries in the Danish labour market (2014)



Figure 4.
Yearly income among full-time (30+), part-time (16-30) and marginal part-time (0-15) workers in selected industries in the Danish labour market (2014)

Working part-time and particularly marginal part-time work seem to have a much more dramatic effect on yearly wages than hourly wages (Figure 4). Unlike full-time employees, the earnings of both marginal part-time workers and part-time workers with long hours are below the poverty line. Marginal part-time workers in particular are at risk of being working in poor conditions. Their yearly job-related income is often below the poverty line, indicating that they face great difficulties in securing a living wage, even if their hourly wages are in line or even above the minimum collectively agreed hourly wages. This is somewhat unsurprising (fewer hours mean less pay), but the full effect is striking although the different institutional settings seem to cushion the risks of in-work poverty. Slightly more part-timers working in hotels and restaurants are at risk of in-work poverty compared to their peers in similar positions in retail followed by industrial cleaning, where the collectively agreed wages are higher, even for young people, and the collective agreement guarantee a specific number of weekly hours. That many marginal part-time workers hold multiple jobs in each of the three service sectors just underline the struggles to secure a living wage from a low-wage part-time job; 67 per cent of industrial cleaners, 64 per cent of retail workers and 47 per cent of employees within hotels and restaurants in marginal part-time employment have more than one job. These figures are slightly lower for their peers holding part-time contracts of longer hours (47 per cent industrial cleaning, 51 per cent in retail and 42 per cent in hotels and restaurants) or full-time positions (33 per cent industrial cleaning, 27 per cent in retail and 20 per cent in hotels and restaurants). However, such findings also indicate that even with a full-time job, it can be difficult to secure a living wage within low-wage service work. Thus, our findings corroborate not only the argument by Ilsøe (2016) that both hourly wages and the number of weekly working hours are pivotal to secure a living wage. Our analysis also reveals that the institutional settings in particular working time regulations are equally as important as the collectively agreed wages when it comes to secure a living wage.

Conclusion and discussion

Our analysis has demonstrated that the actual hourly wages in industrial cleaning, retail, hotels and restaurants have increased since the GFC hit the Danish labour market.

Furthermore, the de facto hourly wages are higher than the collective agreed minimum wages – most likely due to various wage supplements for unsocial hours. However, the majority of workers in the three selected service sectors work part-time or marginal part-time. These workers are paid a slightly lower hourly wage than their peers in full-time positions, but more importantly, they earn a much lower yearly income than their full-time colleagues. Marginal part-time workers earn less than a fifth of poverty line earnings.

The obvious implication for these workers is that they cannot secure a living wage from a marginal part-time job. The number of weekly working hours is, therefore, decisive for securing a living wage. Such workers often supplement their service job with other jobs – which most of them do – or combine sources of income (for instance with student allowances). However, it can also have other implications. The Danish occupational pension funds and unemployment funds are organised around the main job or source of income as well as the number of weekly working hours. Therefore, these two forms of income security can be destabilised, if the income is sparse or stems from a range of different sources. This makes the individual worker vulnerable in the long term, particularly if being trapped in marginal employment; and it can thus contribute to increasing expenses and less funding for the welfare state, as the state must step in to secure workers without occupational pensions and unemployment insurance.

Therefore, our findings call for a need to consider working time, including national working time regulations, in discussions on living wages. More specifically, it seems that minimum thresholds for weekly working hours by collective agreement have a protective effect on not only the number of weekly working hours, but also annual earnings of employees, i.e. to secure a living wage. This might have policy implications for unions, employers' organisations and the state.

Conceptually, our findings might also have implications within labour market research and industrial relations. The historical focus on the hourly wage for low-wage workers such as living wages or minimum wages (regulated via legislation or collective agreement) potentially miss out on the impact of working hours and working time regulations on absolute wages. These concepts have been fruitful when fighting for wage floors for low-wage workers, but have been less successful regarding the regulation of working hours. Our analysis of collective agreements, weekly working hours and yearly income for workers in selected sectors in private services demonstrates that working time regulation can be both a loophole which employers exploit to secure flexibility and curb labour costs and a facilitator of work-life balance strategies for employees to organise their work hours around childrearing and study activities, although parents are less likely to take up employment in private services, and if they do they typically work full-time or long part-time hours. The preponderance of part-time and marginal part-time workers delivers a flexibility for employers and employees alike, but has the consequence that the yearly job-related income for workers are way below the poverty line.

We therefore call for the integration of working hours – and regulation of working hours – into the analyses of low-wage work and the discussion on living wages. The concept of living hours by Ilsøe (2016) addresses the fact that workers should have enough weekly hours to make a living, but tend to overlook the importance of national working time regulations. Industrial cleaning is the only service sector of the three analysed that guarantees a minimum number of 15 weekly working hours within their collective agreement which seems to have some positive spin-off effects as the share of marginal part-time workers is somewhat lower within industrial cleaning compared to retail, hotels and restaurants, which have no (retail) or much lower (hotels and restaurants) collective agreed floor of minimum weekly working hours. However, the

threshold within industrial cleaning is unable to secure a living wage as most industrial cleaners – similar to their peers in retail, hotels and restaurants – boost their income by holding multiple jobs. This indicates a need to include a higher minimum threshold for working hours within existing labour market regulation to secure service workers a living wage as working time regulations otherwise may indirectly contribute to increased segmentation or polarisation in the labour market.

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Article 2:

*Labour market segmentation by region of origin: The case of intra-EU migrants
in the UK, Germany and Denmark*

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Labour market segmentation by region of origin: The case of intra-EU migrants in the UK, Germany and Denmark

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Abstract

The EU enlargements of 2004 and 2007 made CEE citizen legally equal EU labour market participants. However, CEE immigrants still face ‘racialisation’ and segmentation in North-Western Europe in terms of labour market integration. Similar processes might extend to EU-South migrants, giving rise to a *division of labour*, whereby CEE and EU-South migrants find poor-quality, low-pay jobs in the North-Western EU labour markets. We compare the labour market integration of four groups of recent intra-EU migrants (EU8, EU2, EU-South and EU-West/EEA) in the UK, Germany and Denmark. Using labour force, microcensus and register data, we measure *quantitative* labour market integration through labour force participation, and *qualitative* integration through hourly wages. Despite differences in migration trends, labour markets and welfare regimes, we find a consistent pattern of labour market segmentation along occupational and industry lines amongst recent EU immigrant groups in the three countries. EU-West/EEA immigrants out-perform both natives and all other immigrant groups in terms of wages. EU8 and EU2 immigrants have high employment propensities, but also lower wages. EU-South immigrants have lower wages and lower employment propensities. These findings require replication across the North-Western EU countries; however, they suggest that inequalities across the EU are being reproduced rather than converging.

Keywords: intra-EU migration; labour market integration; wages; segmentation; welfare regimes

1. INTRODUCTION

EU citizens consider the right to freedom of movement within the European Union to be the most important individual benefit of EU membership (Recchi 2015). Indeed, the 2004 and 2007 EU enlargement rounds to Central and Eastern European (CEE) countries hugely increased intra-EU labour mobility (Kahanec & Zimmermann 2016), with European citizens representing 40% of the total EU migrant population in 2014 (Castro-Martin & Cortina 2015). The central premise of the right to free movement for workers as laid out in article 45 of the Lisbon Treaty is that EU citizens working in another member state are not discriminated against based on their nationality as regards employment, remuneration or other working conditions. However, equal legal rights do not guarantee equal labour market outcomes.

Previous research (mainly on the UK) has shown that CEE immigrants, in particular, have worse labour market outcomes than natives in the destination country in terms of skills–occupation match (Bettin 2012; Clarke & Drinkwater 2008; Johnston et al. 2015) and that they are over-represented in industries characterised by low-pay and low-skill jobs (Barrett, McGuinness & O'Brien 2012; Friberg et al. 2014; Khattab & Fox 2016; Recchi 2015). Additionally, CEE immigrants in Western Europe have lower wages than immigrants from the former EU15 countries (Barrett, McGuinness & O'Brien 2012; Clarke & Drinkwater 2008; Voitcho夫sky 2014).

Such systematically poorer labour market outcomes pose a challenge to the premise of equality as well as to the legal demand for non-discrimination of EU migrant citizens. Moreover, they challenge a fundamental tenet of the ever-closer European Union project, where workers' mobility is seen as a key driver of economic growth for the EU – as outlined in key EU documents, including the New Skills Agenda for Europe and Youth on the Move.

Recent research focuses almost exclusively on the labour market situation of CEE immigrants in Western European countries. This reflects the steep increase in CEE immigrant inflows since accession, which has also been driven by the considerable economic differences between the EU8¹ and EU2 (Bulgaria and Romania) member states, on the one side, and the 'old' member states (EU15), on the other. Most of this research focuses on the UK and compares CEE immigrants (more particularly immigrants from the EU8 and in most cases Poles) with nationals and sometimes with EU15 immigrants. Several scholars have suggested that a new 'racialisation' and a resulting segmentation of EU immigrants has developed since accession, with CEE immigrants faring worst in North-Western Europe (Diehl et al. 2015; Favell 2008; Favell & Nebe 2009).

¹ Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia, Slovenia.

Poorer labour market outcomes amongst CEE immigrants are often attributed to discrimination (Fox et al. 2015; Demireva & Kesler 2011) and differential power relations, as well as to exclusion by employers from some occupations (Clarke & Drinkwater 2008; Johnston et al. 2015; Parutis 2011; Voitchovsky 2014). Another explanation could be differences in reservation wages (given the different levels of earnings across Europe, see Eurostat 2017) and in welfare state generosity, which affects the value of portable benefits across member states (Bruzelius et al. 2017). These differences will enable immigrants from more affluent countries (EU-West/EEA) – in contrast to immigrants from poorer countries – to look on average for a longer period of time for suitable jobs and to move only when they can be sure of getting a good match. CEE immigrants, by contrast, will be more inclined to take up jobs in the destination country that are low-wage and low-skilled and for which they are over-qualified (Khattab & Fox 2016).

As a result, *a new division of labour* across the EU seems to be emerging, where CEE and potentially Southern European labour migrants are taking up jobs at the bottom of the labour market. They thereby end up achieving poorer qualitative labour market outcomes in EU15 destination countries than their peers from the EU-West and EEA².

However, to establish whether such a division of labour across the EU actually exists a double comparative approach (Tubergen et al. 2004) needs to be employed, first comparing different groups of intra-EU immigrants, which few studies do (for notable exceptions, see Barrett, McGuinness & O'Brien 2012; Clarke & Drinkwater 2008; Johnston et al. 2015; Voitchovsky 2014). Crucially, previous studies rarely look at EU-South³ immigrants as a distinct group. Following the economic downturn in the aftermath of the 2008 economic and financial crisis, skyrocketing unemployment and the subsequent steep increase in migration flows from these countries, inclusion of EU-South migrants as a separate group seems pertinent. In Southern Europe, high unemployment rates and to some degree also reservation wages are likely to act as economic push factors. Spreckelsen et al. (forthcoming) show descriptively that recent (young) immigrants from the EU-South in the UK and Germany seem to fare worse in terms of wages and skills–occupation match than immigrants from EU-West/EEA countries.

Second, the labour market outcomes of the different groups of EU immigrants need to be compared across different national or institutional settings. Most studies examining the labour market situation of EU migrant citizens focus on the UK or on some other single country (see e.g. Barrett, McGuinness & O'Brien 2012). This is problematic (particularly in the context of different institutional

2 Nationals from the four EEA countries (Iceland, Liechtenstein, Norway and Switzerland) enjoy the same freedom of movement with regard to labour as EU citizens. They are among the most affluent countries in Europe (Eurostat 2017).

3 Greece, Italy, Portugal, Spain, Cyprus and Malta.

configurations and transition regimes following the enlargements) if, as we claim, a division of labour should be observable amongst EU migrant citizens in general. Using country-level micro data and regression analyses, this article therefore investigates whether both a quantitative and qualitative division of labour exists among recent intra-EU immigrants in three distinct labour market and welfare regimes – the UK, Germany and Denmark.

The overall hypothesis of our paper is that more than ten years after the establishment of a common EU labour market across the old East-West boundaries, we find a clear labour market segmentation in terms of qualitative labour market outcomes by region of origin while accounting for individual characteristics. And this despite legal equality and the end of transition measures for the majority of ‘new’ EU citizens. We expect the quantitative labour market outcomes of recent EU immigrants in terms of employment propensity to be similar to those of nationals, given that they have unrestricted labour market access and are on average young and relatively highly educated. Because of remaining hurdles, including language challenges and possible discrimination by employers, some differences are likely to remain. Given the general openness of the UK labour market, we expect intra-EU immigrants to fare comparatively better in the UK than in Germany and Denmark. Turning to qualitative outcomes and based on occupational and industry segmentation – i.e., a division of labour created by discrimination, driven by ‘racialisation’ and economic push factors (differences in reservation wages and unemployment rates) – we expect to see immigrants from the EU-West and EEA countries doing better in terms of wages than those from Southern Europe. We expect CEE immigrants to show the poorest outcomes. This segmentation, we propose, reflects a distinct division of labour by macro regions of origin across the EU, independent of the receiving countries’ labour market and welfare regime types.

2 LABOUR MARKET SEGMENTATION OF IMMIGRANTS IN WESTERN EUROPE: THEORETICAL EXPLANATIONS AND HYPOTHESES

On a macro level, segmentation theory (Piore 1979) provides two explanations for the expected division of labour in the EU. First, it argues that because of structural demand, all modern industrialised economies have a secondary labour market segment characterised by low skills and poor working conditions, which is unattractive to native workers but filled by often temporary labour migrants with lower reservation wages because of their different frame of reference (Piore 1979). Second, this labour demand mechanism of segmentation is counteracted by labour market institutions and welfare state arrangements (Peck 1996; Rubery 2007). Both theoretically and empirically, the different destination countries and their respective institutional configurations (e.g., labour market or welfare regimes) should therefore play a moderating role in the degree of segmentation we would expect (Esping-Andersen 1990; Hall & Soskice 2001; Tubergen et al. 2004) from the general segmentation mechanisms. However, we know little about the role

of institutional configurations in the segmentation of intra-EU migration because most existing studies have focused on a single country, often the UK.

Consequently, this article focuses on Denmark, Germany and the UK. Each country represents dominant labour market and welfare state configurations characterising the North-Western EU member states, with varying strengths of the role of state, market and family: Denmark represents the social-democratic welfare regime; Germany, the conservative regime and – in *Varieties of Capitalism* (VOC) terminology – a coordinated market economy; and the UK, the liberal regime and in VOC terms a liberal market economy. It is important to note that these typologies are highly relevant for labour market segmentation and dualisation (e.g., Häusermann and Schwander 2012). Thus, we expect the UK to have more equal outcomes in terms of employment between nationals and EU migrants than Germany and Denmark because of the predominance of general as opposed to specific skills in the (thus more open) UK labour market. However, in the context of intra-EU migration, we posit that the institutional configurations only moderate the more prominent country-of-origin differences discussed below.

On a micro level, employer discrimination by nationality or ethnicity (Kingston et al. 2015; Ebner & Helbling 2016; Fossati et al. 2017), language barriers and insufficient recognition of skills (Chiswick & Miller 2007), as well as differences in reservation wages (Amuedo-Dorantes & De La Rica 2007) are known to influence job choices and prospects (European Commission 2017).

The theoretical explanations above correspond to the observations of macro-level migrant–native segmentation patterns. Previous research has found nationals to be better integrated than migrants in their respective labour markets (Nielsen et al. 2004); similarly, Western migrants consistently do better than their non-Western counterparts (Brozman & Polavieja 2010). Likewise, immigrants consistently find it easier to gain access to the UK than to the German and Danish labour markets (Algan et al. 2010), albeit often through atypical jobs (Ballarino & Panichella 2015; McCollum & Findlay 2015).

The segmentation mechanisms identified above affect immigrants in general. However, EU and EEA immigrants are a legally and economically distinct group, different both to nationals and to third-country immigrants. The overall migrant versus nationals *segmentation effects should be less pronounced* for EU/EEA than for third-country immigrants. This is because of EU initiatives on transparency and recognition of skills and qualifications, as well as a weaker dependence on the new destination labour market for EU immigrants than for third-country workers. Although CEE immigrants were recently restricted to some degree by transition measures – indeed up to 2011 for EU8 citizens in Germany and up to 2013 for EU2 immigrants in Germany and the UK⁴ – freedom of movement implies that EU

⁴ Transition measures for EU2 citizens were abolished in Denmark as of 1 May 2009.

immigrants can easily move for work from one member state to another and easily return to their country of origin. This mobility is also facilitated by shorter distances and lower transport costs (Black et al. 2010).

At the same time, particularly with the accession of the CEE member states, but also as an outcome of the recent economic and financial crisis (which particularly affected the economies of Southern Europe), the EU countries are very heterogeneous in terms of economic and welfare state developments. Compared to EU-West/EEA member states, CEE countries have considerably lower nominal wages – the post-accession catch-up having been partly reversed by the 2008 crisis (Galgócz 2017) – and also have less developed welfare states. To a lesser extent, this is also the case for Southern European member states; after a convergence period, the 2008 economic crisis and the subsequent surge in unemployment and the austerity pressures on wages and welfare systems all widened the gap to Northern Europe (Lehndorff 2015). A decisive factor here are the high youth unemployment rates since the economic crisis, which constitute an important push factor for migrants. The relatively good economic conditions in their home countries, by contrast, means EU-West/EEA immigrants are less likely to have migrated because of economic *push* factors, whereas economic *pull* factors should still be at play. Consequently, the mechanisms outlined in segmentation theory should – because of differences in the selectivity of emigration – (Chiswick 2008) vary according to the country/region of origin of EU migrants, potentially leading to a division of labour among EU migrants.

Two factors, in particular, could create segmentation *between groups of (EU) immigrants* and, in particular, between CEE immigrants and EU-West/EEA immigrants, with EU-South immigrants potentially taking a middle position: differences in employer discrimination deriving from racialisation; and economic push factors, in particular reservation wage differentials and high unemployment. Additionally, transition measures are likely to have played a role in restricting to some degree the free choice of employment.

First, a process of racialisation leads to CEE and EU-South immigrants being perceived as distinct from EU-West/EEA immigrants in terms of language and culture (Favell 2008; Favell & Nebe 2009; Fox et al. 2015), leading to experiences of discrimination. This mechanism has empirically been shown to lead to poorer labour market outcomes at least for CEE immigrants in terms of occupational segmentation and hence wages (Fox et al. 2015; Demireva & Kesler 2011). In particular, such discrimination seems to relate to the hiring of CEE immigrants for specific jobs: employers' perception of CEE immigrants' work ethic and flexibility has meant that employers prefer them to native workers, especially for low-skill, routine, manual jobs (Hopkins & Dawson 2016; McCollum & Findlay 2015). Paradoxically, employers' general perceptions of CEE immigrants may thus translate into high overall employment levels, while at the same time hindering their transition out of the secondary labour market. The racialisation and ensuing discrimination on the part of employers might therefore lead to a systematic

sorting of different immigrant groups into different jobs based on their region of origin (Constant & Massey 2005).

Second, lower reservation wages among CEE immigrants because of sizeable region-of-origin versus country-of-destination wage differentials (for a systematic analysis of wage differentials, see Bruzelius et al. 2017), are likely to make CEE immigrants more willing to accept low-pay, low-skill jobs. Short-term labour migration will be especially affected, where an immigrant accumulates wages in the destination country but regularly returns to and consumes in the country of origin or otherwise transfers earnings (Drinkwater & Garapich 2015). The expected wage differences have been consistently observed for CEE immigrants (with a focus on the UK: Dustmann et al. 2010; Johnston et al. 2015; Pietka et al. 2013; Trevana 2013). Consequently, the intra-EU differentials in wages and potentially also portable unemployment benefits (Bruzelius et al. 2017) seem to increase the likelihood of EU immigrants from poorer member states taking on lower paid and lower skilled jobs (Khattab & Fox 2016). In line with very high unemployment rates and more limited welfare state cushioning as push factors, Spreckelsen et al. (forthcoming) and Akguc and Beblavý (forthcoming) find poorer qualitative labour market outcomes for young immigrants from the EU-South as compared to the EU-West in North-Western destination countries. EU-West/EEA immigrants, on the other hand, have better employment opportunities and qualitative outcomes at home and are thus less likely to migrate to take up low-skill, low-pay employment (Chiswick & Miller 2011).

Building on the above theoretical arguments and previous empirical findings, we expect that:

Hypothesis 1 on quantitative integration: Recent EU migrants, given their legally unrestricted labour market access and their profile (young and highly educated), have relatively high labour force participation (employment propensity), particularly as compared to third-country migrants.

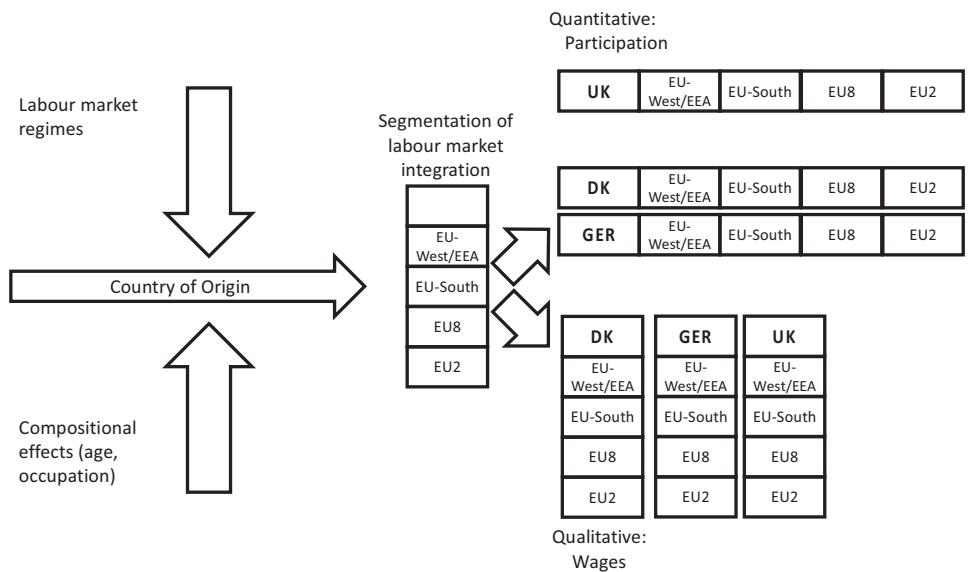
Hypothesis 2 on qualitative integration: Recent intra-EU migrants from EU-West/EEA earn higher wages than recent EU migrants from EU8 and EU2 countries, with EU-South migrants taking a middle ground.

Further, we expect this division of labour to manifest itself in:

Hypothesis 3: Consistent labour market segmentation in terms of qualitative outcomes across all three types of institutional configurations represented by Denmark, Germany and the UK, despite their different welfare state and labour market institutions.

Hypothesis 3a: Because English is a lingua franca and the UK labour market is more permeable given its need for general rather than specific skills, immigrants in the UK are expected to have labour market outcomes that are closer to those of natives than immigrants in Germany or Denmark.

Figure 1: Graphical representation of our main hypotheses



3. DATA AND METHODS

Region of origin is defined using the following six categories; natives (British, German or Danish⁵); EU-West/EEA consists of EU15 (excluding EU-South) and EEA citizens; EU-South; EU8; EU2; and third-

⁵ In the analyses of the UK, Germans and Danes are included in the EU-West/EEA group and vice versa.

country nationals (TCNs).⁶ We look at recent immigrants⁷ who arrived within the last five years; this is a considerable share of EU28 migrants (European Commission 2017). Region-of-origin effects are best studied in recent migrants (Rienzo 2013) because over time migrants tend to catch up or assimilate with their native peers.

Our analyses are based on data from the German Microcensus⁸ (2013) and pooled data (2012–2014) from the UK quarterly Labour Force Survey (UK-LFS),⁹ both of which have relatively comparable sampling designs and indicators as inputs to the European Labour Force Survey (EU-LFS). For Denmark, we use administrative register data¹⁰ (2014). The UK-LFS is likely to underestimate migrant populations (Longhi and Rokicka 2012; Martí and Ródenas 2007) and we expect similar effects for the German Microcensus given its German-only questionnaire (the interviewers are given translation assistance into English). The one limitation of the Danish administrative data is that it only covers the resident population. All three data sets inadequately cover short-term migrants (e.g., seasonal workers, posted workers) and cross-border commuters.

3.1 Dependent variables

We investigate *overall quantitative labour market integration* by measuring labour market participation defined as active (employed or unemployed) versus inactive (ILO) labour market status.¹¹ This approach captures

6 Third-country nationals (TCNs) are immigrants coming from countries outside the EU/EEA. We acknowledge that this is a very broad group, but as our research focus lies on intra-EU migrants, we do not attempt to divide it up further.

7 For the UK, immigrants are identified as having a different country of birth than the UK, no UK citizenship, and UK residency for between one and five years. For Germany, immigrants are identified as having non-German citizenship and having migrated to Germany within the previous five years. For Denmark, immigrants are identified as having a different country of birth and having officially settled in Denmark between one and five years ago.

8 The Microcensus is a representative sample containing demographic and labour market information from 1% of all households in Germany. All persons who have right of residence in Germany, whether living in private or collective households, or at their main or secondary residence, are sampled and are obliged to participate (Research Data Centre of the Federal Statistical Office and Statistical Offices of the Länder 2016).

9 The LFS is the largest social survey in the UK. All adult members from a rotating sample of 41,000 private households are interviewed in five consecutive quarters. The sample size makes it the best data set available for analysing the labour market situation of recent immigrants (Office for National Statistics (ONS) 2015a).

10 Danish administrative register data cover the total population of residents in Denmark, both immigrants and natives. The analysis of employment, unemployment and inactivity uses a register indicating the primary labour market status (ILO definitions) of every resident at the end of each November. For the analysis of wages and working hours, a register containing information on everyone active in the labour market during the year is used to calculate average hourly wages throughout the year.

11 According to the EU-LFS definition, persons working at least one hour in the reference week and persons who were not active in the reference period, but had a job from which they were temporarily absent, are counted as employed and asked questions relating to their employment status. Economically inactive persons are those who are neither employed nor unemployed.

employment propensities and thus allows us to assess labour market openness and selection processes according to region of origin.

We examine qualitative labour market integration by means of *hourly wages*. These are measured in the Danish data by dividing the total average earned income as recorded by the tax office and reported by employers by the number of actual hours worked. In the German data, net hourly wages are derived from net wages in the month prior to the survey, available only in earnings classes.¹² The UK-LFS provides net hourly pay directly, which we adjusted for inflation using the Consumer Price Index (ONS 2015) on the pooled data.

3.2 Explanatory variables

To assess segmentation, we use a '*region of origin*' variable that consists of six groups: natives, EU-West/EEA, EU-South, EU8, EU2 and TCNs.

3.3 Control variables

All models include demographic and household characteristics: *age*, *age squared*, *gender*; two household characteristics: presence of a *dependent child (<16) in household* and the *employment status* of the partner (no partner in household, partner not employed, partner part-time employed, partner full-time employed) (cf. Warren 2004; O'Reilly & Fagan 1998).

We include occupation (one-digit ISCO08) and, alternatively, employment sector (one-digit NACE) to account for the existence of immigrant occupation niches and their clustering in specific industries such as construction and hospitality.¹³

Information on qualification/education is not available in administrative registers for Denmark but is included in additional models for the UK and Germany, which are presented in the appendix. For Germany, we use the International Standard Classification of Education (ISCED) (Schroedter et al. 2006).¹⁴ For immigrants in the UK, only an origin-of-qualification variable is available (none, from school, work-related, from university).

12 The mean of the respective wage class is divided by the normal working hours. We limit the German analysis to persons whose main source of income are wages from work because the information in the Microcensus not only contains wages from work but also, for example, child benefits and income from renting out property (for details, see Engels et al. 2012, pp. 198ff).

13 The German and UK data do not have sufficient case numbers to include both variables in one model.

14 These are created using standard routines available here: <http://www.gesis.org/en/missy/metadata/MZ/>

3.4 Statistical analyses

We model labour market participation using multivariate logistic regressions and model wages through a linear regression of log hourly wages (cf. Chiswick et al. 2005) in Stata 14.0 (StatCorp, College Station, TX). The UK analyses account for sampling design; the German models use standard weights, which account for non-response adjusting for demographic factors, namely age and nationality in broad groups, both separately for men and women. To assess the relative contribution of our variables, we start with a baseline model of region-of-origin differences, subsequently adding demographic, employment and migration characteristics. All analyses are restricted to the working-age population (aged 16–66, excluding students and retirees).

4. RESULTS: SEGMENTATION BY REGION OF ORIGIN?

4.1 Demographic characteristics of EU immigrants in the UK, Germany and Denmark

Table 1 shows that recent EU immigrants are on average at least eight years younger than the native population. Men historically have tended to dominate flows of labour immigrants (Castles et al. 2013). However, among recent EU immigrants there is no clear pattern of gender distribution across the regional groups within the three countries studied. The average time since arrival does not differ substantially across the three countries or migrant groups: EU-South immigrants have arrived somewhat more recently, which is in line with the trends developing since the economic crisis. Given the small variation in years since arrival between regions of origin and given that catching up takes more than five years (Chiswick 1978), we do not control for ‘length of stay’ in the regression models.

4.2 Regression results

4.2.1 Quantitative labour market integration: Labour force participation

Table 2 reports the results of two logit regression models where labour force participation (employed or unemployed vs. inactive) is the dependent variable. While information on the labour market attachment (employed vs. unemployed) of migrants vs. nationals is interesting in its own right because it provides a more complete picture of their labour market integration, it is not relevant for our theoretical argument. For completeness, we display the results in appendix 1 (table 1).

Model 1 shows the baseline regions-of-origin model, while model 2 controls for demographic and partners’ employment characteristics. The only results that are consistent across all three countries are that recent TCNs are significantly less likely than nationals and all other recent migrant groups to participate in the labour market. This is in line with previous research, which has found non-Western migrants to do worse than EU migrants, and supports hypothesis 1 (Brodmann & Polavieja 2010).

Table 1: Demographic characteristics of natives and recent immigrants in the data from Denmark, Germany and the UK for individuals aged 16–66, excluding active students.

		Average age	% Female	Years since arrival	Case numbers	Sample:
DK	Danish nationals	46.9	50%	n.a.	2,586,544	n=2,663,780 (2014)
	EU-West/EEA	35.2	49%	2.7	11,443	
	EU-South	32.9	43%	2.4	3,654	
	EU8	33.4	45%	2.8	15,589	
	EU2	31.9	40%	2.6	10,138	
	TCN	32.9	54%	2.6	36,412	
GER	German nationals	44.7	50%	n.a.	332,193	n=338,156 (2013)
	EU-West/EEA	36.6	45%	3.5	684	
	EU-South	35.0	42%	2.9	561	
	EU8	34.7	51%	3.1	1,353	
	EU2	34.1	49%	3.2	755	
	TCN	33.0	58%	3.6	2,61	
UK	UK nationals	40.8	49%	n.a.	246,711	n= 258,708 (2012-14)
	EU-West/EEA	31.7	48%	2.7	467	
	EU-South	29.7	50%	2.4	531	
	EU8	29.6	49%	2.8	847	
	EU2	31.9	55%	2.9	422	
	TCN	30.5	48%	2.6	2,435	

Source: Authors' calculations based on Danish administrative register 2014, German Microcensus 2013 and UK quarterly Labour Force Survey (UK-LFS) 2012–2014, pooled.

Note: *The table only contains information on individuals between the ages of 16 and 66 who are not active as students and only information on immigrants who have settled within the last five years, excluding immigrants who settled during the last year.*

Table 2: Logit estimates of being active on the labour market for individuals aged 16–66, excluding active students, in Denmark, Germany and the UK.

	Denmark (coeff (SE))		Germany		UK	
Models	(1)	(2)	(1)	(2)	(1)	(2)
National (Reference)	(.)	(.)	(.)	(.)	(.)	(.)
EU-West/EEA	-0.710*** (0.019)	-1.032*** (0.022)	-0.135 (0.111)	-0.474*** (0.113)	0.064 (0.191)	-0.346 (0.198)
EU-South	-0.766*** (0.034)	-1.070*** (0.036)	-0.376*** (0.111)	-0.868*** (0.114)	0.13 (0.168)	-0.272 (0.183)
EU8	-0.049*** (0.019)	-0.311*** (0.021)	-0.221** (0.075)	-0.573*** (0.0755)	0.456*** (0.122)	0.173 (0.119)
EU2	-0.086*** (0.024)	-0.136*** (0.027)	-0.587*** (0.091)	-0.959*** (0.093)	0.355* (0.152)	-0.056 (0.154)
TCN	-1.130*** (0.011)	-1.563*** (0.012)	-1.818 *** (0.041)	-2.071*** (0.043)	-1.015*** (0.062)	-1.485*** (0.065)
Age		0.349*** (0.001)		0.247*** (0.004)		0.352*** (0.004)
Age squared		-0.004*** (<0.001)		-0.003*** (<.001)		-0.005*** (0.000)
Men		0.477*** (0.003)		0.907*** (0.012)		0.717*** (0.014)
Dep. Child		-0.098*** (0.005)		-0.759*** (0.014)		-0.499*** (0.019)
No partner (Ref.)		(.)		(.)		(.)
Non-emp. partn.		0.209*** (0.005)		-0.206*** (0.017)		0.254*** (0.024)
Part-time emp. partn.		0.974*** (0.005)		0.837*** (0.024)		-1.018*** (0.041)
Full-time emp. partn.		1.231*** (0.005)		.177*** (.013)		0.603*** (0.021)
Constant	1.156*** (0.002)	-5.656*** (0.019)	1.894*** (.005)	-2.122*** (.071)		-4.732*** (0.067)
R squared	0.004 (Pseudo R2)	0.197 (Pseudo R2)	0.008 (Pseudo R2)	0.109 (Pseudo R2)	(NA logistic regression)	(NA logistic regression)
Observations	2,663,780	2,663,780	338,156	336,244	228,062	228,062

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Source: Authors' calculations based on Danish administrative register 2014, German Microcensus 2013 and UK quarterly Labour Force Survey (UK-LFS) 2012–2014, pooled.

In Denmark and Germany, all recent EU immigrant groups are doing worse in terms of labour market participation than nationals. In the UK, by contrast, controlling for demographics, differences in labour market participation are not significant for any of the EU immigrant groups. When we look at the baseline model, we see that labour market participation is significantly higher for EU8 and EU2 citizens than for nationals.

In Denmark, controlling for demographics, the difference between the labour market participation of EU immigrants compared to nationals is statistically significant and is smaller for EU2

and EU8 immigrants (model 2). The coefficients for recent EU-West/EEA and EU-South immigrants are similar in magnitude and both groups display greater differences vis-à-vis nationals than EU2 and EU8 immigrants in terms of likelihood of participation in the labour force. For EU immigrants in Germany, controlling for demographic characteristics, the ordering of the immigrant groups is somewhat different, with EU-West/EEA and EU8 immigrants being more similar to nationals as regards labour force participation than EU-South and EU2 nationals (model 2).

One explanation for the difference in quantitative labour market integration across groups and the two destination countries might be the impact of established migrant social networks (Waldinger & Lichter 2003) and of transitional arrangements (Fihel et al. 2015) on finding employment in the first place. We cannot control for these possibilities, but a Danish study on long-term CEE immigrants found that more than half had secured a job in Denmark prior to migrating (Felbo-Kolding 2016).

For all three countries, controlling for demographic characteristics attenuates the differences relative to the respective nationals – a result driven by higher employment propensities for young people, with immigrants being proportionally younger. While the German and Danish results remain significant and negative, for the UK only TCNs exhibit an even stronger negative and statistically significant difference to UK nationals, while the effects on the other groups become insignificant.

Overall, the results support hypothesis 1 that EU immigrant groups, thanks to freedom of movement, have relatively high employment rates relative to nationals and TCNs, but still do worse than nationals, except in the UK. The results for the UK are in line with the liberal labour market regime characterised by general skills as identified in VOC (Hall & Soskice 2001) and also with more recent empirical research stressing the general openness of the UK labour market (Algan et al. 2010). Moreover, these results support hypothesis 3a.

However, the results also highlight a potential selection process whereby a larger proportion of Denmark's and the UK's CEE immigrants participate in the labour market compared to other EU immigrants. In Germany, a similar selection process takes place, but here EU-West/EEA and EU8 immigrants are more likely to gain access. Previous studies have shown that this selection process entails a positive selection either by the immigrants themselves because, for instance, of differences in reservation wages (Khattab & Fox 2016) or by the employers on the basis of discrimination (Demireva & Kesler 2011; Fox et al. 2015), so that those immigrants who do gain access are positively selected from the most able immigrants within the overall immigrant group from the different regions of origin (Chiswick 2008; Constant & Massey 2005). The logic is that in groups where *fewer* immigrants gain access, those who do are likely to be more able than the average among selected immigrants in groups where *more* immigrants gain access; this selection, in turn, might lead to differences in qualitative labour market outcomes.

4.2.2 Qualitative labour market integration: Hourly wages

Log hourly wages are analysed in three steps (for results, see table 3). We first run a baseline model (1). In a further step (not shown), we add demographic information (age, gender, household composition and employment status of partner). This is particularly relevant given the strong variation in average age between nationals and immigrants (table 1) and thus the fact that some of the potential disadvantages experienced in terms of wages are simply due to age differences. Given that the previous literature on CEE immigrants' labour market integration has found that their poor performance in terms of wages compared to natives is due to labour market segmentation (e.g., Johnston et al. 2015), in models 2 and 3 we add control variables related to the type of job the individual holds. Model 2 controls for the effect of the concentration of immigrants in certain industries, while model 3 controls for broad occupation groups. For Germany and the UK, we repeat model 3 with additional information on education/qualification, which leaves the results pretty much unchanged (see table 2, appendix).

Our models show substantial differences in log hourly wages between immigrant groups according to their region of origin. The most consistent finding across all three destination countries is that not only do migrants from EU-West/EEA perform better than migrants originating from CEE countries and EU-South (as well as TCN migrants), as predicted in hypothesis 2, but they also out-perform nationals in terms of wages. The remaining results are less consistent across the three countries and model specifications, although the coefficients are generally negative and significant in model 1 and either in model 2 with sectors or in model 3 with occupations. This indicates that immigrants from less affluent countries with poorer overall economic conditions earn lower log hourly wages than nationals (and EU-West/EEA migrants) across three different welfare state and labour market configurations (represented here by Denmark, Germany and the UK), supporting hypothesis 3.

We cannot, however, confirm a clear ranking of EU-South, EU8 and EU2 migrants – as predicted in hypothesis 2 – across all model specifications and all three destination labour markets. Controlling for demographics and industry (model 2), a consistent ordering of migrants from less affluent countries emerges – in line with our expectations – for Germany and Denmark. For the UK, in turn, the ordering is EU-South, EU2 and EU8. Model 2 also shows that in the case of EU-South immigrants, industry segmentation accounts for much of the difference vis-à-vis nationals, rendering the differences indistinguishable in Denmark and the UK. While controlling for industry segmentation changes the picture considerably for EU-South immigrants, for the other groups it generates more limited reductions in the effect size as compared to the base model than model 3 with occupations. The results of model 3 clearly show that for EU8 and EU2 immigrants, the largest part of their disadvantage vis-à-vis natives can be explained by their concentration not in specific industries – as various studies have previously suggested (Arnholtz & Hansen 2013; Bettin 2012; Drinkwater & Garapich 2015; Friberg et al. 2014) – but in specific

low-pay occupations across different industries. Controlling for occupation in fact renders the difference between UK nationals and EU8 and EU2 immigrants insignificant. This supports hypothesis 3a, which predicted that immigrants in the UK will be more similar to natives. The effects become very small for EU8 and EU2 immigrants in Denmark. In Germany, due to effect-size reduction for EU8 nationals as compared to the model with industry controls, controlling for occupation makes the differences between EU-South and EU8 indistinguishable, although they still have poorer outcomes than nationals. Also, across all three destination countries, the advantage in terms of log hourly wages is substantially reduced for EU-West/EEA immigrants when we control for occupations rather than for sectors.

The fact that effects for EU-South migrants, in contrast to all other EU migrant groups, are larger when we control for industries rather than for occupations calls for further research that also investigates potential interactions between occupations and sectors. This was not possible here because of limited case numbers for Germany and the UK, in particular.

Table 3: OLS estimates of logged hourly wages for employed individuals aged 16–66, excluding active students, 2014 (2013 for DE) (coeff (SE))

Models	Denmark			Germany			UK		
	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
Natives (Reference)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)
EU-West/EEA	0.053*** (0.002)	0.054*** (0.002)	0.033** (0.002)	0.143*** (0.028)	0.229*** (0.026)	0.110*** (0.025)	0.245** (0.077)	0.278*** (0.054)	0.148** (0.053)
EU-South	-0.018** (0.007)	0.003 (0.007)	-0.009 (0.006)	-0.199*** (0.034)	-0.095** (0.032)	-0.115*** (0.028)	-0.239*** (0.051)	-0.074 (0.042)	-0.093* (0.036)
EU8	-0.162*** (0.002)	-0.114*** (0.002)	-0.004* (0.002)	-0.312*** (0.014)	-0.177*** (0.014)	-0.112*** (0.013)	-0.405*** (0.067)	-0.211*** (0.048)	-0.06 (0.038)
EU2	-0.238*** (0.003)	-0.176*** (0.003)	-0.037*** (0.003)	-0.372*** (0.023)	-0.235*** (0.023)	-0.162*** (0.022)	-0.246*** (0.068)	-0.155* (0.066)	-0.043 (0.051)
TCN	-0.143*** (0.001)	-0.123*** (0.001)	-0.034*** (0.001)	-0.118*** (0.021)	-0.040* (0.020)	-0.068*** (0.018)	-0.057 (0.03)	-0.021 (0.027)	-0.019 (0.024)
Age	0.029*** (0.000)	0.023*** (0.000)		0.043*** (0.001)	0.036*** (0.001)			0.071*** (0.001)	0.055*** (0.001)
Age squared	-0.000*** (0.000)	-0.000*** (0.000)		-0.000*** (0.000)	-0.000*** (0.000)		-0.001*** (0)	-0.001*** (0)	
Male	0.146*** (0.001)	0.158*** (0.001)		0.135*** (0.002)	0.124*** (0.002)		0.192*** (0.004)	0.159*** (0.004)	
Dep. child <16	0.072** (0.001)	0.034*** (0.001)		0.134*** (0.003)	0.125*** (0.002)		-0.041*** (0.005)	0 (.)	
Non-emp. Partn.	0.030*** (0.001)	0.023*** (0.001)		0.093*** (0.004)	0.103*** (0.003)		0.084*** (0.007)	-0.016*** (0.004)	
Part-time emp. partn.	0.024*** (0.001)	0.017*** (0.001)		0.120*** (0.003)	0.111*** (0.003)		-0.03 (0.02)	0 (.)	
Full-time emp. partn.	0.058*** (0.001)	0.021*** (0.001)		-0.017*** (0.003)	-0.026*** (0.003)		0.132*** (0.02)	0.054*** (0.01)	

	(0.001)	(0.001)	(0.002)	(0.002)	(0.006)	(0.006)
Agriculture, forestry and fishing	-0.174***		-0.442***		-0.313***	
Energy and water, Manufacturing (Reference)	(0.004) -0.040***		(0.013) -0.214***		(0.025) -0.037***	
	(0.001)		(0.004)		(0.011)	
Wholesale, trade & hotels, restaur.	-0.100*** (0.001)		-0.175*** (0.003)		-0.290*** (0.008)	
Transp and com.	0.032*** (0.001)		-0.065*** (0.004)		-0.058*** (0.011)	
Finance, real estate, profess, adm & support	0.057*** (0.001)		0.035*** (0.004)		0.186*** (0.009)	
Public admin, education and health	-0.055*** (0.001)		0.059*** (0.002)		0.038*** (0.007)	
Other services	-0.054*** (0.002)		-0.177*** (0.006)		-0.118*** (0.013)	
Private househ.	-0.205*** (0.011)		-0.179 (0.023)		-0.292** (0.076)	
Managers	0.613*** (0.002)		0.515*** (0.007)		0.759*** (0.01)	
Professionals	0.368*** (0.001)		0.570*** (0.005)		0.803*** (0.007)	
Technical and associate professionals	0.293*** (0.001)		0.331*** (0.005)		0.491*** (0.007)	
Clerical support workers	0.141*** (0.001)		0.289*** (0.005)		0.301*** (0.007)	
Services and sales workers	0.046*** (0.001)		0.066*** (0.005)		0.123*** (0.007)	
Skilled agricultural, forestry and fishery workers	0.042*** (0.003)		-0.064*** (0.011)		0.066** (0.024)	
Craft and related trades workers	0.160*** (0.001)		0.120** (0.005)		0.267*** (0.009)	
Plant and machine operators and assemblers	0.082*** (0.001)		0.040*** (0.005)		0.124*** (0.009)	
Elementary occupations (Reference)	(.)		(.)		(.)	

Constant	5.357*** (0.003)	4.515*** (0.004)	4.421*** (0.003)	2.467*** (0.001)	1.357*** (0.015)	1.178*** (0.015)	2.416*** (0.003)	0.838*** (0.025)	0.705*** (0.023)
R squared	0.013	0.146	0.330	0.004	0.139	0.234	0.004	0.226	0.407
Observations	1,897,545	1,897,545	1,897,545	251,400	251,050	249,962	155,798	155,648	155,551

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Source: Authors' calculations based on Danish administrative register 2014, German Microcensus 2013 and UK quarterly Labour Force Survey (UK-LFS) 2012–2014, pooled.

5. DISCUSSION AND CONCLUSIONS

This paper provides evidence of a division of labour between different groups of recent intra-EU immigrants in three destination countries with different labour market and welfare state regimes. It uses country-level micro data from the UK, Germany and Denmark, distinguishing between different groups of intra-EU immigrants and third country nationals. In line with previous research – often with a single-country focus (usually the UK) – we distinguish between EU-West/EEA, EU8, EU2 and EU-South regions of origin. This categorisation provides new insights concerning the EU-South as a distinct group, underpinned by the considerable labour market disruption that has followed the economic crisis. We also compare and contrast EU8 and EU2, recognising their later EU entry but also their distinctly different economic and political trajectories during the post-socialist transformation.

We separately analyse and contrast models on quantitative and qualitative labour market integration so as to capture differential selection into and within labour markets. These models corroborate the expected advantage of EU immigrants vis-à-vis third-country migrants, given the formers' relatively unrestricted access to other EU member states' labour markets. This holds across all three destinations, despite their very different migration histories with regard to third-country migrants (e.g., Commonwealth and post-colonial migration in the UK, guestworker programmes in Germany and Denmark, and in Germany also ethnic German immigrants) and different recent transition regimes. Similarly, and as expected, the results for EU immigrants' labour force participation vis-à-vis nationals support our hypothesis that the UK has a more permeable labour market than Germany or Denmark. This could be explained by the importance of general rather than specific skills as proposed in the VOC literature and by the status of English as a lingua franca.

We were particularly interested in qualitative labour market integration, which – notwithstanding other relevant measures of integration such as contract type or skills–occupation match – we captured using log hourly wages. Notably, we found segmentation by region of origin across all three destination countries. While EU-West/EEA immigrants consistently did better than both nationals and all other immigrants, the ranking among the other EU immigrant groups was more complex. Although the picture resulting from the models is complex, it is safe to say that recent EU-South immigrants have

more in common with CEE immigrants than they do with EU-West/EEA immigrants when it comes to qualitative labour market outcomes. This finding is in line with the propositions of segmentation theory, reflecting reservation wage differences and push factors such as high unemployment rates, and might be related to racialisation by region of origin. Crucially, the segmentation could be observed despite variations in labour market and welfare state arrangements, as repeatedly postulated since Esping-Andersen's seminal work (Arts & Gelissen 2002), and to a degree irrespective of the demographic characteristics of the EU migrants. This suggests that country/region-of-origin differences are at least as important as country-of-destination differences.

5.1 Potential explanations and mechanisms

The fact that occupational and to a lesser degree industry segmentation account for most of the variation in qualitative labour market outcomes across the three different labour market and welfare configurations indicates that more than ten years after the EU enlargement of 2004, a clear division of labour has developed. In this division of labour, EU-West/EEA immigrants are able to move more or less 'invisibly' (Favell & Nebe 2009) between jobs that on average are even better than those occupied by nationals within the region of the North-Western EU, regardless, for example, of cultural and language differences. EU-South immigrants who have – at least in recent decades – enjoyed the same 'invisible' mobility in the aftermath of the crisis seem to take up a position closer to that of CEE immigrants than to that of nationals or EU-West/EEA immigrants, in line with what Favell & Nebe (2009) suggest. They even struggle to gain access to the destination labour markets at the same rates as CEE immigrants and, once they do gain access, they are (similar to the CEE immigrants) sorted into jobs at the bottom of the ladder. EU8 immigrants seem to occupy a position very similar to that of EU-South immigrants, though with higher employment rates. This pattern suggests that EU8 immigrants have established themselves in the destination labour markets and that employers see this group as a reliable and flexible source of labour, especially for low-pay, low-skilled jobs (Hopkins & Dawson 2016; McCollum & Findlay 2015). At the same time, EU8 migrants have managed to establish social networks that facilitate entry into the labour market, albeit with uncertain qualitative outcomes (Waldinger & Lichter 2003). The different density of social networks and different transitional arrangements might also account for EU2 immigrants' poorer performance in the intra-EU division of labour.

We are unable to disentangle the exact mechanisms behind the division of labour, but based on previous research, a combination of three mechanisms is likely at play. First, a positive selection process where only EU-West/EEA immigrants who are able to compete on the destination labour market or even improve their position vis-à-vis their country of origin migrate in the first place, because the relatively positive economic conditions in their home countries are unlikely to push them to leave. For EU-South

migrants, in particular, and to a lesser extent for CEE migrants, the overall economic conditions in their home countries are likely to push more people to migrate. Second, the differences in home-country environments, particularly wage levels and cushioning welfare benefits, likely affect the migration groups' reservation wages differently. EU-West/EEA immigrants are likely to only take up employment above a relatively high wage level. By contrast, EU-South and, in particular, CEE immigrants may accept any employment available (Bruzelius et al. 2017). Third, differences in racial visibility to employers (Favell & Nebe 2009) and the resulting differences in employer discrimination and recognition of skills lead to variations in the jobs that the different immigrant groups are found to be eligible for and can thus take up.

5.2 Directions for future research

These results should be considered both from a micro- and a macro-level perspective. On the macro level, the results underline the fact that legal or formal equality is no guarantee of equal labour market outcomes. In the case of EU labour migration, the division of labour seems less determined by overall legal provisions and more by persistent differences in wage levels and employment possibilities across the EU. Future research should therefore consider the country-level and EU-wide mechanisms through which the purported country/regional differences are replicated in the destination countries for EU immigrants. On a micro level, and crucial for policies on intra-EU mobility, future research needs to focus on the individual or group-level mechanisms that lead to widespread occupation and industry segmentation. The portability and levels of unemployment benefits and income support, language differences and the role of labour market intermediaries, and the nature of social networks all need to be considered as determinants of labour market segmentation. For example, what role do employer stereotypes and discrimination play? In what way do the different types and regulatory regimes for labour market intermediaries help replicate existing differentials across the EU as opposed to providing a means of equalisation?

Similarly, future research would need to examine the process of labour market integration among different groups of EU immigrants. In our article we have found a clear division of labour among *recent* intra-EU immigrants, but what would the picture look like if we had focused on longer-term immigrants? Consequently, we would need to study changes in integration over time. This need is compounded by recent studies finding that CEE immigrants increasingly settle long term in their destination countries (Felbo-Kolding 2016; Janicka & Kaczmarczyk 2016). Length of stay improves migrants' specific human capital in the receiving country (Chiswick 1978), their social (recruitment) networks (e.g., Andersen & Felbo-Kolding 2013 on the role of social networks in employers' recruitment of CEE immigrants in Denmark) and their language skills (Chiswick & Miller 2007). However, this finding challenges the overall notion of short-term intra-EU mobility, where immigrants move according to the overall mechanisms of supply and demand, whilst at the same time it provides an opportunity to test the

persistence of the division of labour found in this study. Finally, the position of EU-South immigrants found in this article marks an interesting topic for future research to see if their current position is transitory or if, even as economic conditions in their home countries improve, they remain in the lower echelons of the destination labour markets.

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APPENDIX

Table 1, appendix: Logit estimates for being employed for individuals aged 16–66, excluding active students and individuals inactive on the labour market, 2014

	Denmark (coeff (SE))		Germany		UK	
Models	(1)	(2)	(1)	(2)	(1)	(2)
EU-West/EEA	0.042*** (0.066)	0.272*** (0.067)	0.126 (0.207)	0.317 (0.212)	0.017 (-0.271)	0.127 (0.273)
EU-South	-0.467*** (0.093)	-0.119*** (0.095)	-0.591*** (0.173)	-0.373* (0.182)	-0.207 (-0.217)	0.086 (0.227)
EU8	-0.825*** (0.035)	-0.495*** (0.036)	-0.256* (0.125)	0.0238 (0.128)	-0.375* (-0.184)	-0.047 (0.19)
EU2	-0.966*** (0.039)	-0.627*** (0.041)	-0.986*** (0.129471)	-0.792*** (0.137)	-0.155 (-0.227)	-0.038 (0.234)
TCN	-0.594*** (0.031)	-0.343*** (0.032)	-1.382*** (0.077)	-1.236*** (0.085)	-0.552*** (-0.109)	-0.534*** (0.113)
Age		-0.043*** (0.002)		0.129*** (0.005)		0.169*** (0.007)
Age squared		0.001** (0.000)		-0.002*** (<0.001)		-0.002*** (0.000)
Men		0.093*** (0.008)		-0.081*** (0.019)		-0.239*** (0.026)
Dep. Child		0.256** (0.010)		-0.227*** (0.025)		-0.387*** (0.031)
Non-employed partn.		0.372*** (0.013)		0.218*** (0.029)		1.436*** (0.069)
Part-time emp. partn.		0.735*** (0.011)		1.496*** (0.039)		-0.507*** (0.078)
Full-time emp. partn.		0.985*** (0.011)		1.259*** (0.025)		1.09*** (0.042)
Constant	3.292*** (0.004)	3.243*** (0.049)	2.981*** (0.009)	-0.041 (0.104)		-0.942*** (0.116)
R squared	0.002 (Pseudo R2)	0.028 (Pseudo R2)	0.004 (Pseudo R2)	0.056 (Pseudo R2)	(NA survey logistic regression)	(NA survey logistic regression)
Observations	2,041,588	2,041,588	292,257	291,516	227,415	227,415

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Source: Authors' calculations based on Danish administrative register 2014, German Microcensus 2013 and UK quarterly Labour Force Survey (UK-LFS) 2012–2014, pooled.

Table 2, appendix: OLS estimates of logged hourly wages for employed individuals aged 16–66, excluding active students, 2014 (2013 for Germany) (coeff (SE)), results with information on education/qualification for Germany and the UK

	Germany Coefficient	Std. Error	UK Coefficient	Std. Error
Natives (Reference)				
EU-West/EEA	0.099***	-0.025	0.134*	0.052
EU-South	-0.111***	-0.028	-0.096*	0.038
EU8	-0.123***	-0.013	-0.055	0.038
EU2	-0.159***	0.022	-0.043	0.052
TCN	-0.068***	0.018	-0.03	0.024
Age	0.035***	0.001	0.053***	0.001
Age squared	0.001***	0.000	-0.001***	0.000
Male	0.114***	0.002	0.162***	0.004
Dep. Child	0.123***	0.002	-0.013**	0.004
Non-emp. Partner	0.106***	0.003	0.052***	0.006
Part-time emp. partn.	0.107***	0.003	-0.012	0.017
Full-time emp. partn.	-0.029***	0.002	0.071***	0.005
Managers	0.407***	0.007	0.697***	0.01
Professionals	0.412***	0.005	0.724***	0.007
Technicians and associate professionals	0.241***	0.005	0.434***	0.008
Clerical support workers	0.239***	0.005	0.258***	0.007
Service and sales workers	0.029***	0.005	0.091***	0.007
Skilled agricultural, forestry and fishery workers	-0.109***	0.011	0.046*	0.023
Craft and related trades workers	0.089***	0.005	0.237***	0.009
Plant and machine operators and assemblers	0.026***	0.005	0.123***	0.009
Elementary occupations	Reference			
Education (different between GER/UK):				
ISCED_1 (low) (Reference)			No qualification (Reference)	
ISCED_2 (medium)	.113***	0.004	Qualification from school, home-schooling or alternative routes	0.044***
ISCED_3 (high)	.269***	0.005	Work-related qualification incl. apprenticeships*	0.118***
Constant	1.129***	0.015	Qualification from college or university	0.215***
R squared	0.251			0.418
Observations	249,451			155,529

Source: Authors' calculations based on German Microcensus 2013 and UK quarterly Labour Force Survey (UK-LFS) 2012–2014, pooled.

Article 3:

The unionisation of immigrant workers – Long-term Central and Eastern European immigrants in Denmark

Jonas Felbo-Kolding

The unionisation of immigrant workers – Long-term Central and Eastern European immigrants in Denmark

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Since the eastward enlargements of the EU in 2004 and 2007, trade unions across Western Europe have struggled to organise the rapidly growing group of Central Eastern European (CEE) immigrants as a way to revitalise the labour movement. The article analyses how rates of unionisation among long-term CEE immigrants in Denmark develop over the course of the first five years of migration and what factors explain the propensity of this group to unionise. The article finds that after five years of migration more than half of long-term CEE immigrants have unionised and that most do so within the first two years of migration. The results show that union density at their primary workplace and the union status of a possible partner are the main factors explaining propensity to unionise, thereby apparently confirming the key role of social customs. However, these findings are called into question by an analysis of what types of unions they join, which reveals they are just as likely to join yellow unions as red unions.

Keywords: EU; immigrants; trade unions; unionisation; Denmark; social customs

1. INTRODUCTION

In a situation where trade unions across Western Europe are experiencing a fall in membership (Gorodzeisky & Richards 2013; Ibsen et al. 2017; Visser 2011), while Western Europe itself is experiencing a historically high inflow of immigrants mainly from Central and Eastern European (CEE) countries (Castro-Martin & Cortina 2015; Galgócz et al. 2012), trade unions have focused on organising the new group of immigrants (Fitzgerald & Hardy 2010; Hardy et al. 2012). There have been few, if any, quantitative studies, however, on whether CEE immigrants actually join unions. Generally, CEE immigrants have been considered difficult to organise because of their short-term migration patterns (Meardi 2012). However, over the last couple of years new studies have documented that more CEE immigrants are settling long term,¹ defined in this article as staying for three years or longer in the host country (Felbo-Kolding 2016; Janicka & Kaczmarczyk 2016). As such, these long-term CEE immigrants are a possible source of revitalisation for unions. Alternatively, if trade unions fail to organise long-term CEE immigrants, their increasing share of the labour force over time will contribute to declining union density.

Since the eastward enlargements of the EU in 2004 and 2007, Denmark, like the rest of Western Europe, has received unprecedented numbers of CEE immigrants (Castro-Martin & Cortina 2015; Galgócz et al. 2012), just as Danish trade unions – although from a comparatively high level – have seen a drop in union density (Ibsen et al. 2015). In 2004, CEE immigrants in Denmark totalled 1,296; since then the numbers have increased rapidly, reaching 74,210 in 2015. Of these, Poles and Romanians were by far the two largest groups in 2015, making up more than 63% of the total CEE migrant group (Statistics Denmark). This study therefore focuses on these two populations, using them as a proxy for the CEE countries. Furthermore, this study looks at long-term CEE immigrants who migrated after the first eastward enlargement and who stayed longer than three years in Denmark.² A focus on long-term migrants allows me to look at how the rate of unionisation develops, as well as at whether the factors influencing unionisation change over time.

The article seeks to answer two research questions: How do the unionisation rates of long-term CEE migrants change over time? What factors explain the propensity of such migrants to unionise?

This study uses two sources of data. First, it draws on unique Danish register data, which cover all residents and migrants who are registered in Denmark. The second set of data is a specialised extensive survey of long-term CEE migrants which was developed to explore, among other things, their

¹ Throughout the article, I use Polish and Romanian immigrants as a proxy for long-term CEE settlers. In 2015, Poles and Romanians made up 64% of the total group of long-term CEE settlers in Denmark (Statistics Denmark).

² In Denmark, about 57% of the total CEE group are long-term settlers (Statistics Denmark).

unionisation rates and their propensity to unionise. This study tests several theoretical propositions, including the idea that social customs in the workplace play an important role in shaping an individual's propensity to join a union, as has been found in other studies (Checchi & Visser 2005; Ibsen et al. 2017; Schnabel 2003). However, this study, because it distinguishes between types of unions, can test some underlying assumptions of these models. It also distinguishes between short-term and long-term migrants, examining whether the latter, regardless of their intentions concerning length of stay and regardless of the economic conditions, are likely to unionise and why. In taking these steps to distinguish between long-term and short-term migrants and between traditional "red" and "yellow" unions, we can better tease out the likely factors that explain why immigrants join unions in host countries.

The study finds that more than half of immigrants who have stayed in Denmark for five or more years are unionised and – contrary to what one might expect – that most unionise within the first two years. The two most important factors found to explain long-term CEE migrants' propensity to unionise are 1) the union density at their primary workplace, and 2) the union status of a possible partner. While these two explanatory factors seem to support social customs theory, the second step of the analysis calls into question an equation between workplace union density and support for social customs theory. The study suggests that we need qualitative inquiry to shed light on why CEE immigrants choose to join different types of trade unions in order to be able to adjudicate between the possibility of the choice being the result of instrumental considerations or of social customs.

2 UNIONISATION AMONG WORKERS

This study is informed by two strands of literature that look at the question as to whether and why workers join trade unions. First are studies concerned with the factors related to whether or not workers choose to join trade unions (Crouch 1982; Ibsen et al. 2017; Schnabel 2013; Schnabel & Wagner 2007; Toubol & Jensen 2014). Some of these focus on structural factors such as industry, firm size and public-/private-sector organisations (Turner et al. 2008). They conclude that workers in manufacturing are more likely to be unionised than workers in the service sector (Checchi & Visser 2005; Schnabel & Wagner 2007), that workers in larger firms are more likely to be unionised than workers in smaller firms (Schnabel 2013), and that workers in the public sector are more likely to be unionised than workers in the private sector (Ibsen et al. 2011; Schnabel 2003). Other studies focus on how individual characteristics influence the propensity of workers to join a union (Crouch 1982; Fazekas 2011; Schnabel & Wagner 2007). For example, higher levels of education are associated with higher rates of unionisation (Abbott 1988; Ibsen et al. 2012); younger workers are less likely to join unions than older workers (D'Art & Turner 2003; Schnabel 2013); and, in some studies, men have been found to be more prone to join unions (Turner et

al. 2008; Visser 2002), while other studies have found women to be just as likely as men to join unions (Walters 2002). These theories stress that workers join unions based on instrumental considerations because they gain different forms of individual benefits, such as higher wages, greater employment security, or firm-specific training (Crouch 1982).

Finally, beyond looking at structural and individual explanatory factors, there is a third approach to explaining workers' propensity to unionise known as "social customs theory". This approach has greatly advanced rational choice theories by incorporating reputational effects into the understanding of workers' decision-making (Corneo 1995; Schnabel 2003). Reputational effects operate at the group level, where individual workers choose to be part of unions so as to be part of a workplace group, or because of group pressure or respect for this group (Corneo 1995). Workplace union density has been used as a proxy for the strength of social customs operating in regard to unionisation (Goerke & Pannenberg 2004; Ibsen et al. 2017). Researchers assume that if workplace union density is high, then the reputational effects of non-union membership are considerable, given that many union members take part in the policing and sanctioning of the custom of unionisation (Booth 1985, Checchi & Visser 2005). The sanctioning of breaches of the social custom, however, requires someone to take the role upon themselves and thereby uphold the norm. In the case of unionisation, this role is played at the institutional level by trade unions, which derive their legitimacy from securing high union density and collective agreement coverage, and at the workplace level, through workplace representatives who have been elected to represent the interests of workers as well as the trade union. Oliver et al. (1985) posits that this form of collective action requires not only individuals willing to take on the task, but also a critical mass of individuals to uphold the norm. In a Danish context, Ibsen et al. (2017) found the tipping point for the critical mass for workplace union density to be above 45-65% in different sectors. In sum, social customs operate as a mechanism to encourage workers to join unions, or to discourage them from not joining, once the density reaches somewhere between 45% and 65%.

2.1 Why immigrants (don't) join trade unions

Historically, it has been believed that it is more difficult to get immigrants to join unions and that they have a lower unionisation rate than natives (Ibsen et al. 2011). Recent studies from the United States, however, show that in that context, immigrants have a higher propensity to join unions than native-born workers (Catron 2013; Milkman 2006; Rosenfeld & Kleykamp 2009). In Europe, this has not been the case (Ibsen et al. 2011; Turner et al. 2008). All of the factors related to workers' propensity to join unions also apply when discussing immigrants. However, there are additional factors to consider when looking at immigrants' willingness to join unions.

One of the most salient factors is related to the duration of migration. In the early years following the eastward enlargements of the EU in 2004 and 2007, CEE immigrants mainly exhibited short-term or circular patterns of immigration (Black et al. 2010; Engbersen & Snel 2013). They migrated primarily for work, concentrated in the service industry, which is known for having lower union density (Barrett et al. 2012; Friberg et al. 2012; Khattab & Fox 2016). Their short-term migration patterns and employment in industries associated with lower overall union densities meant that CEE migrants were, on the one hand, less likely to be exposed to unions and, on the other hand, less likely to believe they would gain material benefits from joining a union (given their short-term stay) (Andersen & Arnholtz 2013). Over time, migration patterns have changed and diversified (Düvell & Vogel 2006) with more immigrants remaining long term in their host countries (Felbo-Kolding 2016; Janicka & Kaczmarczyk 2016). Long-term migrants are more likely than short-term migrants both to learn the language and to interact with trade unions (Turner et al. 2008). Likewise, the longer they stay, the more likely they are to move from low-union density workplaces and industries to more highly unionised workplaces in other industries (Parutis 2014). These changes all increase expectation that these long-term immigrants will join unions.

There are also additional factors that may be important in explaining a migrant's propensity to join unions. For example, the reputation of unions in their country of origin might play a role. If migrants see unions as corrupt or co-opted or dangerous, they might be less likely to join them in their host countries. Another important factor stressed by migration scholars is immigrants' intended length of stay. This becomes important because it is often their intentions that determine their willingness to invest in human and social capital relevant to the destination country (Friberg 2012; Piore 1979). In this case, if CEE migrants view union membership as providing a form of social capital that requires an investment in the destination country, we would expect those who intend to stay long term to have a higher propensity to join unions than immigrants who intend to stay short term, regardless of how long they actually stay.

An additional important factor is the precarious employment patterns of immigrants in general (Kalleberg 2009; Milkman 2006; Piore 1979). Workers in atypical or precarious forms of employment have previously been found to have lower probabilities of joining unions (Vandaele & Leschke 2010). This is because precarious forms of employment often mean few or unstable work hours and frequent changes in workplaces, both factors that decrease the reputational effects of unionisation (Ibsen et al. 2017), which in turn lowers the propensity of precarious workers to join unions.

Another important factor to consider when looking at why workers do or do not join unions is the unions' approach to immigrant workers. Since the EU enlargements of 2004 and 2007, trade

unions across Western Europe have tried to figure out how to respond to the inflow of CEE immigrants (Fitzgerald & Hardy 2010; Hardy et al. 2012). If unions adopt a strategy focused mainly on protecting the interests of native workers, then immigrants are seen as a potential threat and unions may actively work to keep employers from hiring immigrants. This might be perceived by immigrants as unfriendliness on the part of the unions and would be likely to lower their propensity to join. In Denmark, unions have taken a two-sided approach to post-enlargement CEE immigrants. On the one side, they have focused on getting government authorities and politicians to become engaged in working against social dumping; on the other, they have tried to organise CEE workers and make sure that they are covered by a collective agreement (Andersen & Arnholtz 2013). Unions have had little success in organising CEE workers and a survey of 500 Polish workers in the greater Copenhagen area in 2008 showed that only 12% were union members (Arnholtz & Hansen 2011). Since unions in Denmark are organised around specific trades and industries, we would expect differences in unions' active efforts to recruit CEE immigrants to manifest themselves in different rates of unionisation between different industries.

Finally, another important consideration is the CEE immigrants' time of arrival, irrespective of length of stay. The long-term CEE workers in this study arrived between 2004 and 2010, a period marked by considerable changes in the economic climate. Immigrants arriving between 2004 and 2007 joined a booming labour market with historically low unemployment, whereas immigrants arriving between 2008 and 2010 entered a labour market in a state of economic downturn (Ministry of Industry, Business and Financial Affairs 2013). In the period of economic crisis, union density in Denmark stabilised after a long period of decline (Toubøl et al. 2015). This stabilisation has been interpreted as the result of a sense of crisis among workers (Toubøl et al. 2015). The possible effect of a sense of crisis is reinforced by the so-called Ghent system, where trade unions administer unemployment insurance. This has traditionally meant that workers have joined both union and unemployment insurance funds, which is especially likely during periods of economic crisis (Ibsen et al. 2011). Presuming that this overall pattern also fits CEE immigrants, we would expect CEE immigrants arriving in years of economic crisis to have a higher propensity to join unions shortly after their arrival.

3. DATA AND METHODS

Data for this article are drawn from two unique sources: Danish administrative register data and a survey of more than 1,000 long-term CEE immigrants from Poland and Romania who migrated to Denmark after the 2004 enlargement of the EU, in the period between 2004 and 2010. Using a unique personal number, the two data sources are linked at the individual level. This enables us to add, at an individual level, data on what happened before migration to vast data from the administrative registers on, for

example, demographic characteristics, labour market integration and union membership. Danish register data cover everyone officially residing in Denmark;³ consequently, unregistered or undocumented immigrants are not included in the data. Since CEE immigrants as EU citizens enjoy the right to freedom of movement within the EU, and their right to social benefits or medical care is contingent on officially residing in the country of destination, it is relatively unlikely for them to migrate to Denmark without officially registering. In addition, they are obliged to register if they intend to stay for more than three months. Since the article is concerned solely with long-term immigrants, the possible problem of unregistered immigrants is likely to be small.

As noted, long-term Polish and Romanian immigrants are used as a proxy for long-term CEE immigrants in Denmark. In 2015, the number of long-term CEE immigrants in Denmark amounted to 42,143, making up 57% of the total CEE group. Poland and Romania are the two main sending countries, not just in Denmark, but across most receiving Western European countries. In 2015, they accounted for 64% of the total group of long-term CEE immigrants in Denmark. Using administrative register data, the sample for the survey was defined by the following criteria: 1) First, only migrants who had immigrated to Denmark after 2004 (Poles) and 2007 (Romanians) were included. Second, in order to target only labour migrants, only migrants who had worked at least 50 hours during either November or December 2014, the months immediately prior to the sampling, were included. Third, only migrants aged 20–60 (working age) at the time of immigration were included. Fourth, only migrants with an official address in Denmark were included – in order to target migrants who had chosen to settle in Denmark and because the survey was initially administered by mail. Fifth, only migrants who had settled in Denmark at least three years prior to sampling were included because the overall aim of the project was to study the long-term labour market integration of CEE migrants.

The survey data were collected during a three-week period in the spring of 2015 by Statistics Denmark, using a combination of a letter urging respondents to fill out a web-based survey and telephone interviews. Statistics Denmark contacted a sample of 1,700 long-term Polish labour migrants and 1,700 long-term Romanian labour migrants. A number of initiatives were taken prior to the collection of data in order to achieve as high a response rate as possible. First, the Polish and Romanian communities in Denmark were contacted through different channels before the actual gathering of the survey data. Second, the questionnaire was translated into both Polish and Romanian, just as bilingual interviewers made it possible for those who answered the questionnaire over the telephone to choose between the three different languages. By the time the telephone interviews were concluded, 958 Romanians, equal to

³ In some specific registers, also persons not residing in Denmark are included, for instance in registers on labour market attachment in which all persons with any form of official taxable income are included.

a response rate of 56%, and 820 Poles, equal to a response rate of 48%, had answered the questionnaire.⁴ For the present study, a number of additional restrictions were applied to the sample. First, in the regression models only immigrants who are active on the labour market in the year of concern are included because the models contain variables concerning labour market integration. Second, since the analyses seek to investigate the effect of different forms of labour market integration, only long-term immigrants who have valid information on all workplace variables are included. The final sample includes 1,076 long-term CEE immigrants.

3.1 Dependent variable

The purpose of the study is to understand how the rate of unionisation changes over time among long-term CEE immigrants, and what factors are related to long-term CEE immigrants' propensity to be unionised; thus, the dependent variable is binary, *member of a union*. This variable reflects whether the immigrant was a member of a trade union during the year concerned.⁵ The variable distinguishes between members of a red trade union and members of a yellow trade union. In order to distinguish between red and yellow union members, following Ibsen et al. (2017), I use their unemployment fund affiliation, so that workers who are members of a union and are affiliated with a yellow unemployment fund are defined as members of a yellow union. Since the cost for the individual of unemployment insurance is practically the same across different funds, because of state subsidies it is unlikely for any worker to be part of a red unemployment fund and at the same time member of a yellow trade union and vice versa.

3.2 Independent variables

Based on the literature, I have included a number of structural variables as potentially significant in explaining long-term migrant union membership. *Industry of employment* captures the fact that industries differ in their union densities, thereby making it more or less likely to be exposed to union representatives or union members. In addition, this variable also captures union strategy, since unions in different industries in Denmark have chosen different strategies when it comes to organising CEE immigrants. The industry variable measures the primary industry of employment in terms of the industry where the CEE immigrants have earned the largest share of their overall income during the year concerned. The

⁴ A detailed description of the data collection from Statistics Denmark is available from the author on request.

⁵ Union dues are tax deductible in Denmark, and trade unions automatically report the membership fees paid by each member to the tax authorities annually. If the individual has no tax deduction for a trade union membership fee, the individual is coded as not being a union member in that year. The data on tax deduction for trade union membership fees is made accessible to researchers through Statistics Denmark at an individual level and can thus be merged with all other information about the individual in the registers. Since tax deductions are reported by the trade unions and not the individuals, the data are considered highly reliable.

variable *workplace size* is defined by three levels: small (1–9 workers), medium (10–49 workers) and large (50+ workers).

As stated in the literature review, social customs theory points to the importance of social norms at the workplace (Corneo 1995; Schnabel 2003) but also in the family (Coleman 1990). Because of the extensive data available in Danish registers, recent studies have been able to calculate the union density at the actual workplace of the individual worker (Ibsen et al. 2017; Toubøl & Jensen 2014). This study follows the same approach and calculates union density among co-workers by dividing the number of union members in the workplace by the number of ordinary wage earners (all regular employees excluding owners and CEOs / self-employed). The variable is defined in five levels of union density: 0–20%, 21–40%, 41–60%, 61–80% and 81–100%.

Workplace union density, however, is also a proxy for social custom for unionisation at the workplace. To further investigate the claim of social custom, I add an additional variable to distinguish between different types of workplaces. Social customs are enforced through the mechanism of sanctioning, so I distinguish between different institutional settings where sanctioning is more or less likely due to the institutional set-up. I use the dominant wage-setting system at industry level as a proxy for measuring the presence of sanctioning at the workplace (institutional setting). I distinguish between industries with a minimum wage system and industries with a normal wage system. Since only union representatives and employers in minimum wage systems are expected to negotiate company-level agreements, union representatives and union members in workplaces with minimum wage systems are more likely to sanction non-union membership. The institutional setting is defined at three levels: the public sector, which is considered a minimum wage system, but has limited tradition for company-level wage bargaining; private-sector industries with a minimum wage system (e.g., manufacturing and construction); private-sector industries with a normal wage system or a minimum wage system that de facto function as a normal wage system (e.g., cleaning, transport, retail trade).

In addition to the difference between wage-setting systems, the Danish labour market offers a special context for studying the social customs theory because of the existence of both red and yellow trade unions at workplace level. Red trade unions are acknowledged by employer associations as legitimate counterparts in the collective bargaining process. At workplace level, red trade unions are represented by shop stewards in more than half of workplaces (Larsen et al. 2010). Employer associations generally do not accept yellow or ideologically alternative trade unions as legitimate counterparts in collective bargaining and, consequently, they have few collective agreements with employers and few, if any, workplace representatives. Red unions have historically organised workers at the workplace level into trade-specific unions, creating a community of common interest vis-à-vis the individual employer.

Unlike red unions, yellow unions have no organisation at the workplace level and do not recruit based on a workplace community, instead they target their recruitment efforts at a more general level by offering legal advice in cases of emergency (Navrbjerg & Larsen 2011). These fundamental differences between red and yellow unions make the distinction between the two forms of unionisation at the workplace level ideal for testing the social customs theory. Reputational effects will only exist in workplaces with red unions. As such, I only expect to find a social customs effect in the case of workplaces with red unions that are highly unionised.

Applying the same logic about the importance of social norms at the workplace, the analyses include two additional variables: *the share of males in the workplace* and *the share of natives in the workplace*. The two variables are defined as continuous variables. Again applying the logic of social norms (Coleman 1990), I also measure the potential effect of the social norms for unionisation in the immediate social network by including a variable that measures *partner's union status* of long-term CEE immigrants. The variable defines four possible partner statuses: no partner, red unionised partner, yellow unionised partner, non-unionised partner.

In order to test for the effect of different *contexts of origin*, the analyses include two separate variables. First, since the study includes long-term immigrants from Poland and Romania, country of origin de facto becomes a proxy for the effect of different contexts of origin, since overall union density (UD) and collective bargaining coverage (CBC) are much higher in Romania (UD: 40–50%, CBC: 36%) than in Poland (UD: 12–14%, CBC: 10–15%) (Fulton 2013). Other studies find that the rapid drop in union density in Poland is a result of union-hostile institutional and economic conditions as well as a discrepancy between union strategies and worker expectations (Gardawski et al. 2012). Long-term immigrants from Poland might therefore have a less positive perception of trade unions overall when they settle in Denmark than long-term immigrants from Romania. Second, since immigrants' intentions regarding duration of stay have previously been found to be highly important for their actions in the country of destination, the analyses include a variable defining the long-term CEE immigrants' *intentions regarding length of stay* at the time of arrival. The variable defines three levels of intended length: less than a year, 1–5 years, more than five years.

As mentioned, the possible effect of the state of the labour market at different times in the process of migration on the propensity of immigrants to join unions is largely unknown. The analyses therefore include a variable that defines the *year of arrival* between 2004 and 2010. This variable should also capture the effect of differences in trade unions' approach to CEE immigrants, as the trade unions in the years following the enlargements were more hesitant towards actively organising CEE immigrants than in later years.

Precarious employment has previously been found to be negatively associated with the propensity to join trade unions. As a proxy, I therefore include a variable that measures the *number of workplaces* the immigrant has had during a year.

Since previous research has found significant differences between different groups of workers based on *demographic characteristics*, the analyses include the following variables: age, gender, dependent child in household and highest level of *pre-migration education*, defined as five levels of education: below upper secondary, upper secondary, vocational, tertiary and other.

3.3 Research design and methods

To answer the research question as to how unionisation rates among long-term CEE immigrants change over time, I look at the overall average unionisation rates (red and yellow unions combined) from the year of arrival up until the fifth year of immigration. Since the long-term CEE immigrants arrived after the first eastward enlargement of the EU in 2004, the year of arrival spans 2004–2010, while the fifth year of migration spans 2009–2015. The rate of unionisation is the average rate of unionisation in different types of unions (“red” or “yellow”) at different times of arrival across the different cohorts. In order to investigate whether the composition of factors related to long-term CEE immigrants’ propensity to be union members changes over time, I estimate separate binary logistic regression models at different lengths of stay (1 year, 3 years and 5 years). In order to include workplace variables, the sample only includes long-term CEE immigrants who were active on the labour market (had some form of official taxable income) during the year of interest. I run separate models for red and yellow union membership in order to compare what factors are related to different forms of unionisation. All models are estimated as full models because I am interested not in the effect of one factor but in exploring what factors are related to the propensity to opt for union membership.

3.4 Descriptive statistics

In this section, I present key demographic and labour market characteristics of long-term CEE immigrants in Denmark. Several studies of post-enlargement CEE immigrants, mainly focused on Polish immigrants in the United Kingdom and Ireland, describe the characteristics of this overall immigrant group (see, e.g., Barrett et al. 2012; Castro-Martin & Cortina 2015). Despite my data focusing only on long-term CEE immigrants, the basic demographics mirror what has been found in other countries among both long- and short-term immigrants. See figures in table 1 below.

Almost two-thirds of all long-term CEE immigrants in the study have a registered partner in Denmark, which could be seen as a sign of more permanent settlement. The same can be said for the

share of CEE workers with a dependent child in the household, which increases from 14% in the first year of migration to 36% in the fifth year of migration. As has been found in other studies (Barrett et al. 2012; Khattab & Fox 2016), long-term CEE immigrants in Denmark on average have a high pre-migration educational level compared to natives. The table shows that long-term CEE immigrants on average come with nine years of working experience, meaning that many of them, especially the Romanians, due to the considerably higher union density in Romania compared to Poland, are likely to have been exposed to trade unions in their home country.

Table 1: Key characteristics of long-term CEE immigrants

<i>Average age (years)</i>	34
<i>Women (%)</i>	38
<i>Dependent children in HH (%)</i>	28
<i>Share of Poles (%)</i>	47
<i>Share of Romanians (%)</i>	53
<i>Partner status (%)</i>	
No partner	37
Red unionised partner	21
Yellow unionised partner	8
Non-unionised partner	35
<i>Pre-migration education (%)</i>	
Below upper secondary	4
Upper secondary	35
Vocational	6
Tertiary	54
Other	2
<i>Average working experience pre-migration (years)</i>	9
<i>Average yearly income (1,000s)</i>	188
<i>Intentions regarding length of stay on arrival (%)</i>	
Less than a year	13
1–5 years	28
More than 5 years	59
<i>Year of arrival, settled in (%)</i>	
2004	1
2005	4
2006	5
2007	11
2008	20
2009	27
2010	16
N	1,076

Source: Statistics Denmark and survey of long-term CEE immigrants

The large share of long-term CEE immigrants stating that they already intended to stay long term on arrival is interesting also in a larger labour market integration perspective. Since these intentions are likely to make them more inclined to invest in human capital relevant to the Danish labour market, this will in turn make it more likely for them to move into workplaces with a higher union density, which should increase their propensity to join unions. Finally, table 1 shows that most of the long-term CEE immigrants in the study arrived around the time of the start of the economic crisis in 2008 and the following two years. This distribution might be the result of many CEE immigrants returning home when the crisis hit the Danish labour market and therefore not matching the sampling criteria of still living in Denmark. It might also be the result of a selection process during the crisis period where immigrants who chose to settle during this period, despite the worse conditions on the labour market, migrated for reasons other than labour market opportunities and were therefore more set on staying long term.

4. RESULTS

In this section, I will introduce two sets of results from the analysis. First, I will look at how the unionisation rates of long-term CEE immigrants develop over time and, second, using binary logistic regression models, I will compare which factors explain union membership in red and yellow trade unions.

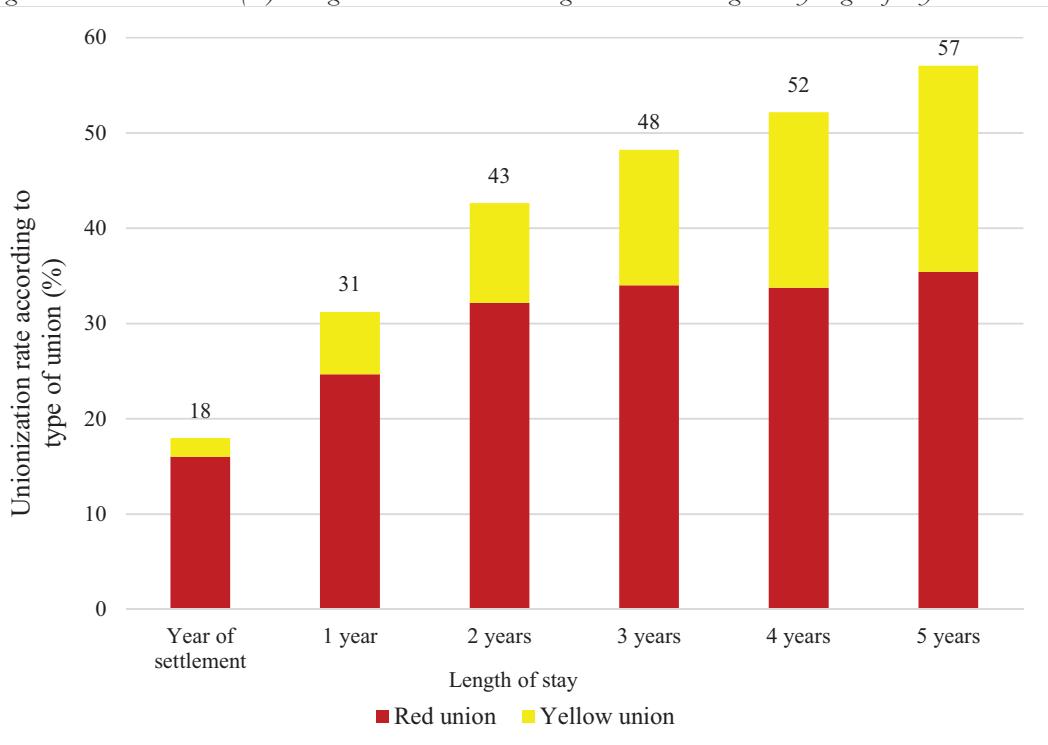
4.1 Unionisation rates among long-term CEE migrants

The total number of CEE immigrants in the Western European EU/EEA countries has increased rapidly since the EU enlargements of 2004 and 2007 (Castro-Martin & Cortina 2015; Recchi 2015). Since then, trade unions across the receiving countries have tried to find an adequate response to the inflow (Andersen & Arnholtz 2013; Fitzgerald & Hardy 2010; Hardy et al. 2012), but so far without knowing the rate of unionisation among different groups of CEE immigrants or how it develops over time. We only have snapshot surveys, which suggest that unionisation among post-enlargement CEE immigrants in the greater Copenhagen area was around 12% (Arnholtz & Hansen 2011). Since this study was cross-sectional, however, it cannot tell us about the immigrants' length of stay or how rates of unionisation developed over time.

Figure 1 shows that 18% join a union during their year of arrival, and that over the following two years the unionisation rate increases by around 12 percentage points each year. After two years, the increase in the unionisation rate drops to around 5 percentage points each year, so that after five years of migration 57% of long-term CEE immigrants in our sample had joined a union. The increase

in the unionisation rate over time thereby confirms the descriptive findings of Turner et al. (2008) for different immigrant groups in Ireland, although the overall unionisation rate is considerably higher among long-term CEE immigrants in Denmark. The unionisation rate of 57%, although lower than the average on the Danish labour market of around 68%, is considerably closer to the average among natives than what other studies have found among immigrant groups (Turner et al. 2008). The differences in unionisation rates between native workers and long-term CEE immigrants might also be the result of differences in employment patterns. It should also be noted that the unionisation rate among the long-term CEE immigrants who arrived in 2004 and 2005 continues to increase and after 9 years of migration has reached 65%.

Figure 1: Unionisation rate (%) among labour-market-active long-term CEE immigrants by length of stay



Source: Statistics Denmark – author's own calculations

N: year of arrival 862; 1 year 993; 2 years 1,013; 3 years 1,047; 4 years 1,043; 5 years 1,076.

Note: Since only long-term CEE immigrants who are active on the labour market during the year in question are included, the number changes over time as the share of the long-term CEE immigrants who are active on the labour market increases.

The high overall rates of unionisation among the fast-growing group of long-term CEE immigrants suggests that the group might be a source of revitalisation for the trade unions. It also challenges the idea that migrants, at least long-term migrants, are eroding union strength.

However, the situation is not as straightforward as the overall unionisation rates suggest, as yellow union membership make up a considerable and, over time, increasing percentage of overall union membership among long-term CEE migrants. While just 2% joined a yellow union during their year of arrival, thereby contributing just over 10% to the overall unionisation rate of these immigrants, by the fifth year, yellow union membership increased to 22%, contributing 38% to the overall unionisation rate. Yellow union membership in general has increased in Denmark during this period of CEE migration (Ibsen et al. 2015), but yellow union membership is considerably more widespread among long-term CEE migrants than among the general working-age population. In 2015, around 9% of all workers in Denmark were members of a yellow union, contributing 14% to the overall unionisation rate. This difference is important given the corporatist collective bargaining system in Denmark, which rests upon trade unions' ability to uphold their legitimacy as representatives of workers' interests through high levels of union density. Therefore, the relatively lower share of red unionisation among long-term CEE immigrants suggests that factors other than those generally used to explain workers' propensity to join unions might be at play.

The high overall unionisation rates contrast considerably with the low rate found previously among Poles in the greater Copenhagen area (Arnholtz & Hansen 2011) and suggests that either the pattern of unionisation has changed since the time of that study in 2008, or that there are notable differences between the unionisation pattern of long-term CEE immigrants and post-enlargement immigrants more generally. The rate of unionisation even in the year of arrival is considerably higher for long-term CEE immigrants than found in earlier studies, and increases greatly over the following years. This suggests that either intentions of length of stay play a significant role in CEE immigrants' choice as to whether to join a union or not, or perhaps that the timing of arrival plays a role.

From the figure, it is obvious that although the overall unionisation rate increases continuously throughout the six-year period, the rate of the increase declines considerably after the second year in Denmark (year 2). If long-term CEE immigrants have not joined a union within the first two years, their propensity to do so declines. Parutis (2014) has suggested that CEE immigrants starting in a new labour market take "any job" and then, after about a year, try to move to a "better job" and later, if possible, to their "dream job". The "any job" that many CEE immigrants start with is characterised by being low-paid and low-skilled and often in poorly regulated industries where union density is generally low, which makes it less likely for the CEE immigrants to come into contact with unions. The "better job", by contrast, is characterised by higher wages and better working conditions, both of which are more likely to be found in unionised workplaces. The steep increase in union density during the first years of migration might therefore be related to the immigrants' broader integration on

the labour market and the resulting change in exposure to trade unions. The declining increase in the rate of unionisation after year 2 might indicate a form of saturation, once the unionisation rate is above 40% there are just not as many non-unionised workers left to unionise and, for different reasons, not all workers, immigrant or natives, choose to unionise. It is important to note, however, that the overall unionisation rate continues to increase year after year.

4.2 Explanatory factors for rising unionisation rates

In the section below, I investigate which factors explain long-term CEE immigrants' propensity to be a member of a red or yellow trade union during the first five years of migration (displayed are year 1, year 3 and year 5). I compare the factors explaining red and yellow union membership, respectively, as well as the composition of explanatory factors over time. Table 2 shows that the propensity of long-term CEE immigrants to be member of a trade union, red or yellow, across the time span is mainly explained by two factors: the unionisation status of a partner, and the union density in the primary workplace.

The effect of the status of a potential partner confirms Coleman's original point about the effect of social norms in the family (1990; also see Ingham 1995 on the effect on unionisation of having a unionised partner). The effect is largest during the first three years of migration for either type of union membership, where long-term CEE immigrants with a unionised partner are more than four times more likely to be members of a union than are immigrants with no registered partner in Denmark. There are, however, considerable differences between the different types of union membership, as having a yellow unionised partner makes it 16 times more likely for the long-term CEE immigrant to be yellow unionised in year 1 and almost 13 times more likely in year 3, whereas the equivalent effect on red unionisation is 5 times and 4 times, respectively. The union status of the partner, however, not only has a positive effect. Having a partner who is unionised in the "opposite" type of union has a negative effect on the propensity to be a member of both red and yellow unions. It seems that 1) the social norms in the "family" play a considerable role for unionisation and 2) the social norms in the family work even stronger when it comes to yellow unionisation than red. Since red unionisation, especially during the first years of migration is much more widespread, yellow unionisation on the part of the partner will reflect an active choice that is more likely to affect the long-term immigrant's propensity to join a yellow union. The large effect in the first years of migration could be a consequence of the immigrants' lack of broader social networks at this point. In this situation, the social network they actually do have (partner), assumes an important role in their decision-making process. The decreasing effect then becomes an effect of their broader integration process in which their general decision-making process will be influenced by broader social contacts and not least their own experiences on the labour market.

Table 2: Union membership (Method: separate binary logistic regression for each year. Dependent variable = union membership. Odds ratios for the independent variables are reported)

	Year 1		Year 3		Year 5	
Dependent variable= union membership	Red	Yellow	Red	Yellow	Red	Yellow
<i>Age</i>	1.323** (0.137)	1.148 (0.201)	1.147 (0.102)	1.082 (0.120)	1.153 (0.116)	1.023 (0.102)
<i>Age squared</i>	0.996* (0.001)	0.998 (0.003)	0.998 (0.001)	0.999 (0.001)	0.998 (0.001)	1.000 (0.001)
<i>Male</i>	1.281 (0.281)	0.709 (0.222)	1.319 (0.247)	0.891 (0.213)	1.772** (0.324)	0.832 (0.175)
<i>Dependent child</i>	1.114 (0.306)	2.357 (1.101)	1.070 (0.216)	1.087 (0.298)	0.798 (0.148)	1.738** (0.363)
<i>Partner status</i>						
No partner (ref. category)	1 (.)	1 (.)	1 (.)	1 (.)	1 (.)	1 (.)
Red unionised partner	5.296*** (1.514)	0.488 (0.309)	4.482*** (1.023)	0.628 (0.232)	4.554*** (1.022)	0.307*** (0.096)
Yellow unionised partner	0.813 (0.482)	16.06*** (7.970)	0.254*** (0.102)	12.99*** (4.325)	0.502* (0.151)	4.594*** (1.256)
Non-unionised partner	0.901 (0.199)	0.893 (0.340)	0.794 (0.159)	0.750 (0.209)	0.782 (0.161)	0.605* (0.137)
<i>Yellow union density in workplace</i>						
0–20% (ref. category)	1 (.)	1 (.)	1 (.)	1 (.)	1 (.)	1 (.)
21–40%	0.763 (0.441)	4.149** (2.103)	0.931 (0.352)	2.380** (0.797)	0.694 (0.233)	3.387*** (0.853)
41–60%	N/A	N/A	N/A	83.87** (120.95)	0.594 (0.554)	6.844* (5.170)
61–80%	N/A	N/A	N/A	N/A	N/A	N/A
81–100%	N/A	N/A	N/A	N/A	N/A	N/A
<i>Red union density in workplace</i>						
0–20% (ref. category)	1 (.)	1 (.)	1 (.)	1 (.)	1 (.)	1 (.)
21–40%	2.810*** (0.834)	1.092 (0.404)	2.167** (0.597)	1.003 (0.311)	4.680*** (1.506)	0.677 (0.167)

41–60%	2.665**	0.425	3.352***	0.725	8.209***	0.688
	(0.909)	(0.187)	(1.045)	(0.256)	(2.802)	(0.182)
61–80%	6.784***	0.107*	11.23***	0.823	20.54***	0.436*
	(2.785)	(0.111)	(4.365)	(0.406)	(8.302)	(0.175)
81–100%	65.83***	1	54.97***	0.221	76.57***	0.055***
	(30.967)	(.)	(27.851)	(0.189)	(36.157)	(0.044)
<i>Number of workplaces</i>	1.337**	0.893	1.274**	1.072	1.091	1.171
	(0.128)	(0.134)	(0.118)	(0.133)	(0.099)	(0.112)
<i>Share of men in workplace</i>	1.008	0.994	1.003	1.008	0.990*	1.000
	(0.005)	(0.008)	(0.004)	(0.006)	(0.004)	(0.005)
<i>Share of natives in workplace</i>	0.972***	1.012	0.990*	0.996	0.993	0.999
	(0.005)	(0.007)	(0.004)	(0.006)	(0.004)	(0.004)
<i>Workplace size</i>						
1–9 employees (ref. category)	1	1	1	1	1	1
	(.)	(.)	(.)	(.)	(.)	(.)
10–49 employees	1.191	1.689	1.571	2.422	1.070	0.941
	(0.475)	(1.047)	(0.496)	(1.185)	(0.343)	(0.292)
50+ employees	1.952	3.040	1.404	3.858**	0.802	0.971
	(0.758)	(1.766)	(0.440)	(1.809)	(0.260)	(0.303)
<i>Industry setting</i>						
Private sector – minimum wage system (ref. category)	1	1	1	1	1	1
	(.)	(.)	(.)	(.)	(.)	(.)
Public sector – minimum wage system	0.587	1.402	0.939	1.305	0.713	0.997
	(0.213)	(1.023)	(0.311)	(0.583)	(0.222)	(0.404)
Private sector normal wage system	0.601	0.997	1.052	1.058	0.946	1.066
	(0.160)	(0.447)	(0.248)	(0.341)	(0.208)	(0.247)
<i>Intentions regarding length of stay</i>						
Less than a year (ref. category)	1	1	1	1	1	1
	(.)	(.)	(.)	(.)	(.)	(.)
1–5 years	0.711	0.398	0.784	0.578	1.098	0.484*
	(0.219)	(0.199)	(0.211)	(0.224)	(0.304)	(0.148)
More than 5 years	0.864	0.845	0.806	0.993	1.238	0.757
	(0.251)	(0.376)	(0.203)	(0.343)	(0.322)	(0.204)
<i>Poles (ref. category: Romanians)</i>	0.929	1.318	0.812	1.521	0.773	1.102
	(0.210)	(0.481)	(0.155)	(0.372)	(0.143)	(0.236)
<i>Pre-settlement education</i>						
Below upper-secondary (ref. category)	1	1	1	1	1	1

	(.)	(.)	(.)	(.)	(.)	(.)
Upper secondary	1.982	0.686	1.142	1.342	1.982	1.202
	(1.045)	(0.597)	(0.511)	(0.946)	(0.837)	(0.569)
Vocational	2.092	0.515	0.680	1.149	1.213	0.799
	(1.286)	(0.567)	(0.373)	(0.931)	(0.613)	(0.472)
Tertiary	2.046	0.614	0.917	0.890	2.150	1.010
	(1.066)	(0.555)	(0.410)	(0.610)	(0.902)	(0.471)
Other	1.278	1	0.212	1	0.885	1.043
	(1.215)	(.)	(0.188)	(.)	(0.697)	(1.034)
<i>Year of arrival</i>						
2004 (ref. category)	1	1	1	1	1	1
	(.)	(.)	(.)	(.)	(.)	(.)
2005	0.253*	0.138	0.814	1.283	1.176	1.423
	(0.167)	(0.178)	(0.460)	(1.112)	(0.749)	(1.277)
2006	0.481	0.0887**	1.451	0.421	0.866	0.585
	(0.251)	(0.078)	(0.661)	(0.375)	(0.473)	(0.466)
2007	0.603	0.521	1.039	1.040	0.531	1.529
	(0.263)	(0.227)	(0.437)	(0.787)	(0.268)	(1.103)
2008	0.631	0.500	0.794	0.845	0.675	1.558
	(0.270)	(0.195)	(0.322)	(0.624)	(0.331)	(1.106)
2009	0.318*	0.412	0.773	1.260	0.556	1.467
	(0.146)	(0.200)	(0.333)	(0.932)	(0.282)	(1.035)
2010	0.330*	1	0.741	1.360	0.805	1.500
	(0.152)	(.)	(0.317)	(1.023)	(0.407)	(1.062)
<i>R squared</i>						
<i>Observations</i>	986	888	1,037	1,030	1,073	1,077

Exponentiated coefficients; Standard errors in parentheses.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Note: The number of CEE workers each year varies since only workers active on the labour market in the year concerned are included in the models.

Union density at the primary workplace stands out as the other main factor related to union membership among long-term CEE immigrants, thereby at least on the surface confirming social customs theory (Corneo 1995; Schnabel 2003) and results previously found among all workers in a Danish context (Ibsen et al. 2017; Toubøl & Jensen 2014). Long-term CEE immigrants' propensity to be member of a union is positively correlated with the level of workplace union density regardless of type of trade union. Higher levels of union density are correlated with higher propensity to be union member. In fact, it seems that the effect of union density at relatively low levels is larger when it comes to yellow unionisation than when it comes to red unionisation. This overall pattern on the one hand confirms the

key role of the workplace in explaining unionisation as stressed by social customs theory, a role that also increases over time. However, digging deeper, the level of workplace union density plays a key role in red and yellow unionisation, which calls into question the attribution of the effect to social customs.

As mentioned earlier, in previous studies, workplace union density has been used as a proxy for social customs, so a correlation between higher workplace union density and increased propensity to join unions is seen as a social customs effect (Ibsen et al. 2017). This is challenged if the effect of workplace union density on increasing propensity to join unions operates in both red and yellow unionised workplaces. In workplaces with red unions we expect to see this effect given that these unions are built around a sense of workplace community and supported by individuals (e.g., shop stewards or union members) willing to sanction non-union membership; but equivalent conditions are absent in the case of workplaces with yellow unions. Although there is a negative effect of high levels of red union density (above 60% in year 1 and year 5) on long-term CEE immigrants' propensity to be yellow unionised, which might be interpreted as the effect of social customs, this effect is inconsistent.

While the results show that workplace union density plays a key role, the overall industry setting plays no significant role in explaining the propensity to unionise, despite differences in wage systems and collective agreement coverage. This finding underlines the significance of the workplace level, but also begs the question: if workplace union density cannot automatically be interpreted solely as a social customs effect, what mechanism then explains why higher workplace union density increases the likelihood of immigrants joining? It could be that we have to look for a more complex set of workplace-level explanations where social customs interact with more instrumental rational calculations (Crouch 1982) to understand long-term CEE immigrants' unionisation patterns. For example, it is possible to see unionisation as, for example, individual protection vis-à-vis the employer detached from a broader workplace community.

Partly supporting this rational choice interpretation is the fact that immigrants in more precarious employment situations with more than one workplace during the first years of migration have a higher propensity for unionisation, though only in red unions. This pattern contrasts with the findings of previous studies, where workers in more precarious employment were less likely to join unions allegedly because of less exposure to social customs (Ibsen et al. 2017). The effect is, however, in line with a rational choice framework in which these immigrants, due to their precarious status, stand to gain more from joining a union than immigrants in more stable forms of employment. What is not explained though is why precarious employment only affects the propensity for red unionisation.

Besides workplace union density, the share of native workers in the workplace affects immigrants' propensity for red unionisation negatively. During the first three years of migration, the

negative effect ranges between 1% and 3% for each 1% increase in the share of native workers. The negative effect of a large share of native workers suggests that native workers might be actively working to keep immigrants out of unions.

While factors related to social norms either at the workplace or in the family play a highly significant role in long-term CEE immigrants' propensity to unionise, several factors previously found to affect propensity to unionise show no effect. For example, structural factors such as industry and workplace size that have previously been found to significantly affect the propensity of immigrants to join unions are not significant in this study. This could be because it plays out differently for different migrant groups, or differently for migrants with varying lengths of stay. Alternatively, it could be that the variable representing union density at the workplace makes the independent effect of these variables disappear. The same interpretation might be used to account for why neither gender nor age has a consistent effect on the propensity to join a union. The effect found in previous studies has in fact been the effect of differences between the workplaces in which men, women, older and younger people work.

Although not previously highlighted, literature on immigrants' labour market integration suggested that immigrants' intentions regarding length of stay would affect their propensity to become members of unions (Dustmann & Görlach 2015; Friberg 2012; Piore 1979). Table 2 shows there is no consistent effect, however, and to the extent that length of stay intentions have an effect on unionisation, the effect is the opposite to what we expected. Long-term CEE migrants, who at the time of arrival intended to stay less than a year, and who we expected to have a lower propensity to join unions, display similar propensities as long-term immigrants who intended to stay longer. This lack of a consistent relationship suggests that CEE immigrants do not view union membership as a form of investment in host-country-specific capital. What is important is not what the immigrants bring with them in terms of intentions or qualifications, but instead what they are exposed to once in Denmark. This is further underscored by the fact that pre-migration qualifications, context of origin, and pre-migration working experience do not have any consistent effect on the propensity to unionise.

Finally, table 2 shows that what is important in explaining unionisation among long-term CEE immigrants is what they are exposed to in the host country and, furthermore, that this exposure must be local to have a significant effect. Table 2 shows that the overall economic climate has no independent effect, nor does the year of arrival, despite the effect of the economic crisis. This is somewhat in contrast to the overall development of union density in Denmark, where the economic crisis resulted in a stabilisation of overall union density after a long period of decline (Toubøl et al. 2015).

5. DISCUSSION AND CONCLUSION

Since the eastward enlargements of the EU in 2004 and 2007, Western European countries have experienced historically high inflows of immigrants, mainly from Central and Eastern European countries (Castro-Martin & Cortina 2015; Recchi 2015). Simultaneously, trade unions have experienced a drop in membership (Gorodzeisky & Richards 2013; Ibsen et al. 2017; Visser 2011). Over the last couple of years, trade unions have focused on organising the growing group of long-term CEE migrants (Fitzgerald & Hardy 2010; Hardy et al. 2012). From a trade union perspective, long-term CEE migrants present a potential source of revitalisation for unions (Gorodzeisky & Richards 2013), but also a potential long-term challenge to union density and thereby the legitimacy of trade unions as representatives of worker interests if they cannot organise migrants.

The main objective of the study was twofold; first, to examine the rate of unionisation among long-term CEE migrants in Denmark and, second, to examine what factors explain their propensity to unionise at different points in the migration process. Building on existing literature, I expected to find a continuous increase in the rate of unionisation, but at levels well below that of native workers. In line with both the overall literature on workers' unionisation, and the specific literature on immigrants' propensity to join unions, I expected factors such as the level of workplace union density, the immigrant's intentions regarding length of stay and the overall economic conditions at time of arrival to affect their propensity to unionise.

This study reveals that after the first five years of migration, more than half of long-term CEE immigrants have unionised, and most of them within the first two years of arriving. The unionisation rate among long-term CEE immigrants is thereby much higher than predicted by the literature. It is still about 10 percentage points lower than for native workers, but some of the gap is likely explained by differences in their long-term exposure to trade unions. In line with social customs theory, the logistic regression analyses find that the main factors related to long-term CEE immigrants' propensity to unionise are the immigrant's exposure to unions in the form of either the union status of a partner or the union density at their workplace. However, additional analysis challenges this assumption by showing that high union density, both of red and yellow unions in the workplace, increases the propensity of immigrants to join unions. This throws into question the proposition that social customs are operating as the underlying mechanism, as they would only be present in workplaces with a high density of red union members. Finally, the regression analysis also shows that neither long-term CEE immigrants' intentions regarding their length of stay, nor the overall economic conditions at the time of their arrival, play any significant role in whether they choose to unionise or not.

Based on these results, the revitalising potential of CEE immigrants might at first seem promising, as more than half of the long-term CEE immigrants in the study were members of a union after five years of migration. However, at least two important challenges persist. On the positive side, the fact that unionisation in the immigrants' country of origin seems to be less important for their unionisation propensity in the host country suggests that immigrants' pre-migration opinions of unions matter less than what they are exposed to in the host country. Second, the results suggest that since CEE immigrants, over time, move from poorly organised workplaces to workplaces that are better organised, future long-term CEE immigrants are likely to go through a similar process of unionisation. The general decline in unionisation among natives, however, constitutes a challenge for the recruitment efforts of the unions since the main effect comes from workplace union density. If this drops in workplaces in general, then future long-term CEE immigrants' propensity to join unions must be expected to also drop.

On the negative side, the fact that the two main factors explaining union membership are related to exposure through either union density at the workplace level or a unionised partner at home suggests that, while it is possible for unions to recruit CEE immigrants in industries and workplaces where they already have a stronghold, it will likely be difficult in workplaces with a low union density. Second, while 57% of the long-term CEE immigrants were unionised after five years of migration, 39% of these were unionised in a yellow union that is not recognised by employers as a legitimate part of the collective bargaining system in Denmark. In terms of revitalising the traditional red trade unions and securing their legitimacy as representatives of worker interests, the unionisation pattern among long-term CEE immigrants thereby poses some challenges. Challenges that, in other national contexts where yellow unions are used more deliberately to undermine the position of the traditional trade unions, are likely to be much more serious.

Although the study confirms the role of workplace union density in increasing the propensity of immigrants to join unions, the picture that emerges from the separate analyses of red and yellow unionisation is more complex. Since a similar effect of workplace union density is found for both red and yellow union density, it is impossible to conclude that what is at play is social customs. As such, this study calls for more qualitative research to understand why CEE immigrants choose to join different types of trade unions, and the role played by social customs at home and at the workplace, but also allowing us to understand more instrumental considerations. Delving deeper into the decision-making process will allow us to disentangle the role of different factors at different points in the migration process.

An important limitation to the study should be mentioned. The study focuses solely on long-term CEE immigrants, and although this group is growing, there is also a large group of short-term

CEE immigrants. It will be necessary for further research to examine trade unions' success in organising these short-term immigrants, and the role played by workplace union density.

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Article 4:

Decomposing the native-immigrant earnings gap – Long-term Central and Eastern European immigrants in Denmark

Jonas Felbo-Kolding

Decomposing the native-immigrant earnings gap – Long-term Central and Eastern European immigrants in Denmark

Research on native-immigrant earnings gaps has primarily focused on average differences in hourly wages or annual earnings. This study contributes to the ongoing debate by investigating how differences in employment stability, working hours and hourly wages each contribute to the overall earnings gap at the top, middle and bottom of the earnings distribution. Using administrative register data from Denmark on long-term Central and Eastern European immigrants, with individual-level panel data on a month-by-month basis, I find that the native-immigrant earnings gap at the top of the earnings distribution is almost entirely explained by differences in hourly wages. However, moving down the distribution, the effect of the differences in working hours and employment stability increases. I find that the differences at the top are the result of a combination of occupational segmentation and discrimination, whereas differences in union characteristics affect the differences at the bottom.

1 INTRODUCTION

Immigrants' labour market integration is one of the major challenges currently facing Western states because of the increasing migration flows. If immigrants fail to successfully integrate into the labour market, it undermines the financial basis of the state and challenges the individual immigrant's broader social integration (Grant & Nadin 2007). In this context, immigrants' earnings are a key measure or proxy of their economic and labour market integration that is easy to interpret. At a societal level, the native-immigrant earnings gap describes a society's overall ability to integrate immigrants to the labour market. At the individual level, the earnings gap describes the immigrant's individual labour market integration and hence consumption abilities (Frenette & Morrisette 2005). Across different contexts of reception, a broad strand of literature has documented a considerable, and often persistent, native-immigrant earnings gap (Chiswick 1978; Borjas 1985; Chiswick et al. 2008; LaLonde & Topel 1992). In this literature, immigrants' integration process is understood in relation to natives, where immigrants are fully assimilated or integrated once they reach earnings parity with comparable natives. The existing earnings gap literature has contributed greatly to the understanding of the status of immigrants' labour market integration. The exclusive focus on earnings and wages, however, excludes aspects central to the

understanding of the labour market integration process. As a result, it is not an accurate or comprehensive measure of labour market integration, and, in some cases, may even be an inaccurate measure.

Most of the native-immigrant earnings gap literature focuses exclusively on gaps in either annual earnings or hourly wages, typically comparing the average of those for natives and immigrants measured at a single point in time. By focusing on gaps in hourly wages and annual earnings as proxies of economic and labour market integration and the factors fostering these native-immigrant differences, the earnings gap literature implicitly assumes that workers, natives and immigrants alike, across the earnings distribution are equally likely to be in stable full-time year-round employment. It thereby inadvertently overlooks that immigrants are less likely than natives to be in full-time employment (Davis et al. 2007; Hum & Simpson 2000; Kalleberg 2009; Rubery 2015) and that more immigrants than natives involuntarily find themselves in non-permanent jobs (Hopkins & Dawson 2016; Hsueh & Tienda 1995; Kalleberg 2011). Over the last two decades, researchers have further developed the earnings gap literature by showing how immigrants fare differently across the earnings distribution, and how the impact of different mechanisms varies across the distribution (Butcher & DiNardo 2002; Chiswick et al. 2008). Although these studies have focused on hourly wages and annual earnings, it seems highly unlikely that there should not be similar differences in terms of working hours and employment stability. Therefore, this article looks at how we can supplement a focus on hourly wages with other measures to increase the accuracy and understanding of the earnings gap.

In this article, I argue that, in order to understand better the dynamics behind the earnings gap and the process of immigrants' labour market integration, the focus on hourly wages needs to be supplemented in two ways. First, by a focus on how native-immigrant differences in working hours and employment stability contribute to the overall earnings gap. Second, by a focus on how the different components contribute to the earnings gap across the earnings distribution. Earnings, whether immigrant or native, are a product of hourly wages, working hours and employment stability. If immigrants, on average, not only receive lower hourly wages, as documented in several studies (Barrett et al. 2012; Clarke & Drinkwater 2008; Drinkwater et al. 2009; Dustmann et al. 2010), but also have trouble finding stable full-time employment, the annual earnings gap will be a product of the sum of these differences. Focusing on these cumulative effects adds to the existing earnings gap literature by including the effect of native-immigrant differences in forms of labour market integration other than hourly wages within the earnings gap framework. By performing the decomposition separately for the top, middle and bottom of the earnings distribution, the article adds unique nuances to the understanding of the dynamics of the earnings gap for different groups. The article achieves this by investigating the following research questions: *What roles do differences in working hours, employment stability and hourly wages play in the overall native-immigrant earnings gap?*

immigrant earnings gap? and *What factors affect the overall earnings gap, differences in hourly wages, working hours and employment stability?* Building on the insights from longitudinal studies and studies across the earnings distribution, the article investigates both research questions over a seven-year period and separately for the top, middle and bottom quartiles of the earnings distribution.

The article uses unique administrative register data on Central and Eastern European (CEE) immigrants who settled¹ in Denmark in 2007/2008, stayed, and have been active on the labour market each year for the first seven years. In the years immediately prior to the onset of the Financial Crisis, Denmark had a tight labour market that was relieved through CEE immigration. This shifted during the Crisis, when unemployment rose for both natives and immigrants, but to a lesser extent for the latter (Ministry of Industry, Business and Financial Affairs 2013). Danish administrative register data cover everyone settled in Denmark regardless of country of origin. The data are uniquely suited to dissecting the earnings gap because, in addition to containing information on hourly wages and annual earnings, they also include information on the number of working hours and periods of employment/unemployment at an individual level on a month-by-month and year-by-year basis. The focus on native-immigrant gaps means that the article applies a ‘relative’ perspective to CEE immigrants’ labour market integration process throughout. CEE immigrants’ may therefore experience an improvement in, for example, their *absolute* annual earnings at the same time as the *relative* annual earnings gap widens because native workers have experienced a greater improvement in the same period.

The article is structured in the following manner. First, a brief overview of the main theories used to explain native-immigrant earnings gaps and native-immigrant differences in working hours and employment stability is provided and hypotheses are derived. Second, the Danish administrative register data, the sampling criteria, the analytical approach and the operationalisation of the main variables are described. Third, the empirical section starts with descriptive statistics comparing long-term CEE immigrants and native workers at the start and finish of the seven-year period (2008–2015). Then follows a decomposition of the overall annual earnings gap, which is subsequently further elaborated by a decomposition across the earnings distribution. In the final part of the empirical section, the factors explaining the native-immigrant earnings gap as well as the differences in hourly wages, working hours and employment stability are investigated using separate linear regression models. The article concludes with a summary of the primary findings, a discussion of the findings, and the limitations of the study and suggestions for possible future avenues of research.

¹ ‘Settled’ refers to immigrants who have an officially registered place of residence in Denmark. Throughout the article this group is termed either long-term CEE immigrants or CEE immigrants.

2 APPROACHES TO NATIVE-IMMIGRANT EARNINGS GAPS

The literature on native-immigrant earnings gaps has contributed greatly to the understanding of the labour market integration of immigrants (see e.g. Borjas 1985; Chiswick 1978; LaLonde & Topel 1992). I argue, however, that, due to insufficient data, the literature leaves an incomplete picture of immigrants' labour market process that potentially leads to wrongful conclusions. Native-immigrant earnings gaps – either as gaps in annual earnings or hourly wages – present an easily interpretable proxy of immigrants' labour market integration. Immigrants are fully integrated once they achieve economic parity with comparable natives (Frenette & Morissette 2005; Hum & Simpson 2000). In a longitudinal framework, it is possible to determine the size of the earnings gap, the rate of integration, the timing of 'full integration' and, not least, the factors that influence both the rate and timing of integration. The literature has consistently found that a considerable native-immigrant earnings gap exists, especially during the first year's settlement (Chiswick 1978; Borjas 1987). This has also been confirmed for CEE immigrants, although the gap found by Friberg (2015) and Bratsberg et al. (2014) in Norway is considerably larger than that which Andersson and Hammarstedt (2012) found for monthly earnings in Sweden.

The earnings gap literature has significantly advanced our understanding of, for instance, the importance of the transferability of human capital (Chiswick 1978; Friedberg 2000); the lack of qualifications (Nielsen et al. 2004); labour market segmentation (Barrett et al. 2012; Constant & Massey 2005); and discrimination (Phelps 1972) in explaining the earnings gap. Over the past 15 years, researchers within the literature have further contributed to the understanding of immigrants' integration process by drawing attention to how native-immigrant differences differ across the earnings distribution (Butcher & DiNardo 2002; Chiswick et al. 2008). Despite the advances made by the focus on differences across the earnings distribution, the focus on (hourly) wages needs to be supplemented by one on the role of the number of working hours and employment stability.

Workers' annual earnings are a function of the average hourly wage, but also employment stability, in the form of the number of months of employment during the year, and working hours, in the form of the average number of hours worked during months of employment. By focusing only on earnings, often in the form of hourly wages, the literature therefore focuses exclusively on one of three components of which (employment-generated) earnings are a function and thereby reduces differences in economic integration to differences in wages. This is, in principle, not a problem *if* everyone, immigrants and natives alike, are employed full-time all year round. Or, alternatively, if immigrants' employment stability and number of working hours at all points in the process of labour market integration and across the entire earnings distribution match that of comparable natives. If this is not the

case, however, it effectively reduces the overall earnings gap to differences in hourly wages and thereby also the understanding of what contributes to differences in socio-economic integration to what contributes to differences in hourly wages.

As is further elaborated below, multiple studies, however, show that this is by no means the case (Dustmann & Görlach 2015; Hopkins & Dawson 2016; Kalleberg 2009; Parutis 2014). I therefore argue that it is pertinent to include all three components in order to render a more complete picture of the earnings gap and thereby the dynamics of immigrants' labour market integration. I do this by looking at how differences between natives and immigrants in the three components contribute to the overall earnings gap at different points in the integration process and for different groups of immigrants at the top, middle and bottom of the earnings distribution. Subsequently, I explore what factors contribute to differences in the annual earnings gap and each of the three components.

The effect of working hours and employment stability has received limited attention in the earnings gap literature. Most of the literature has focused on post-enlargement CEE immigrants' hourly wages. Overall, the literature has found that immigrants receive hourly wages well below those of natives, but also that the wages increase with the years since migration (Barrett et al. 2012; Clarke & Drinkwater 2008; Drinkwater et al. 2009; Dustmann et al. 2010). The studies are all unable to separate the trajectories of long-term immigrants from those of temporary immigrants, but, since most of the temporary immigrants are unlikely to invest in host-country-specific human capital, and are often willing to accept hourly wages, they lower the average hourly wages for the entire CEE group (Drinkwater et al. 2009; McCollum & Findlay 2015). The general literature points to a number of possible explanations for the differences: the transferability of human capital (Chiswick 1978; Friedberg 2000); the lack of qualifications (Nielsen et al. 2004); labour market segmentation (Barrett et al. 2012); discrimination (Fox et al. 2015); and lower reservation wages (Amuedo-Dorantes & De La Rica 2007). Finally, Barrett et al. (2012) find that differences in hourly wages between natives and CEE immigrants are largest at the top of the distribution, suggesting both that differences are not necessarily uniform across the wage distribution and that a glass ceiling exists (Le & Miller 2010).

The native-immigrant earnings gap is likely to be the result not (just) of lower hourly wages, but (also) immigrants' trouble in finding stable employment (Hsueh & Tienda 1995; Kalleberg 2011). Previous studies have found that CEE immigrants are, on average, more likely than natives to be in unstable employment (Hopkins & Dawson 2016; Parutis 2014). CEE immigrants' lower level of employment stability has been attributed to their concentration in jobs in parts of the labour market generally characterised by unstable employment (Hopkins & Dawson 2016; Parutis 2014). According to the literature, CEE immigrants are sorted into these jobs either by employers' unwillingness to hire them

for other jobs (Drinkwater et al. 2009; Favell 2008; Fox et al. 2015) or by immigrants' willingness to accept the same jobs, as opposed to natives, because of their different frame of reference (McCollum & Findlay 2015). Additionally, researchers have stipulated that CEE immigrants' jobs, and thereby their employment stability, differ considerably according to how long they have stayed, noting that, on average, they improve over time (McCollum & Findlay 2015). Immigrants in the beginning of their stay often have to settle for 'survival employment' (Creese & Wiebe 2009) or 'any job' (Parutis 2014). These jobs offer highly unstable employment and immigrants who intend to stay long-term will attempt to move on to 'better' jobs (Parutis 2014). Although the literature thereby does distinguish between different groups of CEE immigrants, it has yet to look into the role of employment stability in the earnings gap of different groups.

In order to complete the picture of native-immigrant earnings gap, it is necessary to include the number of working hours, since previous studies have suggested that there are significant differences between natives and immigrants and that these change over time (Kahanec & Shields 2013). Previous studies suggest that, on average, CEE immigrants work excessive hours when they first arrive in the host country (Davis et al. 2007; Parutis 2014). This is attributed to the fact that, generally, immigrants are interested in working as much as possible in order to establish themselves in the new country, and many therefore take on a second job in order to maximise their total earnings (Davis et al. 2007; Hum & Simpson 2000). According to Parutis (2014), immigrants who choose to stay long-term will, as time passes, look for 'better jobs' characterised by better working conditions, stability and security. Studies of precariousness, however, point out that, because employers in low-wage sectors look to CEE immigrants for flexibility, immigrants have trouble finding a stable number of working hours (McCollum & Findlay 2015). Likewise, studies of labour market segmentation have shown that, due to discrimination, immigrants struggle to move out of jobs in the secondary labour market even as time passes (Piore 1979). Since most studies have focused on either qualitative studies or averages, they tell us little about the number of working hours in different immigrant groups. Finally, studies have found that, in general, people with child caring responsibilities work fewer hours, just as some women with a full-time employed partner work fewer hours in a family division of labour between formal and informal work (Warren 2004; O'Reilly et al. 1998).

Thus far, scholars have not been able to decompose the native-immigrant annual earnings gap into all of its three components. As a consequence, we do not know how much each of the components contributes to the annual earnings gap over time or if it differs between the groups at the top, middle and bottom of the earnings distribution. Likewise, we have yet to find out what factors affect the differences in each of the components between natives and immigrants and whether these differ at

the top, middle and bottom. These shortcomings in the picture which, to a large degree, are due to shortcomings in the available data, potentially lead to inaccurate conclusions about the nature of immigrants' labour market integration that impact both research and policy. In Denmark, the unique administrative register data contain information on annual income and hourly wages, as well as working hours and employment stability, making it possible to account for the contribution of each of the components to the immigrant-native wage gap across the first seven years of migrant labour market integration. It is also possible to identify the factors that affect each of the different components, and to test whether the factors that affect each of the three components are the same as those affecting the overall earnings gap. The longitudinal data also make it possible for us to see whether the factors affecting the components change over time or remain the same, thereby contributing to the literature on immigrants' labour market integration. Finally, the data allow us to see whether the process of labour market integration and the factors affecting it are the same across the earnings distribution.

As already mentioned, there are potentially considerable differences in how much each of the three components contribute to the earnings gap in the 'any' jobs that immigrants hold during the first period after arrival and the subsequent 'better' jobs that they are thought to move on to over time. Based on the existing literature reviewed above, we would expect immigrants' initial jobs to be characterised by a lower level of employment stability and lower hourly wages compared to the average among native Danish workers. On the other hand, we would expect CEE immigrants to work more hours than native Danish workers in order to compensate for this and maximize their income. As time passes, we would expect the earnings gap to narrow because of relative increases in employment stability and hourly wages among immigrants compared to native workers, while the number of working hours would either decrease or remain stable. The expectations outlined above are all based on literature that has generally focused on averages, and therefore leaves few guidelines in terms of what to expect at the top, middle and bottom of the earnings distribution. Following the studies on native-immigrant gaps in hourly wages, however, we would expect this gap to be larger at the top and thereby contribute more to the overall earnings gap. In terms of employment stability and working hours, the literature is less informative, however, and, following studies of precariousness, it seems most likely that, on the one hand, there are groups of immigrants at the top that succeed in gaining stable full-time employment early on, while, on the other, others at the bottom struggle even as time progresses.

In terms of factors affecting each of the components, we expect differences in all three components as well as the overall earnings gap to be primarily a consequence of immigrants' concentration in specific occupations and industries. According to the literature, we would expect immigrants to compensate for a lower level of employment stability and part-time employment by taking

on more than one job so that the difference between immigrants and natives increases when controlling for the average number of workplaces during periods of employment. In line with this, we would expect immigrants to be more likely to change jobs over a year because of unstable employment, so that controlling for the number of workplaces over a year will increase the difference in employment stability. The literature provides no guidelines as to what to expect in terms of what factors affect the gap in the components for the different groups at the top, middle and bottom of the earnings distribution.

3. DATA AND METHODS

3.1 Data and sample selection

In this article, I draw on unique data from the Danish administrative register data on the labour market for the period 2008-2015. Danish register data cover all workers in paid employment on the Danish labour market, natives as well as immigrants, with any form of official taxable income in a Danish company on a monthly basis. Drawing on third-party reported information on monthly salaries by employers to the Danish tax authorities, the data provide information on persons' employment at the level of the individual workplace in terms of, for example, length of employment, wages, and working hours. The labour market data are linked at the individual level to registers with information on persons' education in Denmark, time of settlement, marital status, partner, dependent children, as well as country of origin.

One of the major challenges confronting studies of immigrants' (labour market) integration is selection bias among immigrants who out-migrate from the host country (Constant & Massey 2003). Since not all immigrants choose to stay permanently, the immigrants who do stay permanently or long term – the long-term immigrants – are *de facto* selected among the initial group of immigrants. If, on the one hand, the long-term immigrants are negatively selected in terms of earnings, as Edin et al. (2000) find for Sweden, the earnings gap between natives and immigrants will increase as time passes while, on the other, the opposite will be the case if the long-term immigrants are positively selected, as found in studies for the United States (see, e.g., Massey 1987; Borjas 1989; Bijwaard & Wahba 2013). Taking advantage of the panel data, I restrict my sample to focus only on long-term immigrants, so that only CEE immigrants who arrived in 2007/2008 and who stayed from 2008 to 2015 are included. Since the interest of the article is *labour market* integration and earnings related to labour market participation, the group is additionally restricted to only include persons of working age (18-65 years), who were active on the labour market in each of the years from 2008 to 2015. Immigrants are defined as active if they have some form of income related to an official employment relationship (>1 DKK). Following the same logic of focusing

on the labour market, the panel is finally restricted to not include active students. After implementing the restrictions, the final panel of long-term CEE immigrants consists of 3,992 individuals contributing 31,920 observations.

Since I am interested in CEE immigrants' labour market integration relative to native Danes, a comparable panel of 125,000 native Danish workers was randomly sampled to match the age group² and gender distribution among the long-term CEE immigrants. The panel of native workers were sampled among individuals who matched the same criteria as the long-term CEE immigrants in terms of age (18-65 years), labour market activity (active every year from 2008-2015), and not being active students³. Since there is no information on educational qualifications obtained abroad in the registers and only 6% of the long-term CEE immigrants have a recognised Danish education registered, it is impossible to take differences in educational qualifications into account in the sampling. A recent extensive study on the educational qualifications of all immigrants settled in Denmark covering more than half of all foreign-born immigrants highlights that the qualifications of the two largest CEE groups in Denmark, Poles and Romanians, are on a par with, or even above, the level of native Danes (Schultz-Nielsen & Skakse 2017). This study is unable to distinguish between short- and long-term immigrants, but the results are in line with a recent study on long-term immigrants from Poland and Romania, which suggested that long-term CEE immigrants are likely to bring with them educational qualifications on a par with, or even above, the level of native Danish workers (Felbo-Kolding 2016). The relatively high educational level among CEE workers has also been found in other studies (see, e.g., Barrett et al. 2012).

3.2 Analytical approach

The analysis starts from the fact that an individual i 's overall labour market integration, measured as annual labour market income (Z), is the product of three factors:

$$Z_i = m_i w_i h_i,$$

where m_i is number of months of employment during a given period, h_i is the average number of working hours during months of employment, and w_i is the average hourly wage for that period.

I conduct the analyses in four main steps, each focused on the relative differences between

² The following age groups were defined 18-24, 25-34, 35-44, 45-54, 55-65.

³ CEE immigrants are, on average, significantly younger than the population of native Danish workers. Not sampling the comparison group on age would therefore effectively mean that CEE immigrants' labour market integration would be compared to a much older group of Danish workers. By restricting the sample only to include long-term CEE immigrants who were not active students, and who were active on the labour market in each of the years of the 2008-2015 period, I am able to focus only on the effects of being on the labour market without the risk of overlooking changes in, for instance, educational level after settlement. Since previous studies on earnings gaps have tended to include active students, who, on average, earn significantly less than workers working fulltime and who, in most cases, make up a much larger share of the native comparison group than the immigrant group, these studies will tend to underestimate the average earnings among comparable native workers.

long-term CEE immigrants and native workers. In the first step, descriptive statistics for the long-term CEE immigrants and the panel of native Danish workers in the 2008-2015 period are analysed. In the second step, I decompose the average annual earnings gap between native workers and long-term CEE immigrants for every length of stay, t , by calculating relative differences between long-term CEE immigrants and native workers for each of the three components of annual earnings (shown here only for monthly working hours, b)

$$\frac{\bar{h}_{CEE,t}}{\bar{h}_{DK,t}},$$

where $\bar{h}_{CEE,t}$ and $\bar{h}_{DK,t}$ are average monthly working hours for long-term CEE immigrants and native workers, respectively, for length of stay for immigrants and length of time since 2008 for natives t . As this ratio can be rewritten as:

$$\frac{\bar{m}_{DK,t} \bar{w}_{DK,t} \bar{h}_{CEE,t}}{\bar{m}_{DK,t} \bar{w}_{DK,t} \bar{h}_{DK,t}},$$

which is approximately the ratio of annual earnings between long-term CEE immigrants and natives, had the long-term immigrants only differed in terms of working hours, we can interpret the ratio as (approximately) the relative difference between the two groups due to differences in working hours.⁴ Similarly, I calculate ratios for the other two factors.

As previous studies have shown considerable heterogeneity within immigrant groups across the earnings distribution (Barrett et al. 2011; Butcher & DiNardo 2002; Chiswick et al. 2008), in the third step, I divide all workers into quartiles according to their place in the annual earnings distribution separately for natives and long-term CEE immigrants and for each year in all analyses. As illustrated below, the relative differences in overall earnings as well as in each of the components are then calculated by dividing the average of each of the four quartiles with the average in the corresponding quartile in the panel of native workers resulting in CEE/DK-ratios of

$$\frac{\bar{m}_{DK,t,q} \bar{w}_{DK,t,q} \bar{h}_{CEE,t,q}}{\bar{m}_{DK,t,q} \bar{w}_{DK,t,q} \bar{h}_{DK,t,q}},$$

where $q = 1, \dots, 4$ denotes quartiles, and e.g. $\bar{h}_{DK,t,q}$ is average monthly hours for native workers at time t in quartile q .

Using linear regression models, the fourth step of the analysis looks at different factors that might explain the earnings gap in absolute income levels between CEE immigrants and native Danish

⁴ The reason for dividing by the product of the averages rather than average earnings itself is that, in this way, the ratio becomes 1 if average monthly hours for long-term CEE immigrants and natives are identical.

workers in each of the three components. The regressions control for the effect of each factor separately and, finally, for all factors simultaneously. Income levels are in 2015 prices. Separate analyses for the 2007 and 2008 cohorts are performed as a robustness check for systematic differences depending on the year of arrival. The joint analyses are reported in the article while the separate analyses are not shown.⁵

3.3 Dependent variables

Since the aim of the article is to decompose the labour market integration process, I adopt four dependent variables: the overall labour market integration (Z) and its three components (m , w , h). In the section below, I elaborate on the analytical approach and the different dependent variables in the different analyses. In the first descriptive analyses, the dependent variable is the annual labour market income and employment stability, average hourly wage and average working time, each used as explanatory variables. In the regression models, the overall labour market integration, as well as each of the components, are studied as dependent variables in separate analyses. In order to study the differences across the earnings distribution, all analyses are performed separately for each of four earnings quartiles. The variables are briefly presented below.

Overall labour market integration (Z) – measures an individual's gross annual income from all paid employment relationships during a year, including labour market contributions, labour market supplement pension scheme contributions and employee benefits. *Employment stability (m)* – measures the total number of months of employment during the year defined as months in which the individual has had any form of official labour market income. Employment stability may be accumulated in multiple workplaces and employment spells. *Average monthly work(ing) h (b)* – measures the total number of hours worked during a year divided by the number of months of employment. By dividing the total number of registered hours worked during months of employment and not throughout the year, the variable takes into account the issue that some individuals may only work some periods of the year. *Average hourly wage (w)* – measures the individual's average hourly wage as annual labour market income divided by the total number of working hours during the year.

3.4 Independent variables

In the regression models on the gap between natives and immigrants, I include a number of independent variables. *Country of origin* – since the focus of the article is the native-immigrant earnings gap and the labour market integration process of CEE immigrants relative to native Danish workers, the focal

⁵ The analyses show that the 2007 cohort have a higher entry level than the 2008 cohort, which is likely due to the better overall economic conditions at the time of settlement, but also that the subsequent trends are very similar.

variable is a dummy variable taking the value of 1 for CEE workers and 0 for native Danish. As a consequence, the regression parameter related to this dummy variable will provide the DK-CEE gap in earnings or any of its three components, depending on the choice of dependent variable. The CEE group covers all persons with any of the following countries registered as their country of origin: Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia, Slovenia, Bulgaria and Romania. Native Danes covers all persons with Denmark as their registered country of origin.⁶ *Length of stay* – measures number of years since year of settlement. Year of settlement is defined as either the first year of settlement or first year of official labour market income without settlement, whichever comes first. In the analysis, the year of settlement is termed year 0 and is excluded from the analysis, since immigrants can arrive at any time during the year and it is impossible to adequately take differences in time of year of arrival into account in the measure of employment stability. *Primary industry of employment* – uses NACE 11 category classification of industries to identify the industry in which the individual earns the largest part of his or her annual income during the year. *Primary occupation of employment* – uses the ISCO08 10 category classification of occupations and identifies an individual's primary occupation as the occupation in which the individual earns the largest part of his annual income during the year.

The regressions control for two household characteristics found to affect both employment and wages (Warren 2004; O'Reilly et al. 1998), presence of a *dependent child (<16) in household* and the *employment status* of the partner (no partner in household, partner not employed, partner part-time employed, partner full-time employed). Finally, the regressions jointly control for two *union characteristics*, namely membership of a traditional (red) union and workplace union density in order to control for the impact of unions.

4 DESCRIPTIVE STATISTICS

In this section, I present key demographic and labour market characteristics of the long-term CEE immigrants and the comparable group of native Danish workers. Table 1 below shows that the long-term CEE immigrants in 2008 were, on average, aged 32 years, and that 32% of them were women. Since the panel of comparable native Danish workers was sampled to match the gender distribution within each age group in 2008, the values of the two groups match on these two variables.⁷ There are, additionally,

⁶ Country of origin is used instead of citizenship since I am interested in the differences between immigrants and natives. In the case of post-enlargement CEE immigrants, the difference between the two variables is negligible for at least two reasons: first, due to the relatively short period of time since settlement few immigrants have changed citizenship, second, as citizens in another EU country, CEE immigrants enjoy the right to equal treatment in Denmark and therefore stand to gain little by changing citizenship.

⁷ The one-year difference in average age is due to the fact that age groups were used to sample.

considerable differences between the immigrants' family situations in 2008 and 2015.

Table 1: Descriptive statistics long-term CEE immigrants and native Danish workers 2008-2015

	CEE 2008	CEE 2015	Natives 2008	Natives 2015
Average age (years)	32	39	33	40
Female	32%	32%	32%	32%
Dependent child in household (0-15 years old)	4%	39%	42%	55%
Average annual income (DKK)	228,735	310,514	347,546	426,264
<i>Partner status</i>				
No registered partner in Denmark	70%	49%	37%	32%
Unemployed partner	2%	5%	3%	3%
Part-time employed partner	9%	14%	11%	9%
Full-time employed partner	19%	32%	49%	55%
<i>Union characteristics</i>				
Share of members of traditional unions	32%	39%	82%	81%
Av. share of union members in workplace	41%	47%	55%	57%
Av. number of workplaces when in employment	1,07	1,09	1,09	1,07
<i>Occupation (ISCO) – only main occupations shown</i>				
Professionals	4%	7%	16%	27%
Technicians and associate professionals	4%	2%	25%	14%
Plant and machine operators and assemblers	27%	26%	8%	7%
Elementary occupations	46%	40%	8%	8%
<i>Industry (NACE) – only main industries shown</i>				
Manuf./mining/electricity/water supply, etc.	34%	37%	17%	16%
Wholesale and retail/transport/accom. food serv.	20%	22%	26%	24%
Professional, scient. and tech. activ./adm. activ.	24%	19%	9%	10%
Public adm. /edu./health and social work activ.	5%	7%	24%	26%
N	3.988	3.988	125.000	125.000

Source: Author's own calculations on Danish administrative register data

NB: In the table above, only the main occupations and industries are shown in the regression models.

While only 4% of the immigrants in 2008 had a registered dependent child in Denmark, by 2015, that number had grown to 39%. Likewise, the partnership situation had changed considerably for a large group of the long-term CEE immigrants, in 2008, 70% of the long-term immigrants had no registered partner in Denmark compared to 37% of the native Danish workers, by 2015, 49% of the long-term immigrants had no registered partner, compared to 32% of the native Danes. The considerable changes in the long-term CEE immigrants' family situations can, of course, cover at least two different scenarios, that they have found a partner or had a child in Denmark after their settlement, or that they, when they first arrived, had children or a partner in their home country and then later had their family join them. In terms of dependent children, data on the age of the children show that, in around a third of the cases, the children were born prior to the stayer's settlement and then subsequently joined the long-term immigrants, whereas about two-thirds of the children were born in Denmark. The fact that two-thirds of the long-term CEE immigrants had children after settling in Denmark suggests that they intend to stay, which would make it more likely for them to invest in human capital specific to Denmark (Dustmann & Görlach 2015; Friberg 2012), which, in turn, would make it more likely for them to improve their relative position over time.

Table 1 also shows a substantial increase in the average annual income in all quartiles among long-term CEE immigrants' increase from 2008 to 2015. An indication that long-term CEE immigrants might still have trouble catching up to native workers, however, is the low level of occupational progress and improvement in union characteristics over the seven-year period despite the fact that we would expect them to improve their language proficiency and knowledge about the host labour market. While the share of long-term CEE immigrants working in the three top occupations increased from 9% to 10%, the share is still relatively low, and, although the share of long-term CEE immigrants in elementary occupations has decreased by six percentage points, four out of ten CEE immigrants are still employed in elementary occupations. Among their native counterparts, only 8% work in elementary occupations, while, in 2015, 48% were employed in the three top occupations. Persistently low occupational attainment makes it unlikely for the immigrants to significantly reduce the native-immigrant earnings gap. As with long-term CEE immigrants' occupational attainment, there are only small changes in their industry distribution during the seven-year study period. As a result, the main differences between long-term CEE immigrants and native Danish workers both in 2008 and 2015 are not only CEE immigrants' overrepresentation in manufacturing and professional, scientific and technical activities, but also their underrepresentation in public administration and other parts of the public sector.

5. RESULTS

5.1 Decomposing the overall annual native-immigrant earnings gap

Figure 1 below shows that long-term CEE immigrants, over the course of the first seven years of settlement, on average, experience a three percentage point increase in the overall annual earnings gap. After seven years of settlement, long-term CEE immigrants, on average, earn 27% less than comparable native Danish workers, despite the fact that their absolute earnings increase over the period. As shown in Table 1, long-term CEE immigrants, on average, experience a considerable increase in their absolute annual earnings over the seven-year period. The increase in the overall earnings gap, however, shows that long-term CEE immigrants – despite the fact that they have acquired seven years of working experience specific to the host labour market and likely have improved their language proficiency and knowledge of the host labour market – consequently struggle to close the earnings gap.

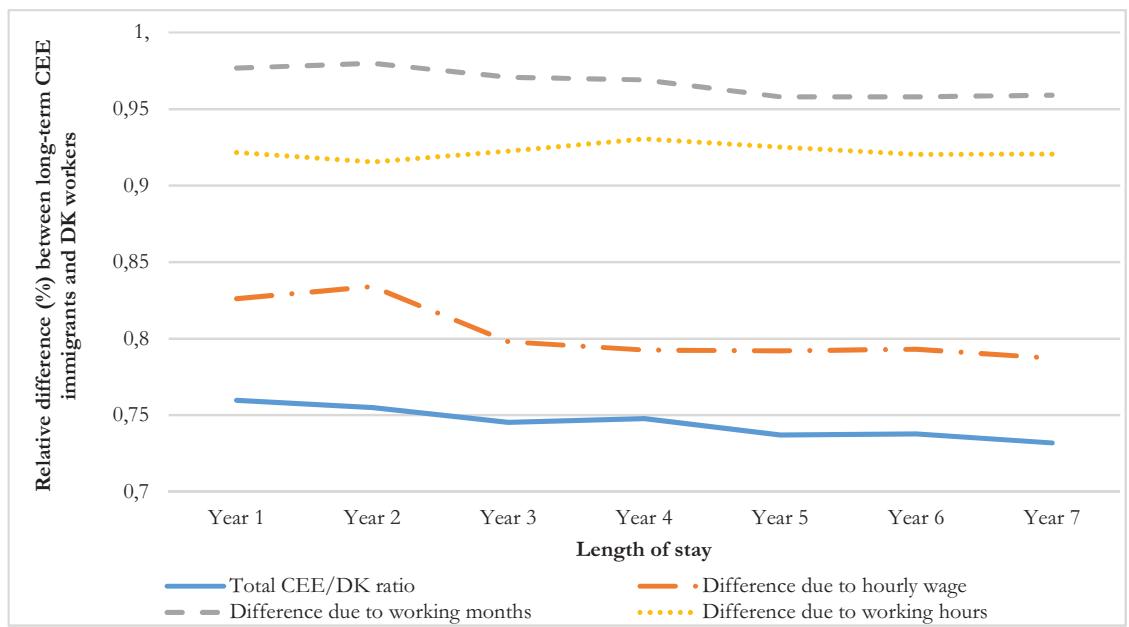
In addition to the overall annual earnings gap, Figure 1 shows how native-immigrant differences in the three components: hourly wages, employment stability and working hours, influence the overall earnings gap. Specifically, the figure shows what the earnings gap would be each year if native workers and long-term CEE immigrants, for example, on average worked the same number of hours and the same number of months during the year, but had different hourly wages. The decomposition of the average earnings gap clearly shows that native-immigrant differences in hourly wages are the main explanation for the overall annual earnings gap and for the increase in the overall earnings gap during the seven-year period. On average, long-term CEE immigrants' hourly wages are between 17% (year 2) and 21% lower than native Danish workers. The increase in the earnings gap due to differences in hourly wages covers up the fact that long-term CEE immigrants' average absolute hourly wages, on the one hand, increase over the seven-year period, but native Danish workers' hourly wages, on the other, increase even more. The development over the period suggests that native workers after a first year in 2008/2009 came out stronger after the Financial Crisis than their CEE counterparts. In the regression analyses, the article looks at what factors might explain this difference. It is important at this point to note that, since the comparable group of native workers were sampled based on the young age profile of the long-term CEE immigrants, the worsening of CEE immigrants' relative position is, in part, a consequence of the vast improvements among the native workers over the seven-year period due to their simultaneous labour market integration process.

While the differences in hourly wages have previously been found in other studies, the differences in working hours and working months and their consequences for the overall annual earnings gap of differences in, for example, employment flexibility, have not previously been studied. Figure 1

shows that, although differences in hourly wages explain most of the overall earnings gap, long-term CEE immigrants' lower number of working hours and their poorer employment stability, although to a lesser extent, contribute to the overall earnings gap. As with the hourly wages, long-term CEE immigrants improve the absolute number of working months and working hours during the period, which suggests an absolute improvement of their labour market integration. Since the overall labour market improves after the Financial Crisis, and thereby also the absolute position of their native counterparts, the relative position of the long-term CEE immigrants, however, worsens.

In summary, long-term CEE immigrants are more likely than native Danish workers not to be in full-time year round employment. As a result, part of the overall annual native-immigrant earnings gap derives from long-term CEE immigrants' lower number of working hours and poorer employment stability, underlining the need to decompose the earnings gap in order to better understand the mechanisms. The main explanation for the average overall annual earnings gap, however, is the difference in hourly wages.

Figure 1: Relative earnings gap between long-term CEE immigrants and native Danish workers due to differences in hourly wages, working months and working hours (%)



Source: Author's own calculation on Danish administrative register data

5.2 Decomposing the earnings gap between long-term CEE immigrants and native Danish workers across the earnings distribution

As previous studies have shown considerable heterogeneity within immigrant groups across the earnings distribution (Barrett et al. 2011; Butcher & DiNardo 2002; Chiswick et al. 2008), below, the earnings gap is decomposed in each of four annual earnings quartiles. The quartiles are defined separately for long-term CEE immigrants and native workers for each year. A person might therefore be part of the bottom quartile in one year and part of another quartile the next due to changes either in his or her own annual earnings or in the overall distribution of annual earnings. The quartile values express the average overall annual earnings gaps between long-term CEE immigrants and native workers in each quartile in each year concerned as well as the size of the earnings gaps when controlling for relative differences in each of the three components.

Figures 2-5 show that the size of the overall annual earnings gap differs across the earnings distribution and across the period of study. At the bottom and the top of the earnings distribution, the earnings gap starts out at around 26% only to widen by around five percentage points over the seven-year period. At the top of the earnings distribution, long-term CEE immigrants experience an unbroken growth in absolute earnings over the period; however, since the absolute earnings growth among native workers at the top is even greater, the earnings gap widens, suggesting the existence of a glass ceiling. The improvement in long-term CEE immigrants' earnings does not therefore seem to be a result of a relative improvement of their labour market position, but instead the result of a general improvement in the labour market. The widening of the earnings gap at the top and bottom quartiles suggests a polarization where the long-term CEE immigrants at the bottom, similar to their temporary compatriots, become stuck long-term in the more precarious jobs. At the top, the earnings are logically higher than at the bottom, but the long-term CEE immigrants are unable over time to keep up with their native counterparts at the top.

While the native-immigrant earnings gap widens more or less continuously over the seven-year period at the bottom and top quartiles, the picture is somewhat different in the two middle quartiles. In the second quartile, the earnings gap narrows, albeit only slightly, throughout the seven years, after a first small widening the earnings gap narrows between year 2 and year 4 in the third quartile only to then widen again. The improvement starts from a relatively low level, which means that, in a situation where the average earnings among native workers decreases or stagnates, even small increases in long-term CEE immigrants' earnings will result in a narrowing of the earnings gap. The analysis so far shows a mixed picture of convergence and divergence across the earnings distribution that underlines the need to study not only average native-immigrant earnings gaps, but also, as becomes evident below, the results of the

decomposition of the earnings gap in each of the four quartiles further underlines the need to study the mechanisms underlying the earnings gaps across the earnings distribution.

Figures 2-5 show that, in the three top quartiles when comparing long-term CEE immigrants and natives in their respective quartiles, the main factor explaining the earnings gap is differences in hourly wages, confirming the results of the average overall annual earnings gap above. The relative differences due to differences in hourly wages range between 12% in the second quartile in year 1 and almost 30% in the top quartile in year 7. In the bottom quartile, long-term CEE immigrants even outperform their native counterparts in terms of hourly wages in year 2. The relatively smaller native-CEE immigrant differences in hourly wages at the bottom of the earnings distribution are likely the result of the relatively high wage floors in low-wage industries in Denmark because of collective bargaining and the standard rate system (normallønssystemet) (Ilsøe et al. 2017).

5.2.1 Decomposing the top quartile

The decomposition across the earnings distribution shows that, in the top quartile, the overall earnings gap, as well as the widening of it, is almost exclusively a consequence of differences in hourly wages and an increase in these. This is a consequence of the fact that long-term CEE immigrants and native Danish workers alike at the top are all in year-round full-time employment. This is, in turn, a logical consequence of the way the quartiles are defined using the annual earnings so that, because of the small wage dispersion, only individuals in full-time stable employment earn sufficient amounts to end up in the top quartile. The situation at the top is therefore, on the one hand, one of stable full-time employment, around eight out of ten of the long-term CEE immigrants at the top have only one workplace during the year. However, on the other, the long-term CEE immigrants at the top seem to struggle breaking through to the jobs with the highest hourly wages even as time passes, which is in line with the limited change in the distribution across occupations seen in Table 1 above. As there are no considerable native-immigrant differences in working hours and employment stability at the top of the earnings distribution, it seems that the previous focus on hourly wages in the earnings gap literature for this segment renders a more or less complete picture of the overall earnings gap.

5.2.2 Decomposing the mid-quartiles

Moving down the earnings distribution, the decomposition, however, reveals that an increasing part of the overall annual earnings gap is explained by differences not just in hourly wages, but also in working hours and employment stability. Compared to the long-term CEE immigrants at the top, CEE immigrants in the second and third quartiles, on average, struggle more finding full-time employment

over the first seven years of settlement. Both quartiles of long-term CEE immigrants increase the average absolute number of working hours more or less continuously from year 1 until year 5. From year 5 and onwards, however, the number of working hours stabilises in the second quartile, at around 89% of full-time employment. In the third quartile, the number of working hours drop slightly from year 5 until year 7. During the same period, native workers experience a slight increase in the number of working hours, resulting in an initial narrowing of the earnings gap due to differences in working hours. While long-term CEE immigrants in the second and third quartiles trail their native counterparts in terms of working hours, they match or outperform them in employment stability. A closer look at long-term CEE immigrants' number of workplaces across the seven-year period, however, reveals a gradual stabilising process, where the overall increase in the absolute number of working hours occurs alongside an increase in the number of long-term immigrants, who only have one workplace during the year. While 60% of the long-term immigrants in the second quartile and 72% in the third quartile had only one workplace in their first year, the shares had increased to 78% and 82% in the seventh year. The combination of an increase in the total number of working hours and an overall drop in the number of workplaces indicates a form of stabilisation of their absolute labour market position that the exclusive focus on wages is unable to detect.

5.2.3 Bottom quartile

Moving to the bottom of the earnings distribution, the assumption of full-time year-round employment becomes even more problematic for long-term CEE immigrants and native Danish workers alike. In 2008, the CEE immigrants in the bottom quartile worked, on average, around 70% of a full-time position and, by 2015, the share had dropped to around 67%. Contrary to their hourly wages, CEE immigrants in the bottom quartile experience not only a drop in working hours relative to native workers, but also an absolute drop despite continuously accumulating host-country-specific human capital. As with the long-term CEE immigrants further up the earnings distribution, a look at the number of workplaces reveals a process where increasing numbers of long-term CEE immigrants at the bottom have, over time, just one workplace during the year (57% in year 1 and 71% in year 7).

The relatively low average number of working hours may, of course, be the result of a voluntary choice of part-time employment. The combination of a consistent lack of employment stability in the form of year-round employment and a consistently, albeit decreasingly, large share of long-term CEE immigrants with multiple workplaces, however, indicates an involuntary pattern of poor overall attachment. Although native workers in the bottom quartile also, on average, worked considerably less than full-time (81% in 2008 and 79% in 2015) the decomposition clearly shows that differences in working hours between long-

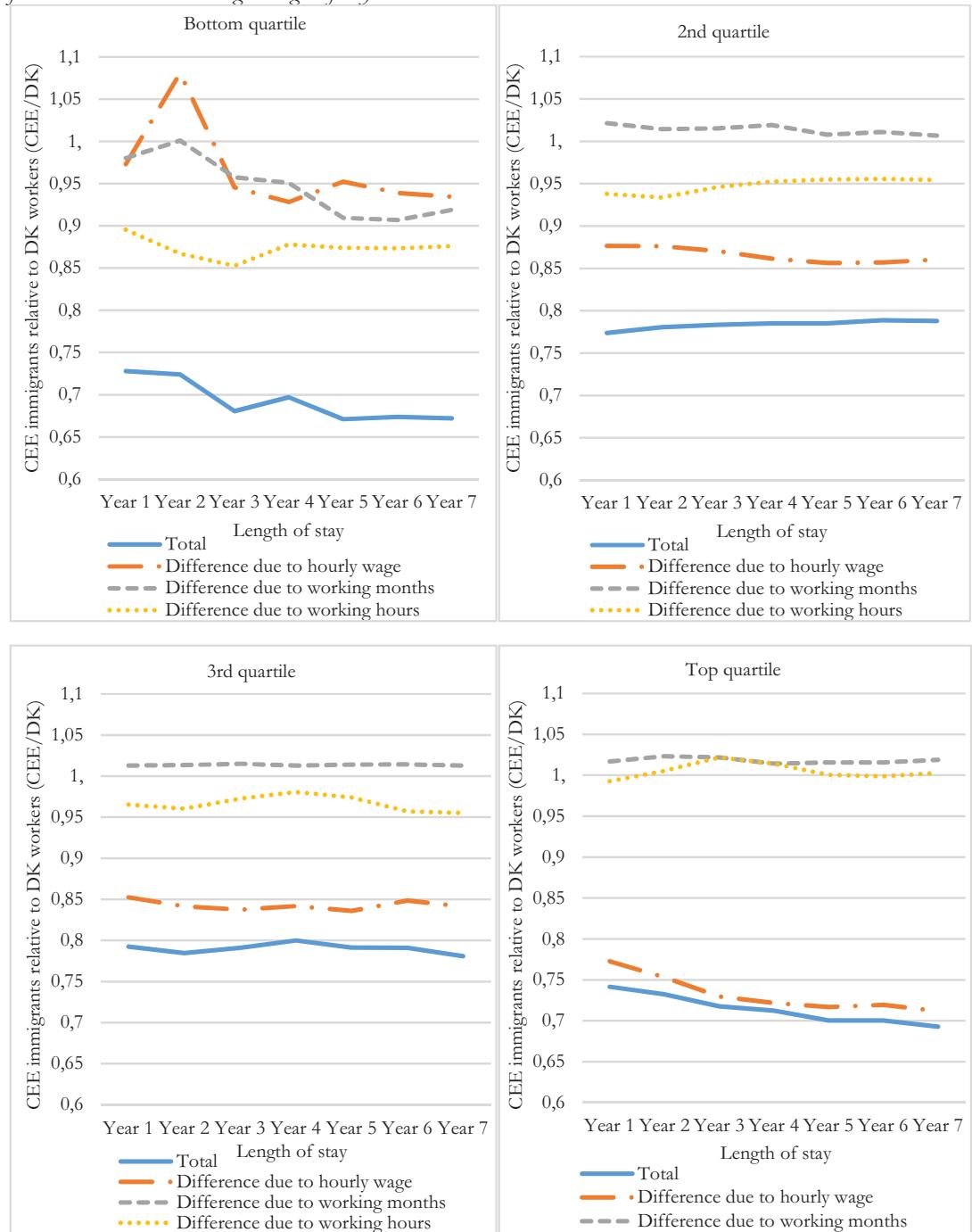
term CEE immigrants and native workers contributes to an overall earnings gap of between 10% and 14%. While long-term CEE immigrants in the bottom quartile might voluntarily have chosen to work part-time e.g. because of caring responsibilities, given the economic motives of most CEE immigrants (Felbo-Kolding 2016) it seems unlikely that long-term CEE immigrants in the bottom quartile would be more prone to opt for part-time employment than native counterparts in the bottom quartile. In the regressions below, I focus on the factors that influence both the overall earnings gap and the differences in each of the three components.

5.3 Factors influencing the overall earnings gap and the individual components

A number of factors have previously been found to explain the overall earnings gap between natives and CEE immigrants, however, so far no single study has been able to compare the factors that affect the differences in each of the three components as well as the overall earnings gap. Only by studying each of the components separately for the top, middle and bottom quartiles is it possible to provide a more nuanced picture of the differences in the factors affecting labour market integration for different groups of immigrants, depending on their place in the earnings distribution.

Figures 6-9 represent the results of a series of linear regression models performed for the overall annual earnings gap for all long-term CEE immigrants as well as for each of the components for each year of length of stay. The independent variables are introduced separately so that each analysis is conducted separately controlling for one variable at a time, in addition, each figure include a line representing the raw actual earnings gap as well as one representing the difference when controlling for all variables at the same time. While the figures from the decomposition showed long-term CEE immigrants' performance relative to native workers (CEE/DK) the figures presenting the regression results show the difference in relative levels (DK-CEE) in each year controlling for the variable. In the case of the overall earnings gap and the differences in hourly wages, the native-CEE difference has been standardised to 2015 prices. The focus in the presentation below will be on the factors explaining the overall earnings gap as well as the factors explaining the differences in each of the components found above to be important in each of the quartiles. The results of the regressions analyses for each of the four quartiles are displayed in figures in the appendix but are presented in the text and compared to the overall trends.

Figures 2-5: Decomposing the difference (%) between average in CEE quartiles relative to averages in respective quartile for Danish workers according to length of stay



Source: Author's own calculations on Danish administrative register data

5.3.1 Factors affecting the overall earning gap

The decomposition showed that the main explanation for the overall earnings gap is not only differences in hourly wages, but also that moving down the earnings distribution especially differences in working hours and to a lesser extent employment stability play an increasing role. At the aggregate level, Figures 6-9 show that differences in occupational distribution i.e. the jobs immigrants and native workers occupy explain the largest part of the overall DK-CEE stayer earnings gap as well as the differences in each of the components. In the case of the overall earnings gap differences in occupational attainment, explain around 60%-70% of the overall earnings gap. The figures reveal that although differences in occupational attainment are the primary explanation, across the components there are differences in the factors explaining DK-CEE differences. Differences in union characteristics (controlling for union membership and union density at the workplace) play almost no role in explaining either the overall earnings gap or the differences in hourly wages. It does, however, play a considerable role in explaining the differences in working months in the first years of migration and although smaller also a role in terms of working hours. The importance of differences in union characteristics seem to confirm the overall take away from the figures, namely that CEE immigrants especially in the bottom of the earnings distribution struggle to break through to more stable jobs, which will often be found in unionised workplaces.

5.3.2 Factors affecting the differences in the components in the top quartile

Focusing in on the quartiles the picture of what explains the overall DK-CEE earnings gap becomes less straightforward. As with the initial decomposition, the picture at the top fits the findings of the role of occupational attainment found at the aggregate level well. Controlling for differences in occupational attainment reduces the earnings gap by more than 40%, while the full model reduces the gap by up to 47%. Additionally the regression model for hourly wages at the top quartile, the component found in the initial decomposition to almost exclusively contribute to the overall earnings gap, confirm that occupational attainment is the primary driver of differences reducing the differences by around 50%. Looking closer at the occupational distribution reveals that while 70-80% of the native workers in the top quartile occupy one of the top three occupations the same is true for 20-25% of the long-term CEE immigrants, meanwhile around 17% of the CEE immigrants consistently across the seven-year period work in elementary occupations while the same is true for no more than 3% of the native workers. The results of the regression models also show that during the first three years of stay long-term CEE immigrants with partners and children have a different employment pattern than comparable native workers, thereafter, however, these differences diminish. While a considerable earnings gap remains unexplained at the top, the regression models show that long-term CEE immigrants at the top although

able to find stable full-time employment more than anything struggle to break through to the high paying jobs indicating a form of glass ceiling.

5.3.3 Factors affecting the differences in the components in the mid-quartiles

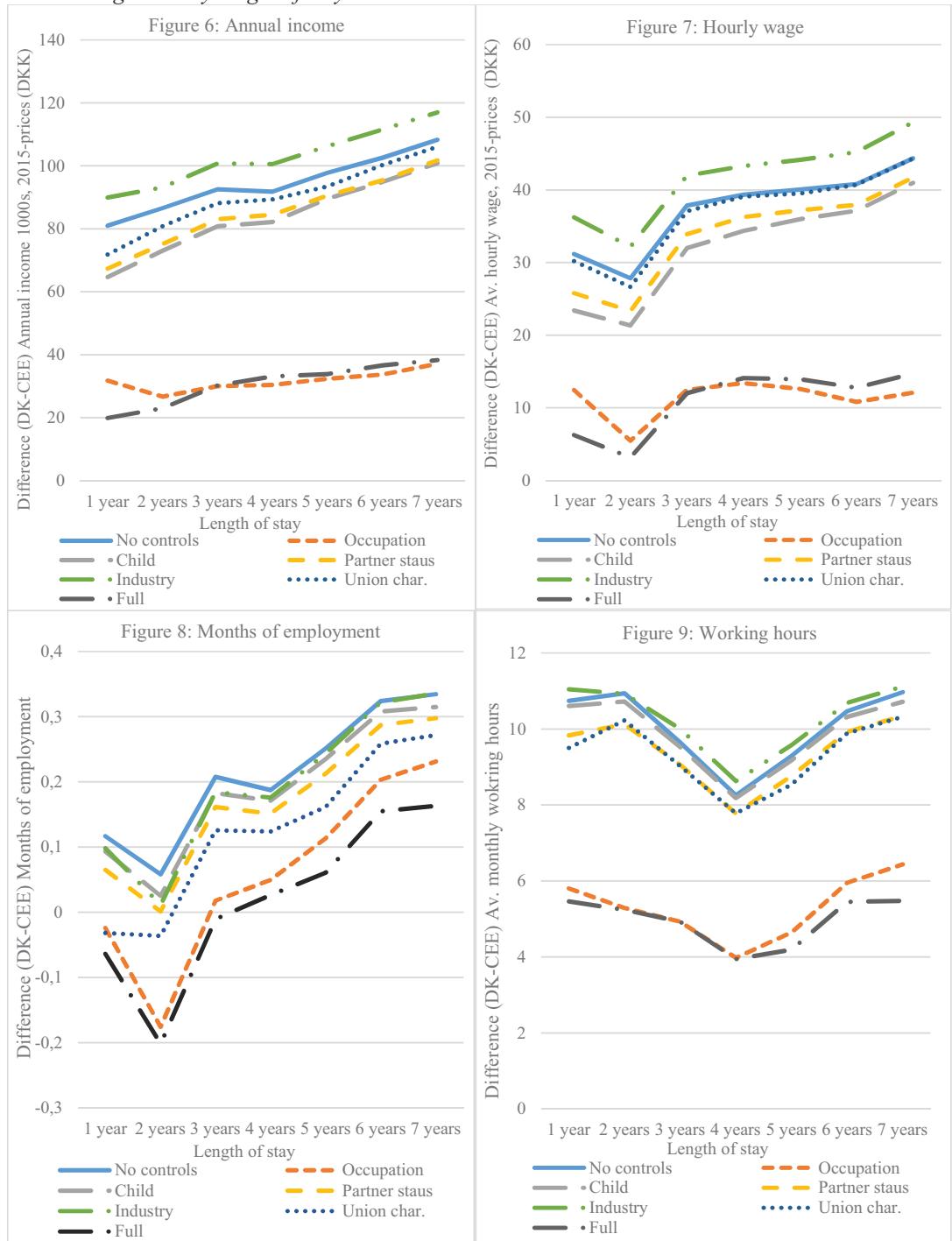
Moving down the earnings distribution, the factors controlled for in the regression model overall lack explanatory power. As shown above, long-term CEE immigrants in the second and third (mid-) quartile have an overall earnings gap of up to 25%, however, controlling for all the factors in the full models only reduces the earnings gap by 3-5%, leaving an overall gap of around 20% unexplained. While differences in occupational attainment is the single most important factor in explaining the overall earnings gap in the mid-quartiles, controlling for it at no point reduces the earnings gap by more than 2-4%. On the surface, it thereby seems that long-term CEE immigrants in the mid-quartiles have attained almost occupational parity with their native counterparts. Looking closer at the occupational distribution among long-term CEE immigrants and native workers, however, reveals that this is by no means the case. While more than half of all CEE immigrants in the second quartile in 2015 worked in elementary occupations and only 3% in the top three occupations, 9% of the native workers in the second quartile worked in elementary occupations, and almost 35% in the top three occupations. What happens is that long-term CEE immigrants are sorted into elementary occupations to a much greater extent; however, the very small wage dispersion on the Danish labour market means that it does not show in the figures.

Focusing on the differences in hourly wages and working time, the two components found above to account for the overall earnings gap, leave an even more complex picture of what explains the DK-CEE differences. While controlling for occupational attainment during the first three years of settlement increases differences in hourly wages by up to 5%, only to then reduce it by up to 8% in the third quartile by year 7, the picture is the complete opposite in terms of working hours. Here, in the first year of settlement, controlling for occupational attainment reduces the differences by 10% in the third quartile; however, by year 7 the effect has reversed, and controlling for occupational attainment now increases the difference by 15%. The role of occupational attainment in explaining native-CEE differences, it seems, varies significantly across the earnings distribution. Additionally, the regression models show that, for the CEE immigrants in the mid-quartiles, what explains their earnings gap is something other than that which is accounted for in the regression models. These unexplained earnings gaps are often attributed to different forms of direct or indirect employer discrimination, that result in immigrants being paid less than natives in otherwise similar occupations.

5.3.4 Factors affecting the differences in components in the bottom quartile

Moving to the bottom quartile, the decomposition above found a considerably more complex picture of the components contributing to the overall earnings gap. While differences in hourly wages and employment stability during the first three years contributed little or even positively to the overall earnings gap, differences in working hours contributed negatively throughout the seven-year period. In order to explain the overall earnings gap, it is therefore necessary to focus on what explains the overall earnings gap as well as the differences in each of the components. The regression models above showed that differences in union characteristics played no role in the other three quartiles; however, in the bottom quartile it appears as the most important factor in explaining the overall earnings gap. Differences in union characteristics (i.e. union density at the workplace and whether the individual is a union member) are especially important during the first years of settlement, where they explain as much as 25% of the overall earnings gap in year 1. Looking closer at the three components confirms the role of union characteristics during the first years of settlement. Controlling for union characteristics reduces the gap in employment stability by more than 50% during the first two years; while it reduces the wage gap in year 1 by 35%, the effect on the hours gap is, however, only around 9%. As the annual earnings gap increases, the explanatory power of union characteristics in explaining the overall earnings, employment stability and hours gap drop overall to around 10%. In the case of the wage gap, however, it is relatively consistently explained, at around 20-30%. Although differences in union characteristics come out as the main factor explaining the overall earnings gap, occupational differences also stand out when looking closer at the components.

Figures 6-9: Differences (DK-CEE) in annual income, average hourly wage, months of employment and working hours by length of stay



Source: Author's own calculations on Danish administrative register data

6 DISCUSSION AND CONCLUSION

In this article, I have investigated how native-immigrant differences in hourly wages, working hours and employment stability contribute to the overall native-immigrant earnings gap. At an overall level, the results support the findings of previous studies that a considerable earnings gap exists between native workers and post-enlargement CEE immigrants even after more than seven years of settlement (Bratsberg et al. 2014; Friberg 2015). Despite improvements in CEE immigrants' absolute earnings, the earnings gap increases by around 4% over the seven-year study period. While most studies have focused exclusively on either annual earnings or hourly wages, I extend the earnings gap literature by focusing on the effect of native-immigrant differences in working hours and employment stability as well as in hourly wages.

The results show that, at the overall aggregate level, the earnings gap is primarily explained by differences in hourly wages and only to a lesser extent by differences in working hours. The figures thereby confirm the overall differences in hourly wages between natives and CEE immigrants found in previous studies (Clarke & Drinkwater 2008; Dustmann et al. 2010) as well as Barrett et al.'s specific finding that differences in hourly wages are greatest at the top (2012). Decomposing the earnings gap across the earnings distribution, however, reveals that the contribution of differences in hourly wages to the overall earnings gap differs considerably. While the earnings gap between long-term CEE immigrants and natives at the top is almost entirely explained by differences in hourly wages, moving down the distribution, the effect of differences in working hours and employment stability increases. At the bottom, long-term CEE immigrants trail their native counterparts in terms of lower hourly wages after the first few years, but even more so in terms of securing working hours and stable employment.

The results suggest that, in the bottom of the earnings distribution, a group of long-term CEE immigrants, despite years of host-country-specific working experience, are unable to find stable employment. They seem, even more so than their native counterparts at the bottom, to be stuck in precarious jobs that are normally associated with short-term labour immigrants (Piore 1979). The results suggest that a segment of long-term CEE immigrants struggle to make the move from the 'any job' to the 'better job' (Parutis 2014). It thereby seems that not just short-term immigrants, as found in previous studies (Creese & Wiebe 2009; Kalleberg 2009; Parutis 2014; Piore 1979), but also a significant segment of the long-term CEE immigrants, struggle to find full-time employment. Previous studies suggest that a large share of the CEE immigrants involuntarily have part-time jobs (Hopkins & Dawson 2016). The concurrent differences in hourly wages and working hours among long-term CEE

immigrants at the bottom indicate that their struggles with obtaining stable employment might have a signalling effect towards potential employers that result in a more general precariousness (Fuller 2015).

The differences in working hours and employment stability might also be due to different trade-offs. Khattab & Fox (2016) found that, while natives in periods of unemployment rely on unemployment benefits, CEE immigrants were more likely to seek forms of employment for which they were overqualified. These jobs might result in a higher overall employment levels, the positions, however, are also more likely to be precarious, with lower employment stability, lower pay and fewer working hours. There are, however, also elements indicating that long-term CEE immigrants ubiquitously experience a stabilisation of their absolute labour market position as the number of long-term CEE immigrants with a single workplace increases in all quartiles over the seven-year period. Since native workers improve even more, this absolute improvement, however, does not show in the CEE immigrants' relative position.

The results of the regression analyses showed that, while occupational segmentation explained most of both the overall earnings gap and the gap in hourly wages at the top of the earnings distribution, the picture was much murkier further down the distribution. In the mid-quartiles, the regression models showed only a very limited effect on the earnings gap of controlling for occupational distribution, on the surface suggesting that CEE immigrants in this part of the earnings distribution had achieved occupational parity. A closer look at the occupational distribution of the long-term CEE immigrants and native counterparts in the mid-quartiles, however, not only revealed considerable labour market segmentation, but also showed that the highly compressed wage structure on the Danish labour market yielded limited differences in earnings across the occupational hierarchy in this part of the earnings distribution. In labour markets with a greater wage dispersion, similar segmentation would likely have yielded much greater differences. In the bottom quartile, differences in union characteristics explained much of the differences in both hourly wages and employment stability, suggesting that the bottom segment of long-term CEE immigrants are unable to move into stable jobs that are often found in highly unionised workplaces (Card 1996). It thereby seems that CEE immigrants across the earnings distribution are sorted into less advantageous segments of the labour market than their native counterparts. At the top, this suggests a glass ceiling, which might be due to a lack of recognition of qualifications obtained abroad, as found in previous studies for Denmark and, consequently, a low return to this education (Nielsen 2011) or discrimination as found in previous studies. At the bottom, this suggests sticky floors, as also found by Lehmer and Ludsteck for CEE immigrants in Germany (2011). However, the decomposition has clearly shown that the sticky floors consist of jobs that are not just less well paid than the jobs their native counterparts at the bottom occupy, but also more unstable in

workplaces characterised by lower unionisation.

Finally, and importantly, the results of the regression analyses showed that, even at the top where controlling for occupational attainment explained the most, a significant unexplained native-immigrant earnings gap remained. Although it has not been possible in this study to control for the effect of differences in educational qualifications, based on previous studies it seems highly likely that a significant part of the earnings gap would remain, as CEE immigrants have found the transfer of human capital troublesome (Dustmann et al. 2010; Fox et al. 2015). Other studies have pointed out that this remaining native-immigrant earnings gap can be attributed to different more or less obvious forms of discrimination (e.g. Phelps 1972). A number of studies have shown that employers' more or less conscious hiring preferences result in ethnic hierarchies (Friberg & Midtbøen 2017; Waldinger & Lichter 2003). In these employer perceptions, CEE immigrants are thought to be more attractive than other immigrants, due to employers' perception of their 'superior' work ethic (Dawson et al. 2017). This perception, on the one hand, helps (especially short-term) CEE immigrants gain a foothold in the labour market, however, on the other, in light of the struggles experienced by long-term CEE immigrants as documented in this study, it seems plausible that the perception of their superior suitability for certain often precarious jobs also entails a perception of lower suitability for other 'better jobs'.

On a methodological level, the study poses a number of challenges. The simultaneous improvement in absolute earnings and deterioration in relative position found in the results highlights the importance of the sampling criteria when using native-immigrant earnings gaps as a proxy for labour market integration. Since earnings gap logically indicates a difference between two or more groups, the sampling of the 'control' group becomes extremely important for the results. This study only includes workers, immigrants and natives alike, who were of working age (18-65 years), active on the labour market throughout each year, and not active students at any point. Following these overall selection criteria, the native 'control' group was sampled based on the gender and age group distribution among the long-term CEE immigrants. Since the long-term CEE immigrants are, on average, considerably younger than their native counterparts on the labour market, this criteria meant that a 'control' group of relatively young native workers, not yet 'established' on the labour market was sampled. This is illustrated by the high degree of occupational mobility among native workers during the study period. Had the long-term CEE immigrants been compared to the entire Danish workforce including a large group of established 'older' workers the earnings gap would, on the one hand, most likely have been larger at the beginning, but would, on the other, likely have narrowed the following years, thereby 'experiencing' an improvement of their relative position.

On an overall level, the results of the decomposition question the use of hourly wages as a

single measure of labour market integration in the earnings gap literature by showing how a unilateral focus on earnings and hourly wages underestimates the challenges faced by, in particular, long-term CEE immigrants at the bottom of the earnings distribution. The results confirmed both the importance of differences in hourly wages and the role played by occupational segmentation in generating them. The decomposition, however, also showed that, in the lower part of the earnings distribution, differences in working hours and employment stability also contributed considerably to the earnings gap. This clearly illustrates the problems, with the conclusion that could easily be drawn from the standard earnings gap literature that, if only immigrants received the same hourly wages as their native counterparts, then the earnings gap would disappear.

This realisation has at least three implications. First, future research on native-immigrant earnings gaps needs to find ways to take the role of working hours and employment stability into consideration. Second, the fact that the dynamics generating the earnings gap differ considerably across the earnings distribution, suggests that it is necessary to distinguish between the experience of different groups in order to be able to not only say that an earnings gap exists or if it is changing, but also why. To this end, future studies need to study the different integration dynamics of immigrant groups at the top, middle and bottom of the earnings distribution. Third, the labour market integration process of post-enlargement long-term CEE immigrants is less than straightforward, despite their legal status as equal citizens of the European Union. This suggests that, while Western European Union states may expect CEE immigrants to alleviate some of their labour shortages in the lower parts of the labour market, employers' hiring preferences may make it less than straightforward for CEE immigrants to alleviate shortages in the more skilled parts of the labour market. The future will show whether employers' will, over time, change their perceptions of CEE immigrants, enabling them to significantly improve their labour market position.

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APPENDIX

Figures 10-13: Difference (DK-CEE) annual income in 1000s, 2015-prices (DKK) in respective quartiles according to length of stay

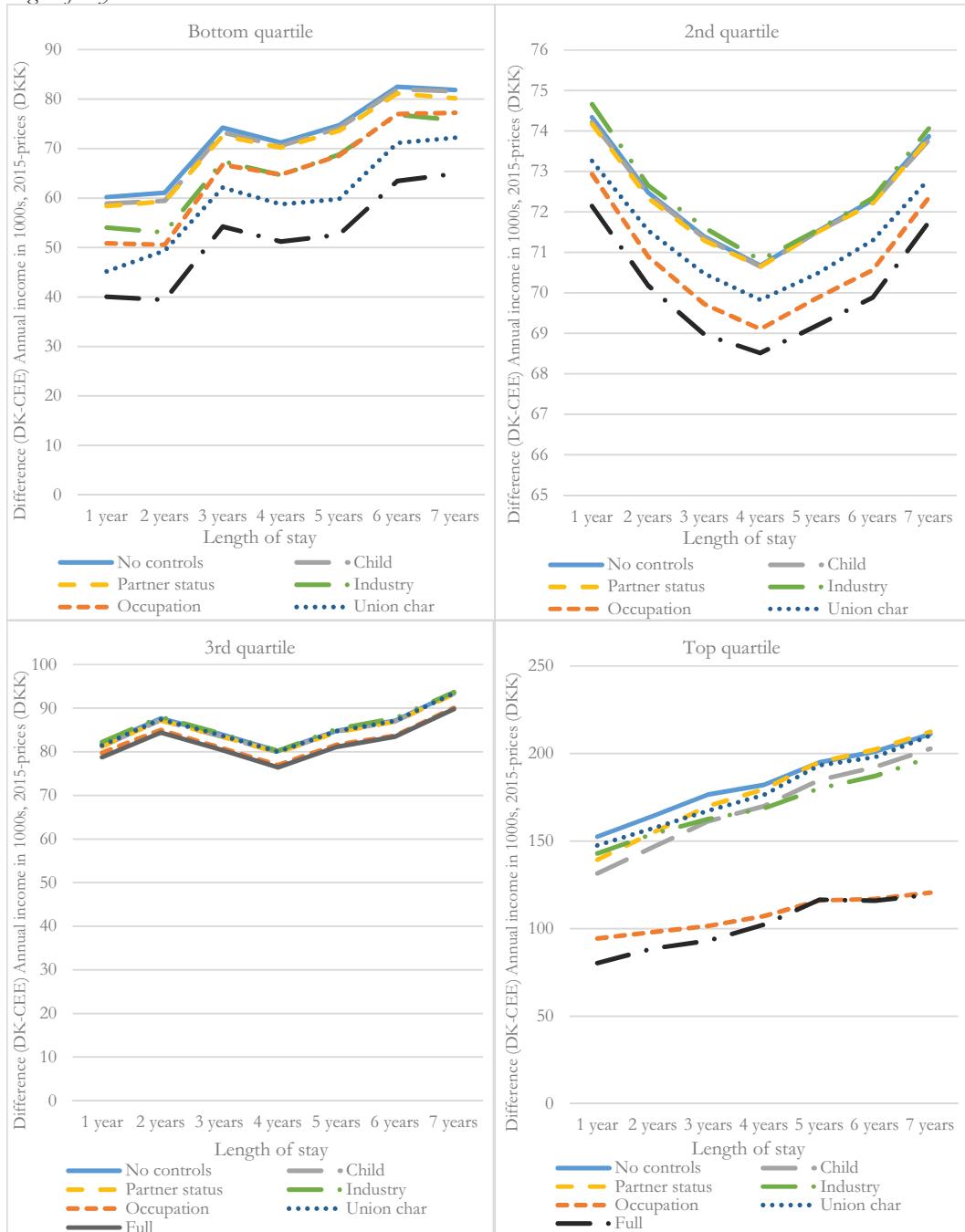


Figure 14-17: Difference (DK-CEE) average hourly wage, 2015-prices in respective quartiles according to length of stay

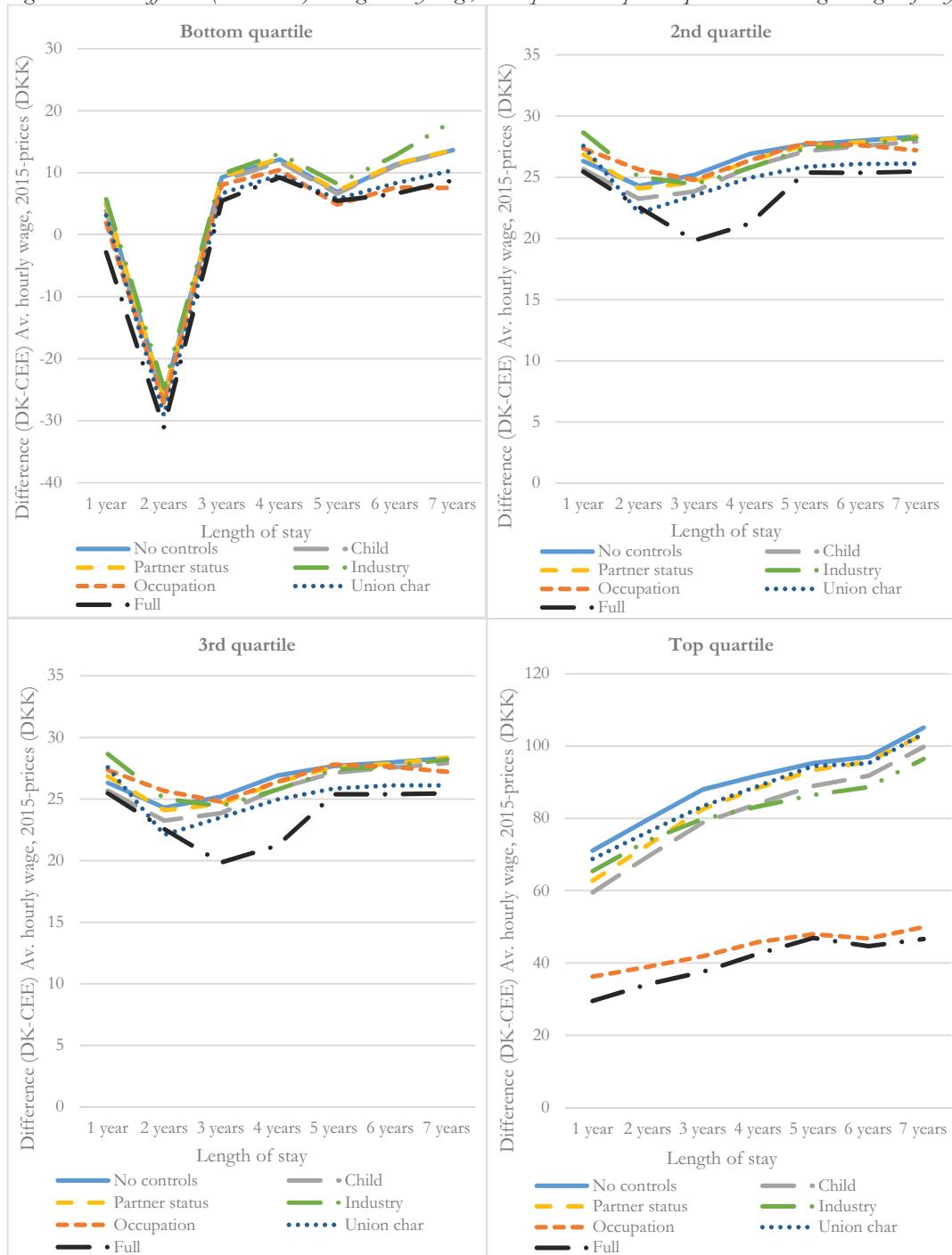


Figure 18-21: Difference (DK-CEE) months of employment in respective quartiles according to length of stay

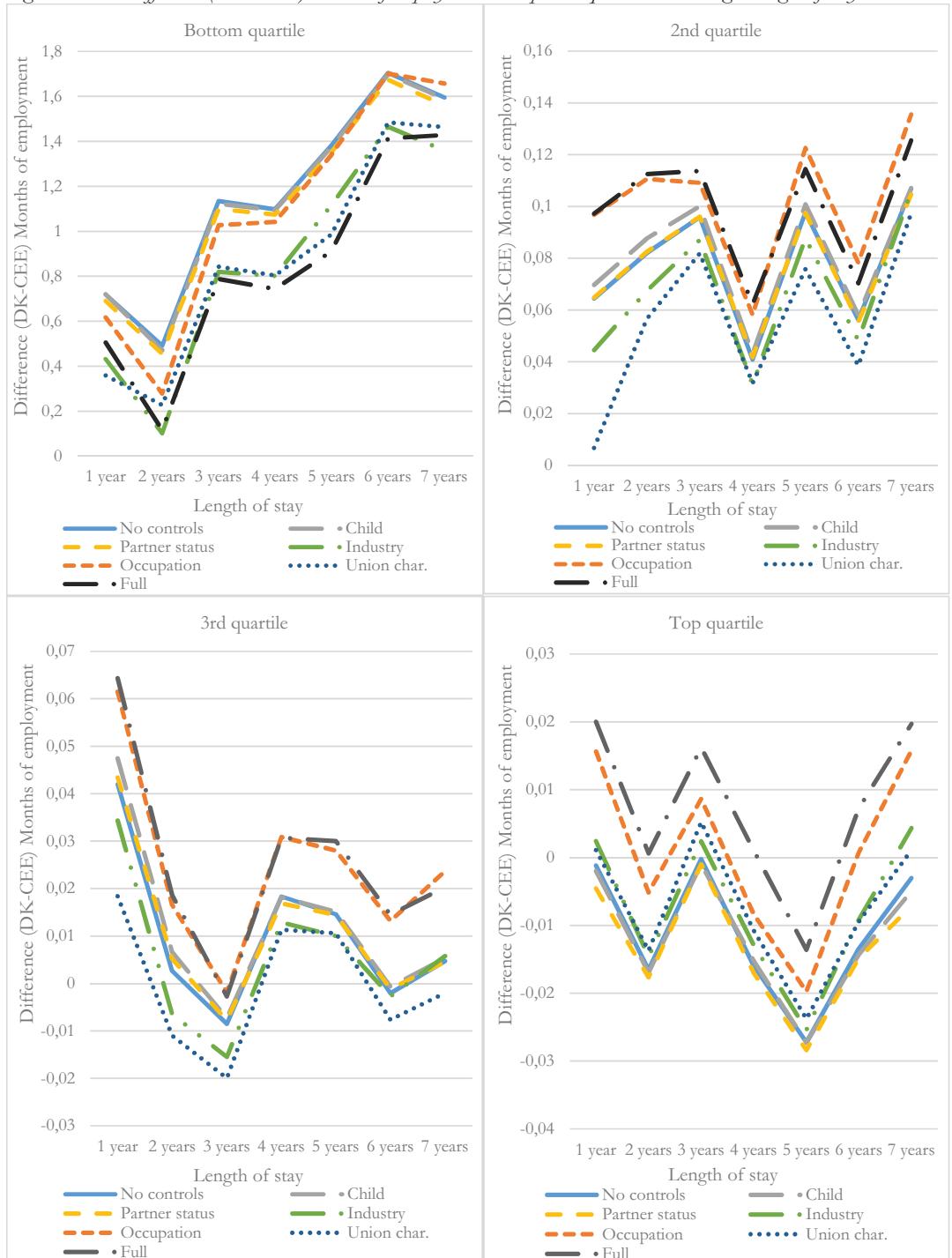
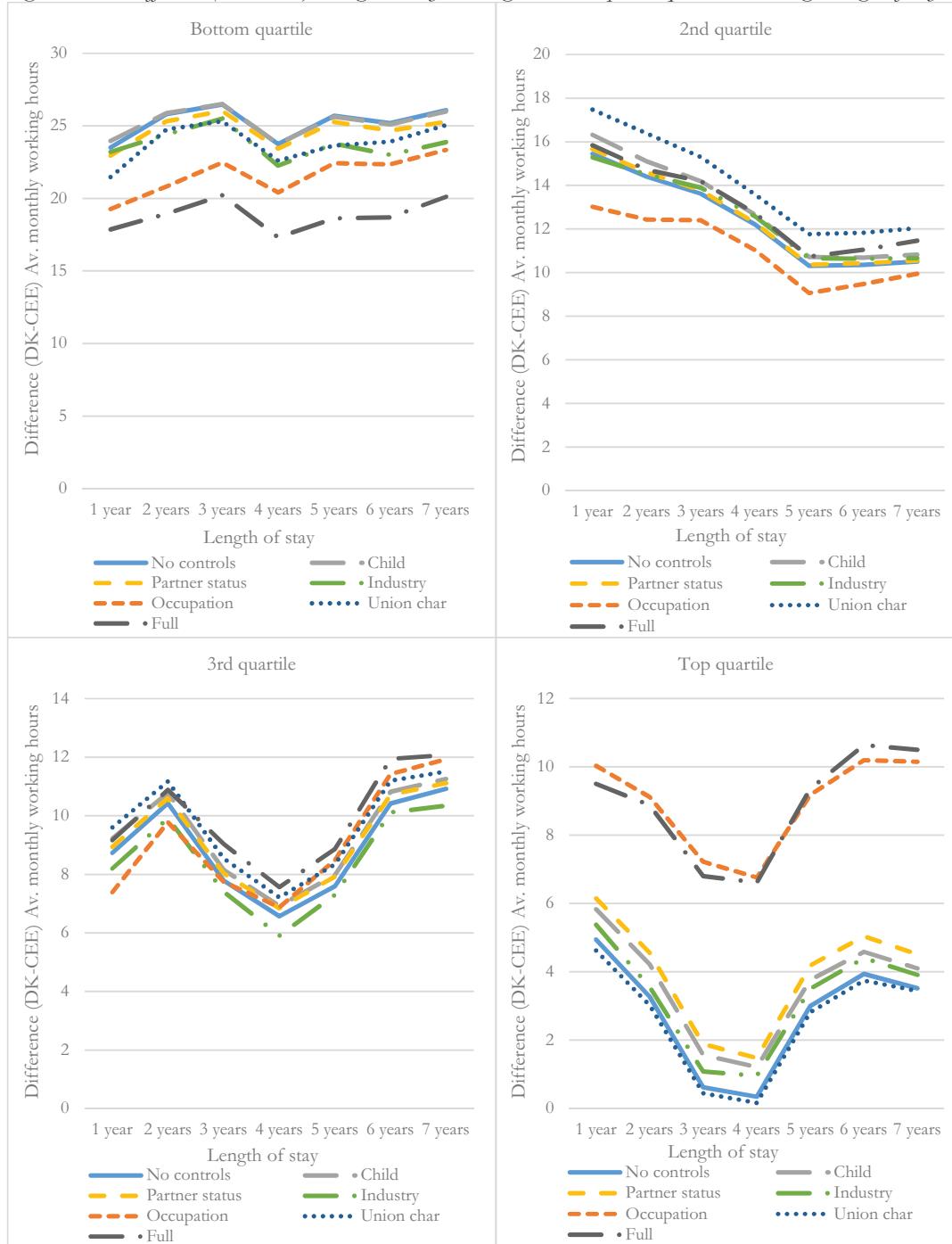


Figure 22-25: Difference (DK-CEE) average monthly working hours in respective quartiles according to length of stay



DANSK RESUMÉ

I løbet af de seneste årtier er integrationen mellem arbejdsmarkedet verden over, og især inden for den Europæiske Union (EU), steget, og immigrationen af arbejdskraft over grænser stiller de nationale arbejdsmarkedssystemer over for nye udfordringer. Især migrationsstrømme fra Central- og Østeuropa og lande uden for EU stiller de vesteuropæiske lande over for nye udfordringer – og muligheder. På den positive side kan arbejdskraftimmigranter være med til at imødekomme arbejdsgiveres behov for arbejdskraft og derved positivt bidrage til statsbudgettet gennem beskatning af virksomheders overskud og lønmodtagernes lønindkomst. På den negative side underminerer indvandringen statsbudgettet og den enkelte immigrants sociale integration og velfærd, hvis ikke immigranterne bliver integreret tilstrækkeligt på arbejdsmarkedet.

I de sidste to til tre årtier har arbejdsmarkederne i hele den vestlige verden oplevet en overordnet fleksibiliseringssproces, der har medført en generel stigning i omfanget af atypiske ansættelsesformer. Som en konsekvens heraf antager arbejdsmarksintegration i øjeblikket en lang række former. Gennem introduktionen og fire separate artikler bidrager denne afhandling til den bredere litteratur om immigranters arbejdsmarksintegration ved at understrege nødvendigheden af at anerkende de forskellige dimensioner af arbejdsmarksintegration for at forstå: 1) hvad der udgør integration på arbejdsmarkedet 2) forskelle i integrationsprocessen for forskellige immigrantgrupper, og 3) de forskellige grader af integration på arbejdsmarkedet. Afhandlingen ser på følgende dimensioner af arbejdsmarksintegration: beskæftigelse, årsindkomst, arbejdstid, beskæftigelsesstabilitet, timeløn og organisering. Afhandlingen trækker på flere forskellige datakilder (tværnationale data, administrative registerdata og en skräddersyet survey) for at indfange de forskellige dimensioner af integrationen af arbejdsmarkedet primært for immigranter fra Central- og Østeuropa. Selv om det danske arbejdsmarked udgør den primære kontekst for analyserne, dækker afhandlingen flere niveauer (landekomparation, nationalt, sektor, arbejdsplads og individuelt).

Afhandlingen finder for det første, at der er opstået en arbejdsdeling blandt EU-immigranter på tværs af det danske, tyske og engelske arbejdsmarked, hvor de central- og østeuropæiske immigranter har højere beskæftigelsesgrader end andre immigrantgrupper, men primært finder arbejde som er ufaglært og lavtlønnet. For det andet, at der eksisterer en betydelig indkomstforskell mellem danskere og blivende central- og østeuropæiske immigranter, selv efter at de har boet og arbejdet i Danmark i syv år, samt at indkomstforskellen generelt set forklares af forskelle i timelønnen og kun i mindre grad af forskelle i arbejdstimer. For det tredje viser afhandlingen, at betydningen af forskellene i timelønnen varierer betydeligt på tværs af indkomstfordelingen. Mens forskelle i timelønnen næsten udelukkende forklarer

de samlede indkomstforskelle i toppen af indkomstfordelingen, er billedet et noget andet længere nede i indkomstfordelingen. I bunden af indkomstfordelingen forklares forskellene mellem danskere og blivende immigranter fra Central- og Østeuropa således af en kombination af forskelle i arbejdstimer, beskæftigelsesstabilitet og timeløn. Slutteligt finder afhandlingen, at mere end halvdelen af de blivende central- og østeuropæiske immigranter i Danmark efter fem års bosættelse har meldt sig ind i en dansk fagforening - de fleste af dem inden for de første to år efter at have slået sig ned. Afhandlingen konstaterer, at immigranternes sandsynlighed for at melde sig ind i en fagforening primært er knyttet til de sociale normer på arbejdsplassen, og hvorvidt deres partner er organiseret.

ENGLISH SUMMARY

Over the last few decades, integration between economies and labour markets across the globe has increased, and especially within the European Union (EU). As a result, labour market integration is one of the major challenges facing Western European states today, not least because of the increasing migration flows coming from Central and Eastern Europe (CEE) and countries outside the EU. On the positive side, labour immigrants may alleviate employers' labour demands, thereby positively contributing to the state budget through the taxation of firm profits and individual workers' labour market income. On the negative side, if immigrants fail to integrate successfully into the receiving labour markets, it undermines the fiscal basis of the state and challenges the broader social integration and welfare of individual immigrants and their offspring.

Over the last two to three decades, labour markets across the Western world have experienced a process of flexibilisation that has led to an increase in atypical or non-standard forms of employment. As a result, labour market integration currently takes on a multitude of forms. In the introduction and the four separate articles, this dissertation contributes conceptually to the broader literature on immigrant labour market integration by stressing the need to pay attention to the multidimensionality of labour market integration in order to understand: 1) what constitutes labour market integration, 2) the differences in the process of integration for different immigrant groups, and 3) the different degrees of labour market integration. The dissertation proposes to look at the following dimensions: employment, earnings, working hours, employment stability, hourly wages and unionisation. The dissertation draws on multiple sources of data (comparative cross-national, administrative register data and a customised survey) to analyse the different dimensions of labour market integration primarily of CEE immigrants. Although the Danish labour market provides the primary context of the analyses, the dissertation covers multiple levels (comparative cross-national, national, sectoral, workplace and individual).

The overall findings of the dissertation are fourfold. First, there exists a division of labour among groups of intra-EU immigrants across the Danish, German and British labour markets, where CEE immigrants have higher employment rates than other intra-EU immigrant groups, but primarily find low-paid, low-skilled employment. Second, a considerable earnings gap exists between native workers and post-enlargement CEE immigrants even after more than seven years of settlement, and the gap is primarily explained by differences in hourly wages and only to a lesser extent by differences in working hours. Third, in an earnings gap decomposition, the extent to which differences in hourly wages explain the gap varies greatly across the earnings distribution. Whereas the earnings gap between long-term CEE immigrants and natives at the top is almost entirely explained by differences in hourly wages,

moving down the distribution, the effect of differences in working hours and employment stability increases. Finally, focusing on unionisation the dissertation finds that after five years of settlement, more than half of the long-term CEE immigrants in Denmark have unionised, and most of them within the first two years of arriving. The two main factors explaining long-term CEE immigrants' propensity to unionise are social customs at the workplace and the unionisation status of their partners.

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Labour Market Integration

On the multiple dimensions of immigrant labour market integration
