THE IMPACT OF LABOR MARKET INSECURITY ON MENTAL HEALTH AMONG IMMIGRANTS IN EUROPE

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Abstract

The impact of labor market insecurity on immigrants’ mental health is understudied. This current study investigated whether labor market insecurity, as measured by different employment arrangements, has detrimental impact on immigrants’ depression, and if so, how it compares to the role of unemployment. Furthermore, this study investigated whether labor market insecurity had more detrimental impact on immigrants than non-immigrants. To do so, data from seventh wave of European Social Survey (2014/2015) was divided into three separate immigrant groups; first-generation immigrants, second-generation immigrants and non-immigrants. The results show that labor market insecurity among immigrants had detrimental impact on mental health. The effects were not restricted to the first-generation immigrants’ mental health, they could also be observed in the second-generation immigrants and among non-immigrants. The results presented in this thesis show that not only unemployment, but also insecure employment arrangement have negative impact on mental health, both among immigrants and non-immigrants.

Keywords: Labor market insecurity, insecure employment, mental health, depression, immigration, temporary employment, informal employment, unemployment
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Introduction

Due to global migration patterns, the western population has become increasingly diverse. In the late 20th century and onwards, many within working age have migrated to Europe. But integration into European societies remain a challenge. One may expect that secure employment could be one possible way for immigrants to gain access to conventional society and feel like they are citizens of their new countries. It is known from previous research that immigrants face many barriers in finding jobs and the jobs that they find are often precarious, offering limited job security and are sometimes informal, i.e. not regulated within written contracts (Perocco, 2010; Benach et al., 2010). Furthermore, previous research has shown that unemployment (Buffel et al., 2017) and insecure labor market situation could have negative impact on both mental and physical health (Buffel et al., 2017; Kim et al., 2008; De Cuyper and De Witte, 2006). However, there is little research that connects these separate strands of literature and shows how employment arrangements of immigrants in Europe affects their mental health. This current study aims to fill that gap.

Labor market insecurity is sociologically interesting as employment for many serves as more than just an income. Employment function as a significant distributor of wealth, determinant of identity and social inclusion. Insecure employment could both be an “step towards” secure employment or reinforcing insecure labor market position. However, employees in insecure employment arrangement more often face unemployment than secure employment (Gash, 2008). As immigrants are relatively new to the host society they may lack the social ties to access secure labor market position (Toma, 2016) which could affect immigrant’s ability to (re-) enter employment and reinforce insecure labor market position or unemployment. Unemployed immigrants are particularly vulnerable
to homelessness (Benjaminsen, 2015) which might enhance the stress of labor market insecurity.

There are various pre-and post-migration factors that may impact mental health outcomes and ability to acquire secure employment among immigrants. Some migrate due to war and terror and have experienced traumatic events, which might cause rapid change in family and social status, cultural and language knowledge (Kelly and Hedman, 2016). Others may have had time to plan and prepare their migration in terms of future employment, family status, social networks etc. However, this current study examines general patterns in labor market insecurity throughout Europe and hence, immigrants are clustered into first and second generation.

This current study aims to provide an analysis of how employment arrangements affect mental health outcome among immigrants in Europe, focusing on labor market insecurity. By using the seventh wave of European Social Survey from 2014 (ESS7), this study examines differences in mental health outcomes among first and second-generation immigrants and non-immigrants in Europe, depending on employment arrangement. Furthermore, ESS7 was analyzed using cross sectional data which comes with a risk of reverse causality of labor market insecurity and mental health. To minimize the risk of reverse causal relationship, this study provides adequate theoretical framework of how labor market insecurity is detrimental to mental health and why immigrants are expected to be particularly vulnerable.

According to Levecque and Van Rossem (2015), first-generation immigrants have higher risk of depression. Moreover, the employment of migrant workers is often with poor conditions, and sometimes even dangerous (Benach et al., 2010). Additionally, Zhang and Ta (2009) highlight socioeconomic position and social ties as important determinants of mental health among immigrants. As employment for many functions as
an important determinant of socioeconomic position and social ties (Nordenmark and Strandh 1999; Strandh, However, mental health outcomes of immigrants in the contemporary European labor market is understudied; no previous studies were found that focus on the impact of labor market insecurity and mental health among immigrants. Self-employment could function as a proxy for labor market insecurity (Behling and Harvey, 2015). However, previous research has found that generally, self-employment has positive impact on subjective well-being and therefore plausible positively impact on mental health (Johansson Sevä et al., 2016). However, in this current study labor market insecurity was defined as informal or temporary employment arrangement. Hence, self-employment was excluded from the definition of labor market insecurity. There are various reasons to be unemployed or otherwise labor market inactive. However, involuntarily unemployed has more detrimental impact on mental health than voluntarily within the same employment status (Strandh, 2000). In this current study, unemployed or otherwise labor market inactive were clustered.

This current study provides a conceptual framework in how to understand labor market insecurity and the impact on mental health among immigrants. Moreover, new empirical evidence is presented that shows the detrimental impact of labor market insecurity among immigrants.

This current study is divided into four chapters: literate review, method, results and discussion. The literature review presents recent research and theoretical frameworks in the field of labor market insecurity and mental health outcomes. Moreover, the literature review gives insight in how immigrants are of particular interest on the impact of labor market insecurity on mental health. The data and methods section presents how ESS7 was used and how dependent and control variables are operationalized to get adequate results. In the discussion section, contemporary research and theoretical frameworks presented in the literature review were used to analyze the results. Furthermore,
suggestions for future research based on finding in this current study is presented in the discussion section.

**Literature review**

*Labor market insecurity and mental health*

For many, a job is more than its’ instrumental use. Apart from income, employment could come with latent functions such as identity, status, every-day structure, social contacts and participation in organizational goals (Nordenmark and Strandh, 1999). Depending on the psychosocial and the economic need of the individual, employment have different functions. Mental health outcomes are expected to be worse when (re-)entering employment if the previously unemployed individual had higher psychosocial need for employment than if employment mainly serves an instrumental purpose (Nordenmark and Strandh, 1999). Hence, if the needs of the individual do not match the functions of employment, mental health outcomes are expected to be worse than for those for whom functions match. These functions particularly relevant in insecure employment arrangement, which often do not offer high social status, prestige and stable income to the same extent as permanent employment. A study by Kim (et al., 2008) shows that permanent employees are treated favorably in terms of work safety; dangerous tasks are often handed to temporary employees and they more often have to pay for their own safety equipment. While as for permanent employees, the safety equipment is more often paid for and safety regulations guide their work tasks. Furthermore are social benefits, regular working hours and skill utilization more common in permanent employment arrangements, which have been found to have positive effects on mental health (Van Aerden et al., 2016).
If there is a strong societal norm of permanent and secure employment, insecure employment could impose negative mental health among immigrants. According to Merton, desire is culturally learned and internalized. He portrays the concept of failing to achieve the culturally prescribed goal as strain. Strain is a notion of hopelessness in an individual or group which could lead to a feeling of personal failure and hence, negatively affect the mental health (Merton, referred in Giddens and Sutton, 2013, pp 58-59). Accordingly, entering permanent employment could serve as determinant of entering and taking part of conventional norms of society, while being in insecure employment could have an excluding effect and have negative effect on mental health. The functionalist theoretical model presented by Nordenmark and Strandh along with Merton’s theory of culturally prescribed goals largely deny human agency, as it denies individuals’ rational capacity to make and execute plans. From an individual perspective, people with permanent employment have better possibility to make long term economic plans, while people who are unemployed have less possibility for long term plans and every-day predictability (Strandh, 2000). Contrary, temporary employment arrangement has less predictability before and/or after the start and end date of the contract. Informal employment arrangement includes no formal contract, the uncertainty of workers with this type of jobs is more obvious. Informal contracts can be redundant without previous notification to the employee and therefore, in this current study, are assumed to negatively impact the predictability for the employee. Hence, temporary and informal employment constitutes a similar situation as unemployment, regarding long term economic planning and every-day predictability.

*Labor market insecurity among immigrants*

Temporary and informal employment has economic consequences which negatively affect mental health. Some studies highlight economic inequalities, such as unstable income, higher expenses and social exclusion of temporary employment arrangement as determinants of mental and general health (Van Aerden et al., 2016; Kim et al., 2008; De
Similar nature can be found in informal employment arrangements and therefore, are assumed to negatively affect mental and general health. Immigrants in informal employment arrangements face irregular and often long working hours, not recognized educational qualities and low income, all of which could lead to worsen mental health (Perocco, 2010). Furthermore, informal employment in Europe is often intersectionally discriminating, as racialized women are more commonly discriminated against (Perocco, 2010). Giannoni et al., (2016) highlight socioeconomic inequalities as determinant of mental health among immigrants. As employment serves as a distributor of wealth, immigrants could be particularly vulnerable to labor market insecurity. Since immigrants often are in a more precarious socioeconomic position (Giannoni et al., 2016), they are expected to face more difficulties than non-immigrants to make long term social and economic plans and therefore, are more vulnerable to labor market insecurity. Furthermore, a study by Birkelund et al. (2017) shows that unemployed’s job applicants face ethnic discrimination. Hence, it is plausible to assume that discrimination in the labor market could lead to immigrants more often seeking insecure employments as an alternative labor market access.

Previous research portrays how social ties, often measured in social capital, have positive impact on mental health (Viruell-Fuentes and Andrade, 2016; Hao, 2000). Non-immigrants and second-generation immigrants are presumed to have attended school in host country, which increases the social and cultural capital of the individual. As immigrants are new to the host society, social ties could be crucial to access secure labor market position (Toma, 2016). For instance, if immigrants are in informal employment arrangement, the social capital acquired from employment is from the informal sector, which do not necessarily increase the chances to access secure labor market position. Toma (2016) portrays how Senegalese women who migrated to Europe uses social capital to access the labor market. However, the employment the Senegalese women found was often insecure. Additionally, non-immigrants and second-generation
immigrants are assumed to have greater access to social institutions, such as family or friends, which might be crucial to access employment (Toma, 2016). To illustrate, first-generation immigrants’ family or friends plausibly often stays in the country of origin and therefore, do not increase chances to access secure labor market position in the host country. The impact of labor market insecurity on mental health could hence be worse among first-generation immigrants with less encompassing social networks than second-generation immigrants.

Some studies on immigrants’ mental health are clinical or focuses on personal traits and/or ethnic discrimination with relatively small samples (Krings et al., 2014; Akhavan, 2007). Research on immigrants’ mental health outcomes often focus on personal cultural traits, instead of structural, such as discrimination and racialization processes, to understanding socioeconomic inequalities and mental health outcomes (Viruell-Fuentes et al., 2012). However, no previous research was found that focus on the impact of labor market insecurity on mental health among immigrants. Hence, this current study fills in an important gap and provides new evidence in a growing social category (Standing, 2013).

Summary of the literature review
The literature review presented in this study highlights the latent functions of insecure employment. Immigrants, since they are new to a society, are expected to have greater psychosocial and economic needs of permanent employment and therefore are exposed to a larger negative impact of labor market insecurity. Furthermore, the literature review presents how the non-instrumental functions of permanent employment presented by Nordenmark and Strandh are, according to contemporary research, deranged in temporary and informal employment. From an individual perspective, people who are in temporary and informal employment have more difficulties to make long term economic plans. For instance, it may be important for first-generation immigrants, since they are
new to the host country, construct their plans. As for non-immigrants, long-term plans are more often already established. Moreover, is socioeconomic position and social ties structural factors that negatively impact mental health. Since immigrants often are in precarious socioeconomic position and have fewer social ties, they are more vulnerable to labor market insecurity. While as insecure employment is socially and economically discriminating which has negative impact on mental health, the discrimination is more prevalent among immigrants. Furthermore, as immigrants already is disadvantaged social category, insecure labor market position could imply additional discrimination and therefore have more detrimental impact on mental health. Hence, due to less social ties and more discrimination, immigrants are assumed in this current study to be particularly vulnerable to labor market insecurity.

Below, Figure 1 illustrates a model of the theoretical relationship of this current study:
Hypothesis (H)

This current study aims to determine whether:

- (H1) first and second-generation immigrants are exposed to negative effect of temporary and informal employment arrangement on mental health;

- If so, (H2) is the negative impact of temporary and informal employment arrangement stronger among first and second-generation immigrants than non-immigrants.

Figure 1. Theoretical model. Own illustration.
Data and methods

The sample for this current study was collected from the seventh wave of European Social Survey (ESS7) from 2014/15. European Social Survey is a cross-national survey that conduct interviews in 23 countries within Europe and Israel. Countries included in ESS7 were: Austria, Belgium, Czech Republic, Denmark, Estonia, Finland, France, Germany, Hungary, Ireland, Island, Israel, Latvia, Lithuania, Netherlands, Norway, Poland, Portugal, Slovenia, Spain, Sweden, Switzerland, United Kingdom (European Social Survey (ESS), 2017). ESS is well reputed and its data is of high academic standard. The response rate of ESS7 of countries used in this current study varied from 31.4% in Germany to 67.9% in Spain (European Social Survey, 2017).

Ethical consideration
In each country interviews are done face-to-face with respondents (European Social Survey (ESS), 2017). To ensure ethics, ESS subscribed to the “Declaration on Professional Ethics” (International Statistical Institute, 2010). ESS also informs the respondent about the purpose of the study. By participating, the informant agrees to participate that the information could be used by third party for scientific purpose.

The data is divided by first-generation immigrants, second-generation immigrants and non-immigrants
Only people within the age of 18-60 were included in this current study, this distinction was made to exclude people of non-working age. In contemporary research, a distinction is often made between first and second-generation immigrants (Levecque and Van Rossem, 2015). The same distinction was made in this current study; immigrant is defined as either first or second generation. Additionally, a distinction was made to distinguish non-immigrants from each immigrant group. Non-immigrants are in this current study those who were born within host country and whom both parents were
born in the host country. First generation immigrant included those who migrated to the host country themselves. Second generation immigrant were those who was born in the host country and for whom one of their parents was born outside the host country. To be able to analyze each group separately, the data was divided by immigrant status. The working age population was 26,295, and non-immigrants were the majority within the sample (n=20,359, 77.4 %). The sample size of first-generation immigrants were 3,096 (11.7%) and second-generation immigrants were of similar size, n=2,842 (10.8%).

Main variables

Dependent variable – mental health (CES-D’8)
The variable mental health is based on CES-D’8 scale (Radloff, 1977), commonly used to quantitively measure depression (Van de Velde et al., 2010), and functions as a determinant of mental health through a regression analysis. CES-D’8 is made out of eight variables; “Restless sleep, how often past week”, “Felt like everything was an effort, how often past week”, “Felt depressed, how often past week”, “Were happy, how often past week”, “Felt lonely, how often past week”, “Enjoyed life, how often past week”, “Felt sad, how often past week” and “Could not get going, how often past week”. All eight variables had the same values: 0 = “None or most of the time”, 1 = “Some of the time”, 2 = “Most of the time”, 3 = “All or almost all the time”.

The value of the variables set to answer the respondents’ mental health from previous week from the time of the respondents’ answer. The manifest variables’ relation between the latent variable (mental health) were measured through a factor analysis, the eight manifest variables all scored higher than 0.4 or lower than -0.4, which shows a correlation. Two variables scored lower than -0.4 and six scored higher than 0.4. The two variables which scored negatively were “Were happy, how often past week” and “Enjoyed life, how often past week”. Higher scores on these two indicates life
satisfaction and not depression. Therefore, the values were recoded to make an index possible. The index reliability was measured using Cronbach’s alpha, the score 0.827 shows that the index was reliable. Furthermore, the index was created by adding values from each manifest variable together. The results are an index with the possible values 0-24. Low scores indicate good mental health and high scores indicate poor mental health. Figure 1, found below, illustrates how CES-D’8 was constructed:

![Diagram of CES-D'8 scale]

Figure 2. CES-D’8 scale, own illustration.

**Independent variable – employment arrangement**

In this current study, the employment arrangement variable was combined out of two types of variables: “type of contract” and “employment status”. Type of contract varies from no contract, permanent contract and temporary contract and are combined with type of employment status, ranging from: “employee”, “self-employed”, “working for own family business”, and “not-applicable”. Employees with a permanent contract are in this current study assumed to have a permanent employment arrangement. Employees with a temporary contract are in this current study assumed to have a temporary employment arrangement while employees with no contract are assumed to have an informal employment arrangement.
Employment status “not-applicable” are assumed to be unemployed or otherwise labor market inactive\(^1\). Below, a chart (Table 1) displays how the employment arrangement variable was constructed.

<table>
<thead>
<tr>
<th>Type of contract</th>
<th>Employment status</th>
<th>Employment arrangement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Permanent</td>
<td>Employee</td>
<td>Permanent employment</td>
</tr>
<tr>
<td>Temporary</td>
<td>Employee</td>
<td>Temporary employment</td>
</tr>
<tr>
<td>No contract</td>
<td>Employee</td>
<td>Informal employment</td>
</tr>
<tr>
<td></td>
<td>Family business or self</td>
<td>Self-employed</td>
</tr>
<tr>
<td></td>
<td>employed</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Not applicable</td>
<td>Unemployed or otherwise labor market inactive.</td>
</tr>
</tbody>
</table>

**Table 1 – Employment arrangement based on contract type and employment status.**

**Control variables**

In this current study control variables were used to increase reliability. The control variables age, education and welfare regime could have high explanatory value and hence, by controlling for these, the main variables become more precise.

**Independent variable - welfare regimes**

Previous research has found significant correlation between welfare regime and mental health outcomes in general (De Moortel et al., 2015) and among immigrants (Levecque and Van Rossem, 2015). In this current study, countries are clustered according to Esping-Andersens (1999) definition of welfare regimes. Esping-Andersen categorize

\(^1\) OECD (2017) define an unemployed individual as someone who does not have a job, but actively seek one. Due to sample size, unemployment is clustered with those who are otherwise labor market inactive and therefore, the definition in this current study is broader than how OECD defines unemployment.
countries into five different type of welfare regimes; liberal, nordic (or social
democratic), conservative (or continental), post-communist (or central and eastern
European) and south European (or Mediterranean). Accordingly, in this current study
countries were clustered into five different welfare regimes: liberal, Nordic,
conservative, post-communist, and south European. Nordic countries includes: Denmark,
Sweden, Norway and Finland. Liberal countries includes: Great Britain, Ireland and
Switzerland. Post-communist countries include: Estonia, Lithuania, Hungary, Poland and
Slovenia. Southern European countries include Spain and Portugal. By clustering
countries, some countries were excluded such as Israel.

Independent variable - individual characteristics
Age and education are continuous variables, both measured in years. As for education,
values are determined by completed years of education and age was determined by the
respondents’ year of birth.

Method
Mean values on CES-D index to compare depressive symptoms among the three
immigrant groups according to their labor market status was used in this current study to
show differences in mental health outcomes. To analyse the relationship between mental
health outcomes and labour market insecurity, this current study used linear regression
and controlled for age, education and welfare regime. Furthermore, the regression
analysis was done separately for each immigrant group. The regression analysis was
done to estimate the value the dependent variable, mental health, based on the value of
the independent variable, labor market insecurity.
Results

Descriptive statistics

Mean depression symptom scores among first-generation immigrants

As for first-generation immigrants, people in temporary and informal employment arrangement reported higher mean depression symptom scores (13.982 and 14.031) than those with permanent employment arrangement (13.228), within the same immigrant status. The lowest mean depression symptom scores among first-generation immigrants were those who were self-employed or worked within family businesses (12.795). Unemployed or otherwise labor market inactive first-generation immigrants reported higher mean depression symptom score (13.650) than first-generation immigrants with permanent employment arrangement (13.228). However, the mean depression symptom score reported by unemployed or otherwise labor market inactive first-generation immigrants were lower (13.650 to 13.982 and 14.031) than those in temporary and informal employment arrangement.

As for first-generation immigrants, those in temporary and informal employment arrangement reported the highest mean depression symptom scores. Hence, first-generation immigrants in labor market insecurity generally reported the worse mental health than those who had permanent employment arrangement and those who were self-employed or worked within family businesses. Furthermore, first-generation immigrants in labor market insecurity reported worse mental health than unemployed or otherwise labor market inactive first-generation immigrants.
Depression symptom scores among second-generation immigrants

Second-generation immigrants in permanent employment arrangement reported mean depression symptom score of 13.363. Second-generation immigrants in temporary and informal employment arrangement both reported higher depression symptom score than second-generation immigrants in permanent employment arrangement (14.284 and 13.662 to 13.363). Similar to first-generation immigrants, the lowest reported mean depression symptom score could be found among second-generation immigrants who were self-employed or worked within family businesses (12.968). As for unemployment or otherwise labor market inactive, second-generation immigrants reported relatively high depression symptom score (13.895). The results from Table 2 shows that second-generation immigrants who were unemployed or otherwise labor market inactive generally had lower depression symptom score than those who were in temporary employment arrangement (13.895 to 14.284), within the same immigrant status. However, for informal employment arrangement, second-generation immigrants reported lower mean depression symptom scores than those who were unemployed or otherwise labor market inactive (13.662 to 13.895), within the same immigrant status. Similarly to first-generation immigrants, second-generation immigrants in temporary and informal employment arrangement reported higher depression symptom scores than second-generation immigrants who were self-employed or worked within family businesses or in permanent employment arrangement.

Overall, second-generation immigrants in labor market insecurity generally reported worse mental health than second-generation immigrants who had permanent employment arrangement or were self-employed or worked within family businesses. However, unemployed or otherwise labor market inactive second-generation immigrants reported worse mental health than second-generation immigrants in informal employment arrangement.
Depression symptom scores among non-immigrants

Aligned with both first and second-generation immigrants, non-immigrants with permanent employment reported lower depression symptom score (12.916) than non-immigrants in temporary and informal employment (13.769 and 13.752). Among non-immigrants who were self-employed or worked within family businesses reported the lowest mean depression symptom score (12.819). These results were aligned with the results for first and second-generation immigrants, which shows that those who were self-employed or worked within family businesses generally reported the best mental health. Unemployed non-immigrants reported lower depression symptom scores (13.175) than non-immigrants in informal and temporary employment arrangement (13.769 and 13.752). These results show that unemployed or otherwise labor market inactive non-immigrants reported better mental health than both first and second-generation immigrants who were unemployed or otherwise labor market inactive. Non-immigrants in labor market insecurity generally had worse mental health than non-immigrants in any other employment arrangement.

Table 2 – Descriptive statistics and depression scores based on employment arrangements and immigrant status. Scores varies from 0-24.

<table>
<thead>
<tr>
<th>Employment arrangement (mean (SD))</th>
<th>First-generation immigrants (n = 3096)</th>
<th>Second-generation immigrants (n = 2842)</th>
<th>Non-immigrants (n = 20359)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Permanent</td>
<td>13.288 (3.84)</td>
<td>13.363 (3.74)</td>
<td>12.916 (3.64)</td>
</tr>
<tr>
<td>Temporary</td>
<td>13.982 (4.32)</td>
<td>14.284 (3.99)</td>
<td>13.769 (4.13)</td>
</tr>
<tr>
<td>Informal</td>
<td>14.031 (4.44)</td>
<td>13.662 (4.52)</td>
<td>13.752 (4.30)</td>
</tr>
<tr>
<td>Self employed</td>
<td>12.795 (3.69)</td>
<td>12.968 (3.69)</td>
<td>12.819 (3.72)</td>
</tr>
<tr>
<td>Unemployed</td>
<td>13.650 (4.47)</td>
<td>13.895 (4.51)</td>
<td>13.175 (4.14)</td>
</tr>
<tr>
<td>Total</td>
<td>13.644 (4.15)</td>
<td>13.677 (3.99)</td>
<td>13.286 (4.03)</td>
</tr>
</tbody>
</table>
Summary of the results from descriptive statistics

Overall, the descriptive statistics shows that regardless of immigrant status, people who were in labor market insecurity generally reported worse mental health than those in permanent employment arrangement. These results indicate, aligned with the first hypothesis (H1), a relative big detrimental impact of labor market insecurity on mental health, both for immigrants and non-immigrants. Furthermore, the results indicate some support for the second hypothesis (H2) with the exception for second-generation immigrants in informal employment arrangement and reported lower mean depression symptom score than non-immigrants within the same employment arrangement. For all immigrant groups, the differences between labor market insecurity and those who were self-employed or worked within family businesses was large. Those who were unemployed or otherwise labor market inactive reported worse mental health than those who were self-employed or worked within family business or had permanent employment arrangement. However, for unemployed or otherwise labor market inactive non-immigrants, the differences in reported depression symptom score to permanent employment were relatively low.

Regardless of immigrant status, those who were self-employed or worked within family businesses reported better mental health than the other employment arrangement. While contrasted to unemployment or otherwise labor market inactive, labor market insecurity generally reported worse mental health among all immigrant statuses except for temporary employment arrangement among second-generation immigrants.

Linear regression model
Table 3 displays a comparison of three different linear regression analysis, based on immigrant status and controlled for welfare regimes and age. Permanent employment arrangement was reference group.

**Linear regression model – results for first-generation immigrants**

For first-generation immigrants, temporary employment arrangement had detrimental impact on mental health, with an increase in depression scores of 0.845 on the depression scale. Furthermore, Table 3 shows that informal employment arrangement was detrimental for first-generation immigrants’ mental health, with an increase in 1.317 on the depression scale. Both results for labor market insecurity were statistically significant (p<0.01). These results were aligned with the first hypothesis (H1) that labor market insecurity has detrimental impact on mental health among immigrants. Moreover, Table 3 shows that self-employment or worked within family businesses had positive impact on mental health, with a decrease in of -0.369 points on the depression scale, among first-generation immigrants. The result was statistically significant (p<0.04). Being unemployed or otherwise labor market inactive had detrimental impact on mental health, with an increase of 0.605 points on the depression scale for first-generation immigrants. The results were statistically significant (p< 0.01). The R2 value of 0.047 shows that 4.7% of the variance in depression symptom score is explained by the variables used in table 3 for first-generation immigrants.

**Linear regression model – Results for second-generation immigrants**

Table 3 displays how temporary employment arrangement had detrimental impact on mental health on second-generation immigrants, with an increase in depression scores of 1.115 points. The results were statistically significant (p<0.01). As for informal employment arrangement among second-generation immigrants, the results were not statistically significant. Therefore, the results show no correlation of informal employment and the impact on mental health. However, the results for temporary
employment among second-generation immigrants are align with the first research question (H1) that labor market insecurity is detrimental to immigrants’ mental health. Furthermore, Table 3 shows how self-employment had positive impact on mental health among first-generation immigrants with a decrease of 0.367 points on the depression scale, the result was statistically significant (p<0.04). These results were similar with the impact of self-employment on mental health among first-generation immigrants. Being unemployed or otherwise labor market inactive had detrimental impact on second-generation immigrants with an increase of 0.745 points on the depression scale, the results were statistically significant (p<0.04). The $R^2$ value of 0.042 shows that 4.2% of the variance in depression symptom score is explained by the variables used in table 3 for second-generation immigrants.

Linear regression model – results for non-immigrants

Align with both first and second-generation immigrants, temporary employment had detrimental impact on non-immigrants’ mental health. Non-immigrants in temporary employment arrangement had an increase in depression score of 1.059 points, the results were statistically significant (p<0.01). Moreover, Table 3 shows that the impact of informal employment was detrimental on mental health among non-immigrants, with an increase in depression score of 1.068, these results were statistically significant (p<0.01). The results for non-immigrants shows that labor market insecurity not only has detrimental impact for immigrants’ mental health, but also for non-immigrants’. As for non-immigrants who were self-employed or worked within family business, the results were not statistically significant. Unemployment had detrimental impact on mental health with an increase of 0.571 on the depression scale among non-immigrants, the results were statistically significant (p<0.01). The $R^2$ value of 0.033 shows that 3.3% of the variance in depression symptom score is explained by the variables used in table 3 for non-immigrants.
Summary of the results from the linear regression model

Aligned with the first hypothesis (H1), labor market insecurity had detrimental impact on mental health regardless of immigrant status. However, the results from Table 3 shows no correlation of the impact of informal employment among second-generation immigrants.
immigrants. As for the second hypothesis, (H2) the results were ambiguous. First-generation immigrants had less detrimental impact of temporary employment than both second-generation immigrants and non-immigrants. Moreover, for second-generation immigrants the detrimental impact of temporary employment was marginally higher than non-immigrants. While the impact of informal employment arrangement is more detrimental for first-generation immigrants than non-immigrants. As for second-generation immigrants in informal employment arrangement, the results were not statistically significant.

Among first and second-generation immigrants, those who were self-employed or worked within family businesses had positive impact on mental health. The results for non-immigrants were not statistically significant. The results from the linear regression model indicate that regardless of immigrant status, it is not only important for mental well-being to have a job. But it is also important to have secure employment arrangement or to be self-employed or work within family business.

**Sensitivity analysis**

*The role of gender in labor market insecurity and mental health outcomes among immigrants*

One might presume that gender would be of great importance in variations in mental health outcomes. It could be assumed that men’s mental health is more effected by labor market insecurity, as men are often seen as the provider of income and security in conventional heterosexual families, often called “male breadwinner” model (Nadim, 2016). The presumed sense of failure in insecure labor market position would therefore more negatively affect men’s mental health than women’s.
Male breadwinner model was not ignored in this current study. Consistent with previous research stating that gender has significant impact on mental health (Van de Velde et al., 2010), when dividing the data by gender, this current study found similar patterns. However, no great variances of the impact of employment arrangement on mental health could be found in this research, with some exception for unemployed female second-generation immigrants. Temporary employment arrangement shows some difference among both group of immigrants based on gender; second generation immigrant women reported 0.3 points higher than first generation immigrant women. Hence the small differences in impact of labor market insecurity, men and women were in this current study clustered.
Discussion

This current study contributes to the identification of a research gap within the contemporary field of labor market insecurity among immigrants. Empirically, this current study highlights the variances of the impact of labor market insecurity, depending on employment arrangement and immigration status. As for theoretical contribution, plausible mechanisms in the impact of labor market insecurity on mental health, particularly among immigrants, were discussed. Linear regression analysis was used to measure variances in mental health outcomes using data from the seventh wave of European Social Survey, from 2014 and 2015. The data was sampled into three different groups depending on immigrant status, respondents within the age range of 18-60 were included. The results were discussed in subsections below.

Key findings of this current study

(H1) Labor market insecurity had detrimental impact on immigrants’ mental health

The main initial objective of this current study was to determine whether labor market insecurity has detrimental impact on immigrants’ mental health; when controlled for age, education and welfare regimes, both first and second-generation immigrants had negative mental health outcome from temporary employment arrangement. Furthermore, first-generation immigrants had negative mental health outcome from informal employment arrangement. As for second-generation immigrants, the results were not statistically significant. The result from this current study confirm that labor market insecurity has detrimental impact on mental health, both among first- and second-generation immigrants. Therefore, the first research question in this current study could be confirmed. Moreover, the results from this current study shows that labor market insecurity is detrimental to non-immigrants mental health to the same degree.
(H2) Ambiguous results whether labor market insecurity had more detrimental impact on immigrants’ mental health than non-immigrants

Another important finding in this current study was that informal employment arrangement was particularly detrimental for first-generation immigrants’ mental health. Whereas, temporary employment arrangement was not as detrimental for first-generation immigrants as for second-generation immigrants and non-immigrants. Furthermore, this current study found that for non-immigrants, the negative impact of informal and temporary employment arrangement on mental health were very similar. As for unemployment or otherwise labor market inactive, the differences in outcomes were aligned with the first hypothesis (H2) that immigrants are particularly vulnerable to labor market insecurity, however the impact on mental health of unemployment or otherwise inactive were relatively similar. The differences in mental health outcomes of labor market insecurity, regarding immigrant status and employment shows ambiguous results if immigrants are particularly vulnerable to labor market insecurity. Therefore, the hypothesis (H2) question in this current study could not be confirmed.

Type of employment arrangement is an important determinant for mental health outcomes

In the public debate, there are many arguments driven by neo-liberal economics which presumes that insecure employment is better than no job (Cam, 2002). Considering mental health, the results from this current study implies that such discourse Overall, the results from this current study shows that employment arrangement is an important determinant of mental health, regardless of immigrant status. Furthermore, an interesting finding in this current study is that unemployment has negative impact on mental health, which is aligned with previous research (Buffel et al., 2017). Aligned with previous studies, the results from this current study shows that labor market insecurity is detrimental to mental health (Buffel et al., 2017; Kim et al., 2008; De Cuyper and De
Witte, 2006). However, unemployment in this current study shows less detrimental impact on mental health than labor market insecurity, regardless of immigrant stat

As previously mentioned in this current study could determinants of mental health regarding employment arrangement be economic and/or psycho social need for employment, every-day structure (Nordenmark and Strandh, 1999) and irregular/long working hours (Perocco, 2010), income, participation in organizational goals, status (Nordenmark and Strandh, 1999) and societal norms (Giddens and Sutton, 2013, pp 58-59), ability for long-term economic planning and every-day predictability (Strandh, 2000), socioeconomic status (Giannoni et al., 2016) and/or social ties (Viruell-Fuentes and Andrade, 2016). People in permanent employment arrangement along with those who were self-employed or worked within family businesses reported better health. Prior studies have noticed the importance of the positive impact of self-employment on mental health (Johansson Sevä et al., 2016) which the results from this current study confirms.

Discussion on differences in mental health outcomes among first and second-generation immigrants and non-immigrants in labor market insecurity

The differences in mental health outcomes in temporary employment arrangement among first and second-generation immigrants and non-immigrants could be argued to be a result of societal norms (Giddens and Sutton, 2013, pp 58-59). Temporary employment arrangement then for first-generation immigrants more function as a “step towards” participating in conventional norms or “a step” closer to permanent employment. While as for second-generation immigrants and non-immigrants, temporary employment arrangement may more be a mark of labor market insecurity and therefore, the mental health outcomes among second-generation immigrants and non-immigrants were similar while for first-generation immigrants the results were substantially lower.
Furthermore, the differences in mental health outcomes in temporary employment arrangement might be due to the relative security. For first-generation immigrants, temporary employment could come with some positive effect on economic planning and every-day predictability (Strandh, 2000). Furthermore, first-generation immigrants generally are more inexperienced in the host country’s labor market, temporary employment than could have a more stabilizing function than informal employment and therefore less negative impact on mental health than for second-generation immigrants and non-immigrants (Nordenmark and Strandh, 1999).

*Informal employment arrangement among first-generation immigrants*

As first-generation immigrants often are new to the host society, the psychosocial need for employment could be greater. Informal employment arrangement may not provide adequate social stimulation (Nordenmark and Strandh, 1999) and hence more negatively affect mental health outcomes among first-generation immigrants than non-immigrants. First-generation immigrants in informal employment arrangement may be internalized with the notion of failure as a result of societal norms (Merton, referred in Giddens and Sutton, 2013) and hence, explain the greater detrimental impact of informal employment arrangement on mental health for first-generation immigrants than for non-immigrants. For non-immigrants, the need to “enter” conventional society (Merton, referred in Giddens and Sutton, 2013) might be lower and therefore explain the differences in impact of informal employment on mental health between non-immigrants and first-generation immigrants. For first-generation immigrants as group, informal employment arrangement may have lower social status (Nordenmark and Strandh, 1999) than for non-immigrants and functions as exclusive in terms taking part of conventional society and hence, the impact of informal employment arrangement differs among first generation immigrant and non-immigrants.
First-generation immigrants are more often in precarious economic position (Giannoni et al., 2016) therefore, the economic need for employment among first-generation immigrants could be greater and explain why the detrimental impact of informal employment differ among nonimmigrants and first-generation immigrants (Nordenmark and Strandh, 1999). Informal employment often come with low wages (Perocco, 2010) and first-generation immigrants often have socioeconomic disadvantage therefore, could explain why informal employment arrangement is more detrimental (Nordenmark and Strandh, 1999) among first-generation immigrants than non-immigrants. Considering the socioeconomic disadvantage of first-generation immigrants (Giannoni et al., 2016) informal employment arrangement may further interfere with their ability to make long term economic plans and every-day predictability (Strandh, 2000) along with every-day structure (Nordenmark and Strandh, 1999), hence the greater impact of informal employment arrangement on first-generation immigrants’- than non-immigrants’ mental health. The reason why immigrants are in informal employment arrangement may differ from nonimmigrants, as they often face discrimination (Birkelund et al., 2017).

Furthermore, the working conditions for first-generation immigrants in informal employment may differ from the other two immigrant groups (Perocco, 2010) and explain the stronger impact of informal employment arrangement on mental health for first-generation immigrants than non-immigrants.

Suggestions for future research.

The role of self-employment for mental health.
Recent contemporary debate on self-employment as insecure employment, e. g the taxicompany Uber (O’Conner, et al., 2016), indicate of how being self-employed could be a proxy of labor market insecurity (Behling and Harvey, 2015). The sample size in ESS7 were too small to distinguish between self-employed who were not in labor market
insecurity and those who were, among immigrants. Further studies on labor market insecurity should investigate how self-employment impact immigrants’ mental health. A study by Beugelsdijk and Noorderhaven (2005) highlight personal traits among self-employed as autonomous, creative etc. However, if one is involuntary self-employed, the mental health outcomes might differ as the personal traits among those who are involuntary self-employed may not match (Johansson Sevä et al., 2016). The results would be interesting to determine if labor market insecurity among self-employed immigrants are detrimental to mental health.

*Empirically test mechanisms behind mental health outcomes of immigrants in labor market insecurity and suggestions for future research*

To more thoroughly understand the impact of labor market insecurity, one need to understand the mechanisms behind the mental health outcomes. Considering the theoretical framework presented in the literature overview, social- and economic exclusion along with identity, every-day structure (Nordenmark and Strandh, 1999) etc. are important functions of employment. By using these as mediating variables, future research can help understanding which of the mechanisms of labor market insecurity that are detrimental to immigrants’ (or non-immigrants’) mental health.

*Contribution to contemporary public debate – “The Precariat”*

In recent years “The Precariat – The New Dangerous Class” by Guy Standing has become increasingly popular and were debated in influential newspapers, such as “The Guardian” (Harris, 2014). Standing describes the precariat as a new global class. The new global class, Standing portrays as the new underclass, “below” the old proletariat. The nature of this class is according to Standing “chronic uncertainty” which he means creates anxiety and stress (Standing, 2013). Hence, labor market insecurity is, according to Standing, becoming increasingly widespread which negatively impact the mental health among the precariat. Standing dedicate one chapter to why immigrants are
particularly vulnerable, one example that Standing mentions is immigrants often face discrimination in terms of not getting knowledge validated in the host country (Standing, 2011, pp 144). The results of this study were aligned with Standings theory, labor market insecurity is detrimental to immigrants’- and non-immigrants’ mental health. Hence, this study provides empirical evidence aligned with the theory of the precariat. However, the results of my study do not confirm that immigrants were particularly vulnerable. Nor can my results determine whether labor market insecurity is increasing within Europe.

**General public debate**

Contemporary debate on employment often implies that “any job is better than no job”. Especially in the discourse regarding immigrants where the implications often involve questioning of moral and immigrants will to work. The findings in this current study indicate that such discourse needs to be nuanced. In fact, unemployment is not necessarily worse. Insecure employment arrangement was in this study shown to have detrimental impact to both immigrants and non-immigrants. Furthermore, unemployment or otherwise inactive was shown to have detrimental impact on mental health for all groups. The results from this current study implies that people within working age generally want to work if they have secure employment, regardless of immigrant status.

**Limitations**

**Pre- and post-migration experiences**

People migrate to Europe from different countries and for various different reasons. For instance, some flee war and terror, others temporary work during seasons. Moreover, depending on country of origin, migrants might have different education and work experience from country of origin (Kelly and Hedman, 2016). Host countries adapt different policies that affect integration and the ability to provide adequate employment (Kelly and Hedman, 2016). Hence, there are many pre-and post-migration factors that
most probably affect mental health outcomes, which due to timeframe and sample size were not considered in this current study. However, immigrants were in this current study clustered as two homogenous groups, regardless of country of origin, which obviously is not an adequate reflection of reality in contemporary Europe.

**Temporary and informal employment arrangement necessarily does not imply labor market insecurity**

What is considered labor market insecurity could vary throughout Europe, as the perceived employment insecurity varies depending age, education and skill requirements of the employment (Böckerman 2004). Considering Merton’s theory of culturally prescribed goals (Merton, referred in Giddens and Sutton, 2013, pp 58-59), the possible sense of failure as a results of labor market insecurity might weaker in contexts where temporary and informal employment are common and/or an accepted form of employment arrangement. Some European countries, such as Italy and Belgium, the risk of being in temporary employment arrangement is relatively high (Gebel and Giesecke, 2011), which could lead to more acceptance towards being in labor market insecurity in such countries. Furthermore, Böckerman (2004) shows that perceived labor market insecurity is more common in low-skilled jobs, especially in large manufacturing industries. Hence, context, such as type of job, country, skill requirement, could impact mental health outcomes when studying labor market insecurity. However, considering timeframe given, no such distinction was possible for this current study.

*Causality*

It is possible that people who are more depressed generally get more insecure employment arrangement. A longitudinal study would allow to track the temporal order of events, it could be determined whether people first get an insecure employment which is detrimental to mental health or if people with worse mental health seek insecure
employment. However, no dataset was found that were longitudinal and representable for Europe.

**Validity**

Validity could be affected by participation among immigrants as some immigrants may not be able to participate in European Social Survey due to language barrier, people who migrated recently probably more so. However, ESS translate their surveys to any language that make up more than 5% of the country’s population (European Social Survey, 2017).
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