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Good jobs and bad jobs: the effect of globalisation on the perceived job quality of workers with different skill levels

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Abstract

The increasing inequality as a consequence of globalisation requires more attention to the role of education. The aim of the present study is to contribute to the understanding of the micro-implications of the compensation hypothesis by researching the effect of increasing globalisation on the perceived job quality of workers with different skill levels. A sample of six advanced economies (Germany, Hungary, Norway, Israel, United Kingdom, and United States) is used to test the theoretical assumption that globalisation tends to deteriorate the perceived job quality of relatively low-educated workers but tends to strengthen the perceived job quality of relatively high-educated workers. Data from the International Social Survey Programme (ISSP) Work Orientations survey is used to compute the weighted average of job values and job outcomes to determine the subjective job quality of individual respondents. Using regression analysis, the findings indicate significant support for globalisation having asymmetric effects on the subjective job quality of workers with different skill levels. However, the small coefficients suggest that the effects are presumably trivial. Suggestions for future research are discussed based on the limitations and strengths of the study.

Key words: *globalisation, job quality, good jobs, education, inequality*

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1. Introduction

1.1. Globalisation and good jobs

Globalisation resulted in large structural changes to society and the worldwide spatial division of labour (Rodrik, 2019). As globalisation allows for accessibility to international markets and the possibility to move production to other countries, economic and political elites are argued to have watered down its relationships with local communities and workers (Rodrik, 2018). Due to the opportunities enabled by globalisation, elites may easily attract migrant workers from low-wage countries to fulfil jobs, through which a sense of replaceability among local workers grew. According to Rodrik (2019), elites typically benefited from globalisation as they were no longer limited to human resources in local areas.

In a globalised world, one can notice winners and losers: those who can reap the benefits of globalisation (winners) and those who miss out on the opportunities offered by the increasing economic, social, and political integration internationally (losers). Rodrik and Sabel (2019) argue that the labour market is currently divided in two: the highly productive modern sector with the good jobs on one side (often in metropoles) and an increasing mass of less productive jobs and communities with bad jobs on the other side. From a narrow point of view, good jobs refer to high-wage jobs that pay above the average wage (Acemoglu, 2001; Loveman & Tilly, 1988; Schmitt & Jones, 2012). The broader conceptualisation of good jobs argues that a good job is a satisfying job that pays an adequate wage while meeting non-monetary needs such as autonomy and job security (Clark, 1998; Rodrik & Sabel, 2019). Following the broad conceptualisation, good jobs can be identified through six attributes: pay, hours of work, future prospects, job difficulty, job content, and interpersonal relationships (Clark, 1998, p.17). The extent to which good job aspects are positively fulfilled according to individual workers themselves, make up the *perceived job quality* (Clark, 1998). Therefore, when referring to a good job, a high perceived job quality is meant. Subsequently, a low perception of job quality refers to a bad job.

The drop in good jobs causes inequality, exclusion, geographic segregation, and loss of trust in elites, governments, and experts (Rodrik & Sabel, 2019). Importantly, failing to generate *good jobs* brings significant economic, social, and political costs (Rodrik & Sabel, 2019). These costs drive a large wedge between the market wage and the social cost of labour as the social opportunity costs of generating good jobs is considerably lower than the market wage. Moreover, bad jobs lead to lagging communities with poor social outcomes and social and political strife (Rodrik & Sabel, 2019). To illustrate, a study conducted in Sweden suggests that a decline in good jobs is associated with electoral gains for nativists political parties (Dal Bó, Finan, Folke, Persson & Rickne, 2019). Continuing, Colantone and Stanig (2016) argue that large import shocks due to globalisation are associated with increasing support for radical right-wing political parties. As a consequence, support for democratic and liberal values may deteriorate (Colantone & Stanig, 2018).

In different words, a shortfall of good jobs can be viewed as a market failure whereas generating good jobs is a source of positive externalities (Rodrik & Sabel, 2019). Examples of positive externalities are adequate nutrition, health, education, responsible citizenship, and sustainable action (Rodrik & Sabel, 2019). Characteristics of good jobs include core labour protections, such as safe working conditions, collective bargaining rights, and regulations against arbitrary dismissal (Rodrik, 2019). However, these good jobs are at risk, as high wage jobs coexist in a *'sea of poor jobs'* (Temin, 2017). This is the result of balancing good jobs and the level of employment due to the tendency of organisations to economise on labour use by adopting technologies that replace workers when wages rise (Rodrik & Sabel, 2019). To allow for improvements to be made in attaining more good jobs for communities, the scholarly debates first requires a mapping of how good jobs are perceived by individuals in an era of globalisation.

1.2. Research focus

Trade theory predicts that high-skilled workers benefit from globalisation while low-skilled workers lose out (Walter & Maduz, 2009; Findlay & Kierzkowski, 1983). Winners of globalisation have higher wages whereas losers of globalisation have lower wages and higher unemployment risks (Walter & Maduz, 2009). Within a similar vein, Rodrik and Sabel (2019) suggest that the current labour market is

divided in two with good jobs on one side and bad jobs on the other. Subsequently, wages and unemployment risks are part of what constitutes a good job and defines a job's quality.

Arguing from the Stolper-Samuelson theorem, the comparative advantages of economies is dependent on the factors of production an economy is abundantly endowed with (Walter & Maduz, 2009, p.5). When discussing human-capital endowment specifically, the extension of the Stolper-Samuelson suggests that high-skilled workers are considered the abundant factors of production in advanced economies (Walter & Maduz, 2009, p.5; Findlay & Kierzkowski, 1983). This implies that high-skilled workers are the *winners* of globalisation, whereas low-skilled workers are the *losers* of globalisation (Walter & Maduz, 2009). Thus, globalisation is expected to have different impacts on workers depending on their skill levels. As a consequence, high-skilled workers could evaluate their jobs differently than low-skilled workers in an era of globalisation. To assess whether the prediction in the extended Stolper-Samuelson theorem of Findlay and Kierzkowski (1983) is reflected in evaluation of jobs at the individual-level, the present study aims to analyse how globalisation is affecting the perception of job quality differently for workers with different skill levels.

In prior studies, scholars found evidence for increasing economic inequality due to globalisation (Walter, 2010; Rodrik, 1998). Losers of globalisation are more likely to express feelings economic insecurity (Walter, 2010) as they are likely to be affected by imports leading to lower wages and/or job insecurity (Hays, Ehrlich & Peinhardt, 2005). Studies suggest that the effect of exposure to globalisation on job security is highly dependent on an individual's skill level (Walter, 2010). Those who benefit from globalisation are often well-educated and those who are negatively impacted are often low educated.[1] However, limited research is conducted on the effect of globalisation on the self-assessed job quality by people with different education levels. The effects of globalisation are expected to translate to the evaluation of jobs as labour market shocks due to globalisation and technological advancements (such

[1] *Note.* Often, the use of the terms *'low-skilled'* and *'high-skilled'* are used interchangeably with the terms *'low-educated'* and *'well/high-educated'* workers (Häussermann, Kurer & Schwander, 2015) as data about educational attainment are typically used to measure skill level under the assumption that the higher the education, the higher the skill level (WTO, 2008). Following the existing terminology within the scholarly debate, this study uses *'skills'* and *'education'* interchangeably.

as artificial intelligence) have profound implications for workers with different skills and thus different education levels (Autor, Dorn & Hanson 2015; Brynjolfsson & McAfee, 2014).

Taking into consideration that developments in globalisation affect the wage and job security differently for high-skilled versus and low-skilled workers (Autor et al., 2015; Walter 2010), the effects of globalisation may spread to broader set of job outcomes that determine a job's quality such as job content and job difficulty (Clark, 1998). Essentially, the present study aims to understand how increasing levels of exposure to international trade to workers with different skill levels affect the evaluation of job quality on micro-level. Therefore, the research question of this study is as follows:

"How does globalisation affect the perceived job quality of individual workers with different skill levels?"

The research question is studied by testing the following hypotheses: (1) Education level positively affects perceived job quality, (1a) Relative to middle-educated workers, low-educated workers have a lower perceived job quality, (1b) Relative to middle-educated workers, high-educated workers have a higher perceived job quality, (2a) Globalisation tends to deteriorate the perceived job quality of relatively low-educated workers, and (2b) Globalisation tends to strengthen the perceived job quality of relatively high-educated workers. The analysis employs two datasets. First, data about globalisation measured as the exposure to the global economy is retrieved from the Organisation for Economic Cooperation and Development (hereafter: OECD) National Accounts. Second, data about the perception of job quality is retrieved from the International Social Survey Programme (ISSP) *Work Orientations* (WO) set. The hypotheses will be tested with a sample of six developed economies: Germany, Hungary, Norway, Israel, United Kingdom (hereafter: UK), and the United States (hereafter: US). To analyse the data, multiple linear regression techniques are deployed using STATA 16.

1.3. Academic and societal relevance

The scientific contribution of researching the perceived job quality of workers with different skill levels in a globalising world is twofold. First, the optimism for free trade as the solution to global ills is diminishing as the international competition on wages create fairness problems (Rodrik, 2017).

Assessing whether the prediction that workers with high-level education benefit from globalisation and that workers with low-level education lose from globalisation in advanced economies is reflected in individual perceived job quality (Walter & Maduz, 2009; Findlay & Kierzkowski, 1983), contributes to the understanding of the effects of globalisation on the individual level. Essentially, the results contribute to the understanding of the micro-implications of the compensation hypothesis that suggests exposure to unemployment risks and low wages due to globalisation strengthens the sense of economic insecurity (Cameron, 1978; Katzenstein, 1985; Scheve & Slaughter, 2004; Rodrik, 1998). Namely, the micro-implications regard how the link between globalisation and the welfare state is translated into the positions of individuals in the global economy and the way it shapes their perceptions (Walter, 2010).

The effects of globalisation on individuals are not easily understood as the scholarly debate provides empirical evidence for competing suggestions. On one side, studies suggest that globalisation affects policy preferences and risk perceptions of workers differently such that high-skilled workers are more likely to be in favour of trade and immigration than low-skilled workers (Walter & Maduz, 2009; Hays et al., 2005; Scheve & Slaughter, 2001). On the other, studies suggest that education level does not influence policy preferences for international trade in any way (Hainmueller & Hiscox, 2006). Therefore, studying how the subjective perception of job quality of individual workers is changing contributes to identifying how jobs are affected by international trade and helps the academic debate regarding the effects of globalisation gain more conclusive results.

Second, literature is currently inconclusive about the adequate measure for job quality. The present study contributes to the existing body of knowledge by encouraging a pure subjective worker-oriented approach at the individual level. Essentially, a subjective approach does not have to be the opposite of an objective approach as self-assessed job quality (thus subjective) helps to reveal changes in the objective job quality over time if the values of respondents are included in the measure (Green, 2006; Brown, Charlwood, Forde & Spencer, 2007, p.942). Therefore, building on subjective measures is needed to contextualise findings stemming from objective measures. This study constructs a weighted average method using job values and job outcomes and thereby contributes to the understanding of how the goodness in jobs can be subjectively quantified in science and policy. Theoretical exploration

suggests that measuring job quality should include a broad range of job aspects including monetary and non-monetary dimensions (Jencks, Perman & Rainwater, 1988). Consequently, the measure for job quality in this study is not solely determined by its wage, but by jobs characteristics as experienced by workers themselves. The measure captures three relevant dimensions that contribute to job quality, namely: pay, future prospects, and job content (Clark, 1998).

Furthermore, the present study is relevant in both scientific and social aspects as rising political tensions observed in the globalised world require a thorough analysis of the effect of globalisation on good jobs that clarifies global trends and directions for policy making. Understanding job quality is becoming increasingly important as it contributes to the economic welfare of citizens by ensuring that the benefits of economic growth is not merely limited to a small group of people (Rodrik, 2019). Moreover, a shortage of good jobs is related to a range of public ills, such as the rise of nativist populist political movements and political polarisation (Rodrik & Sabel, 2019). Additionally, several supranational and inter-governmental organisations have declared the importance of improving job quality (Muñoz de Bustillo et al., 2009). To illustrate, G20 countries have signed the Ankara Declaration that emphasises the commitment to strengthening job quality in order to sustain economic growth and foster inclusiveness (Findlay, Warhurst, Keep & Lloyd, 2017).

Thus, understanding how workers perceive their jobs' quality while dealing with increasing globalisation could perhaps elucidate the wider public debate on changes in society and political landscapes. More practically, the findings provide policy makers with information about the state of job quality, possibly giving direction for shaping job quality policies (Acemoglu, 2001). Finally, the global outbreak of COVID-19 caused dramatic changes to jobs. Job loss, job changes (such as job satisfaction and job stress), and job outcomes (such as job commitment and coping strategies) are identified as few of the focal issues in studying the impact of the crisis on jobs (Venkatesh, 2020). As such, this study lays down the foundation for a comparative analysis of pre-COVID-19 and post-COVID-19 job quality perceptions.

1.4. Reading guide

The remainder of this thesis is organised as follows. *Chapter 2* further discusses the academic literature surrounding the concepts of globalisation, job quality, and education and sets out the build-up of the hypotheses. Next, *Chapter 3* explains the datasets and methodology in depth. The regression equation and empirical findings are provided in *Chapter 4*. *Chapter 5* concludes the thesis by summarising key insights, critically analysing the findings, and providing suggestions for future research in the field of globalisation and job quality.

2. Theory

2.1. Globalisation

2.1.1. Defining globalisation

Globalisation can be defined as the process of economic, social, and political international integration (Dreher, 2006). Researchers are unable to agree on a universal definition of globalisation, given that globalisation spans various of facets, disciplines, communities, and cultures (Al-Rodhan & Stoudmann, 2006). The variety in definitions of globalisation imply that it holds different meanings to different people (Al-Rodhan & Stoudmann, 2006). Amongst economist, globalisation refers to the economic internationalisation and the spreading of capitalist market relations in which production and finance is globalised (Cox, 1999; Pieterse, 1994). Differently, according to political scientists, globalisation refers to proliferation of international relations and the growing importance of world politics (Pieterse, 1994, p.658). Moreover, sociologists focus on the development of world societies with global standardisation of cultures (Pieterse, 1994). When discussing the meaning of globalisation in different disciplines, globalisation is shown to be a multidimensional phenomenon.

Albrow (1990, p.9) defines globalisation as *"all those processes by which the people of the world are incorporated into a single world society, global society"*. This definition emphasises the social process of integration and standardisation to one global community. With this, the definition does not explicitly touch upon the international economic and political integration involved in globalisation. Al-Rodhan and Stoudmann (2006, p.2) used its comprehensive overview of the debate about defining globalisation and existing definitions to propose a definition themselves: *"globalisation is a process that encompasses the causes, course, and consequences of transnational and transcultural integration of human and non-human activities"*. Thus, globalisation is argued to be an ongoing process that affects communities, cultures, and economies as a result of integration (Al-Rodhan & Stoudmann, 2006). Defining globalisation such way allows for a broader interpretation and acknowledges the multidimensional

nature without constraining it to, for instance, *only* economic, political, and cultural integration. Therefore, the present study wishes to abide to this definition when referring to globalisation. However, constraints in measurability exist when using such broad definition of globalisation. The methodological approach to measuring globalisation will be discussed in *Chapter 3*.

2.1.2. Effects of globalisation

Scholars have widely discussed whether globalisation has a positive or negative effect on the welfare state (Dreher, Sturm and Ursprung, 2008). Academic literature often expresses the impact of globalisation in two hypotheses, namely the efficiency hypothesis and the compensation hypothesis. The former argues that globalisation has a negative effect on public expenditures as countries exposed to globalisation have access to bigger markets, countries are also exposed to tougher competition. The efficiency hypothesis assumes that firms will move its production chain to reduce costs, which leads to a decrease in jobs. Here, a race to the bottom occurs as taxes go down, causing a decrease in public expenditures. The latter hypothesis argues conversely. The compensation hypothesis assumes that globalisation has a positive effect on the size of government as the reduction of production costs leads to more insecurities among employees. As employees are more exposed to the risk of becoming unemployed or having lower wages, they will demand the government for compensation of the economic risk (Rodrik, 1998).

Both hypotheses have their specific explanatory powers for the effects of globalisation. Macro studies suggest mixed results as variables and measurements may vary. For instance, Rodrik (1998) found a positive correlation between an economy's exposure to international trade and the size of its government. The results suggest that societies seem to demand (and receive) an expanded government role as the price for accepting larger doses of external risk. Rodrik's (1998) evidence for the compensation hypothesis tends to also prevail in microstudies as findings suggest a positive relationship between globalisation and government expenditures. For example, Walter (2010) conducted a study on the effect of globalisation by means of survey data and focused on microlevel causal mechanisms of globalisation on the welfare state. The scholar found empirical evidence for the causal foundations of

the compensation hypothesis: Swiss losers are more likely to express feelings of economic insecurity, which increases the likelihood of expressing preferences for more welfare state involvement.

More important for this study, Walter (2010) finds that the effect of exposure to globalisation is highly dependent on an individual's skill level. Given that Switzerland is an advanced economy, those who benefit are often well-educated, whereas those who are negatively impacted are often low educated (Walter, 2010). Within microstudies, inconclusive results exist as other studies find no significant evidence for globalisation affecting the risk perception and policy preferences differently for individuals working in tradable industries with a comparative advantage and individuals working in non-tradable industries with no comparative advantage (Rehm 2009; Rehm, 2016; Walter & Maduz, 2009, p.17).

Differently, Dreher and colleagues (2008) used panel data to study the impact of globalisation on the composition of government expenditures. Here, the scholars argue that both effects unfold. The liberalisation of trade and factor mobility erode income and capital tax bases and will eventually lead to a global race to the bottom in taxes. Further to this, a governments' ability to finance welfare state activities will fade (Dreher et al., 2008). However, for a government to maintain its political support, maximisation motives tend to direct the political process towards a redistribution of the economic gains induced by globalisation via for instance social welfare programs (Dreher et al., 2008). Here, the compensation effect undermines the efficiency effect, which implies that the overall effect of globalisation on government welfare programs remains to be ambiguous (Dreher et al., 2008). Therefore, globalisation is a complex phenomenon – with mixed definitions and interpretations – that has mixed effects in public policy.

Furthermore, the discussion and study of the effects of globalisation does not go without the understanding of technological advancements that are bound to the timeline and development of globalisation (Autor et al., 2015; Iversen & Cusack, 2000). The effects of globalisation on the labour market were long argued to be intertwined with the effects of technological advancements. Subsequently, both phenomena lead to similar effects on the labour market. Following this entanglement, Autor and colleagues (2015) were able disentangle the effects of globalisation and technological developments on the labour market. Instead of studying the overall effects of international

trade, Autor et al. (2015) studied the effects of imports from China on the labour market. As the imports from China have grown explosively since joining the World Trade Organisation (WTO) in 2001, these effects were more traceable than the gradual increase in international trade in general (Van Vliet, 2019). Autor and colleagues (2015) find that globalisation and technological development have distinctive effects on the labour market: i) due to globalisation, employment decreases in sectors exposed to imports from China as production lines are disappearing; and ii) due to technological developments, the labour market polarises as routine jobs in the middle segment are replaced by technology.

2.1.3. Education and effects of globalisation

The effects of globalisation on the welfare state are also studied in the context of public support and demand for social policies (Busemeyer & Garritzmann, 2018). Advocates of the compensation hypothesis argue that globalisation increases the demand for compensatory social policies such as unemployment insurances and education investments (Busemeyer & Garritzmann, 2018, p.427). Contrary, the efficiency hypothesis implies that these social expenditures are limited as tax rates go down (Swank & Steinmo, 2002). The present study further elaborates on the implications of the compensation hypothesis on micro-level as previously done by Walter (2010) and Busemeyer and Garritzman (2018).

2.1.3.1. International trade models

The compensation hypothesis suggests that the demand for social insurances via the welfare state increase with globalisation as the exposure to unemployment and lower wage risks strengthens economic insecurity (Cameron, 1978; Katzenstein, 1985; Scheve & Slaughter, 2004; Rodrik, 1998). The micro-foundations of this hypothesis focus on individual perceptions and preferences for policies when economic insecurity increases (Scheve & Slaughter, 2004). Compensation by the welfare state could compensate for income losses through social transfers but could also repair labour market risks ex ante by investing in education (Bonoli, 2013; Hemerijck, 2013; Busemeyer & Garritzmann, 2018, p.431). Although causality is not yet confirmed in studies, scholars suggest a positive relationship between economic globalisation and education expenditures (Dreher et al., 2008).

Investments in human capital, such as training and education, positively contributes to the employability of workers and thereby acts as an insurance against changes in demand on the labour market (Busemeyer & Garritzmann, 2018, p.432). As such, individuals with high education would support educational investments as it brings individual and societal progress (Busemeyer & Garritzmann, 2018). This expectation can be derived from economic trade models that suggest globalisation will further erode the position of those who are already disadvantaged on the labour market (Busemeyer & Garritzmann, 2018, p.432).

To begin with, the Ricardo-Viner model posits that differences in technological advancements are the source of international comparative advantage (Leamer & Levinsohn, 1994). The model assumes that the mobility of labour between sectors is limited, implying that workers with specific skills cannot easily move across sectors. Workers in the import-competing industry would lose from globalisation, whereas workers in export industries would gain from globalisation (WTO, 2008, p.132). Essentially, those with a competitive advantage would likely benefit from globalisation. As a consequence, those who lose a job would have difficulties to find a job in another sector. This short-term effect of trade liberalisation and thus increasing globalisation suggests that workers with non-competitive skills lose from globalisation.

However, sector-specific skills can become mobile over time and thereby producing a Heckscher-Ohlin equilibrium (Leamer & Levinsohn, 1994). In the Stolper-Samuelson theorem within the Heckscher-Ohlin trade theory, factor endowments play a central role, implying that comparative advantage exists in the production of goods for which the production factors are abundantly available. In the context of international trade, countries export goods for which it has a comparative advantage as those have relatively low prices. Products that require the country's scare resources will be imported (Leamer & Levinsohn, 1994). Findlay and Kierzkowski (1983) extended the Stolper-Samuelson theorem by considering human-capital endowments. Within the same vein as factor endowments, the extension suggests that workers with high-level education are considered the abundant factor of production in advanced economies (Walter & Maduz, 2009, p.5). With diminishing trade barriers, high-skilled workers are favoured in skill-abundant developed economies. Conversely, low-skilled workers are

favoured in less-developed economies (Michaels, 2007, p.1). Following this logic, high-skilled workers benefit from international trade as their employment and wages increase, whereas the opposite is true for low-skilled workers.

2.1.3.2. Empirical evidence

Economic analysis of wage differentials between high-educated and low-educated workers attribute the variation in wages to globalisation and technological change (Weisstanner & Armingeon, 2018, p.1). As discussed, losers of globalisation were more likely to express feelings of economic insecurity (Walter, 2010). According to the scholar, this effect is dependent on the skill level on the individual such that beneficiaries of globalisation were often well-educated, whereas the people feeling insecure due to increasing imports, were often low educated (Walter, 2010).

Continuing, Autor and colleagues (2013) find evidence for increased exposure to Chinese imports causing a decrease in local demand that reduces low-skilled employment in non-manufacturing industries (Cerrato, Ferrara & Ruggieri, 2018). Subsequently, low-skilled manufacturing workers are likely to face competition from Chinese imports due to openness to trade (Jensen, Quinn & Weymouth, 2017). Therefore, openness to international trade has implications for low-skilled workers in (non-) manufacturing industries as it exposes them to global competition that drives down the demand – and eventually wages – for low-skilled labour. Within the same vein, studies suggest that *"globalisation tends to benefit skilled labour relatively more than unskilled labour – even in labour-abundant countries"* (Kuo & Naoi, 2015, p.132). As a consequence, scholars find that more-educated workers in developing countries were more in favour of openness in comparison to less-educated workers (Ardanaz, Murillo & Pinto, 2013; Kuo & Naoi, 2015).

Moreover, several studies find that the effects of economic globalisation are strongly related to education and skill levels. López-Villavicencio and Ortiz (2017) studied the effects of economic globalisation on employment levels for 20 OECD countries and find that outflows of foreign direct investments, restrictions of cross-border trade, and capital transactions reduce the unemployment rate. However, capital account openness raises the unemployment rate. In this, educated workers tend to have more *offshorable* jobs, meaning that such workers can work their jobs from abroad (Blinder & Krueger, 2013).

As such, the education level is tightly related to the security a job has as a result of increasing globalisation. Similarly, Colantone and Stanig (2016) find that the impact of globalisation on the labour market played a key role in the political support for Brexit. The scholars find that geographically concentrated economic distress, driven by imports from China (as a measure for international trade), led to an increase in Leave support (Colantone & Stanig, 2016). In different words, individuals living in regions that were more affected by import shocks, were more likely to support the UK in leaving the European Union (hereafter: EU), meaning that Leave support was conditional on education (Rodrik & Sabel, 2019).

Thus, the level of education seems to play an important role on how workers can be affected by globalisation. Subsequently, their perceptions and behaviour towards work can be altered by this development. To further investigate the effects of globalisation and educational levels on how jobs are perceived, the next section discusses job quality.

2.2. Job quality: good jobs and bad jobs

2.2.1. Defining good jobs

Job quality addresses whether jobs can be considered good jobs or bad jobs. Defining good jobs can be slippery as the academic discussion about good jobs provides different explanations and definitions (Rodrik & Sabel, 2019). Starting from a philosophical perspective, the discussion of defining good jobs moves towards the definitions used in academic studies. A definition good and bad jobs can be found in Marx's ([1867], 1967) critique on political economy, in which he argues that *"employer's ownership and control of the means of production ensured that virtually all jobs would be bad"* (Kalleberg, Reskin & Hudson, 2000, p.259). This deterministic conceptualisation of jobs has been altered by sociologists who include the prestige of jobs (Hodge, Siegel & Rossi, 1964; Kalleberg et al., 2000) and physical demands (Cain & Treiman, 1981) into the definition. The prestige of jobs was determined by the workers themselves as respondents were asked for their *personal opinions* of the *general standing* a job has (Hodge et al., 1964, p.288).

In Acemoglu's (2001) study about good versus bad jobs in non-competitive labour markets, good jobs are referred to as high-wage jobs whereas bad jobs are referred to as low-wage jobs. High-wage jobs are

referred to as good in this study, as in the laissez-faire equilibrium there will be too few jobs with high wages (Acemoglu, 2001). Similarly, in a study about the labour market adjustments and trade liberalisation, good jobs are defined as jobs with an above average wage (Davis & Harrigan, 2011). Reasoning from these studies, the main characteristic that defines whether a job is good or bad, is its economic compensation for labour, namely wages. Even more specific, scholars researching programs about creating good jobs have attached a specific quantification for wage, such as at least sixteen US dollars an hour (Pollin, Garrett-Peltier, Heintz & Scharber, 2008).

However, other economic compensations for labour are overlooked in approaching good jobs. Kalleberg (2011) argues that the economic dimension of labour reflects a social wage, that includes the earnings from labour and non-wage benefits (e.g. health care benefits and annual leave). The non-wage benefits may enhance the economic value of a job, meaning that the economic value of a job is not merely reflected in the wage of a job. Therefore, defining a job based on its wage is insufficient. To this end, Clark (1998) was amongst the first of scholars to point out that job quality has been largely focused on its remuneration, neglecting the experiences as reported by the employees themselves. More importantly, monetary rewards seem to be the least important job aspect in comparison to job autonomy, job security and promotion opportunities (Clark, 1998).

Similarly, Kalleberg (2011) conducted a study among American workers and identified that having autonomy, control, and opportunities for advancing to jobs with higher wages define job quality alongside economic compensation. The extent to which these job values are reflected in a job together with the importance to the values given by workers themselves, allows people to define whether their job is ‘good’ or ‘bad’ (Kalleberg, 2011). Osterman and Shulman (2011) take a broader approach when studying below-standard jobs in the US job market. The scholars argue that job quality is polarised in good jobs and bad jobs: good job provides high wages, benefits, opportunities for advancements, and trainings. In contrary, the *dead-end* bad jobs pay minimum wages and do not offer possibilities for learning new skills nor vertical mobility (Osterman & Schulman, 2011; Smith, 2013). According to Kalleberg (2011), the number of good jobs can be expanded by creating (public) jobs that establish high wages and provide benefits. In the same vein, existing bad jobs can turn into good jobs by incentivising

private employers to change the wages and working conditions of the dead-end jobs (Osterman & Schulman, 2011).

Two important contributions of these studies can be identified, namely: a) job quality that defines good and bad jobs are specified using both economic and non-economic measures, and b) good and bad jobs are a product of evaluation done by workers themselves. Therefore, wage differentials (Acemoglu, 1996) should not be the mere characteristics in defining the quality of jobs. Furthermore, good jobs and bad jobs are defined through a subjective procedure that involves the subjective importance and interests of individual workers. Thus, the focus of this study will be on the subjective perception of job quality as defined by scholars Kalleberg (2011) and Osterman and Schulman (2011), instead of the objective notion of good jobs in terms of its wage as traditionally proposed (Acemoglu, 2001; Acemoglu, 1996).

In addition to the multidimensionality and individual value assignment in good jobs, defining a good job is also subjected to the national context one argues from. Good jobs have a broad definition as the perception of a good job is also bounded to national contexts (Mughan, Bean & McAllister, 2003). For example, in the US, a good job *"offers excellent wages and fringe benefits, healthy prospects of promotion, pleasant working conditions, and long-term job security"* (Burtless, Lawrance, Litan & Shapiro, 1998, p.51). However, while private employers providing benefits is common in the US, in other countries such as Australia and the Netherlands, the government often bears the responsibility of providing health benefits and pensions (Mughan et al., 2003). Following, it is more difficult to formulate one single sound definition of a good job that satisfies all perspectives; hence it becomes more logical to study the *perception* of job quality.

2.2.2. Components of good jobs

As discussed, defining good jobs is complex and depends on national contexts. However, by using these definitions, one can determine the indicators that illustrate whether a job is good or bad. Clark (1998) suggests that a good job is explained through multiple aspects than merely earnings and hours worked. He argues that only accounting for wage and hours is likely to provide a misleading understanding of good jobs and the behaviour of workers. Workers value multiple aspects of their job, such as the length of the working week and job content (Clark, 1998). The author argues that a good job is defined by six

attributes: pay, hours of work, future prospects, job difficulty, job content, and interpersonal relationships (Clark, 1998, p.17). These aspects together provide a comprehensive, but not exhaustive, understanding of good jobs that is reflective of a large body of literature.

In a study conducted on the factors that determine job preferences, Jurgensen (1978) uses ten factors that determine whether a job is good or bad, namely: security, advancement, type of work, company, pay, co-workers, supervisor, benefits, hours, and working conditions. Opposed to Clark (1998), Jurgensen found that pay is the most important factor of a job. A decade later, Jencks and colleagues (1988) introduce a new measure for a job's desirability, in which a desired job is a good job and a non-desired job is a bad job. This measure is built on the notion that economists tend to focus on the wages, while psychologists tend to focus too much on the subjective satisfaction of workers. Jencks and colleagues (1988) have pointed out the lack of comprehensiveness in measures of job desirability. They argue that *"neither occupational status nor earnings nor job satisfaction is a good measure of a job's overall desirability"* (Jencks et al., 1988, p.1323).

Therefore, the scholars introduce a new index that aims to measure the competitive success of individuals in the labour market – thus, accounting for differences amongst jobs that belong to the same occupational category – and rank the jobs in the American economy (Jencks et al., 1988). Instead of only focusing on the remuneration, the index also includes non-monetary characteristics of jobs while explaining variation in job ratings done by workers in different occupations (Jencks et al., 1988). The index of job desirability incorporates thirteen non-monetary characteristics of jobs and includes measures of earnings. Notably, the index weights job characteristics according to their effects on workers' *judgement* on how good their current job is in comparison to an average job. The index includes the risk of job loss, vacation weeks, frequency of supervision, and educational requirements (Jencks et al., 1988).

Erickson (2017) studied the desirability for jobs on different hierarchal levels of workers in the security industry. Despite that the study focuses on the hierarchical differences amongst jobs, it uses specific indicators to assess whether these jobs are perceived as good jobs or bad jobs (Erickson, 2017). Three key indicators of job desirability are specified: income, autonomy, and routinisation. Income is defined

as the personal income before paying taxes, autonomy was measured by four items that touched upon freedom in decision making, influence of supervisors in decision making, control over speed of working, and freedom to decide how to do their work (Erickson, 2017). Finally, routinisation is measured by the question whether the worker performs the same task over and over again. According to Erickson (2017) these three characteristics make up a good job.

In a more recent working paper of Rodrik and Sabel (2019, p.5) on building a good jobs economy, good jobs are defined as a job that *"enables at least a middle-class existence, by a region's standards with enough income for housing, food, transportation, education, and other family expenses, as well as some savings"*. Noticeably, Rodrik and Sabel refer to the income (wage) as a characteristic of a good job. By referring to a middle-class existence, the scholars view on good jobs aligns with the economic notion of job quality in terms of its economic compensation that must be equal or more than the average income as previously formulated by Acemoglu (2001) and Davis and Harrigan (2011).

Thus, the six dimensions contributing to good jobs (pay, hours of work, future prospects, job difficulty, job content, and interpersonal relationships) as proposed by Clark (1998) are similarly represented in various definitions of good jobs (Erickson, 2017; Jencks et al., 1988; Jurgensen, 1978). The six dimensions are also reflected in the ISSP WO dataset and serve to illustrate good jobs but are by no means exhaustive. All six dimensions and its relationship with good jobs will be individually discussed below.

2.2.3. Dimensions of good jobs

First, several studies confirm that pay is positively related to job satisfaction (Blanchflower, Oswald & Warr, 1993; Clark, 1998).[2] Moreover, data about wages is widely available and often used in research (Clark, 1998). Workers can refer to their absolute income or relative income when defining their attitudes towards their pay (Frank, 1993; Clark, 1998). The absolute income refers to the amount of the

[2] *Note.* Clark (1998) argued that the overall job satisfaction could be a measure for job quality as it predicts whether workers would like to stay in their job or leave (p.1). Although it is able to predict changes in labour market behaviour, it does not do so by directly addressing the key components of perceived job quality. Therefore, the present study treats job satisfaction as a predictive concept for the perceived job quality that allows for hypothesising and making inferences but it is strictly not utilised as a direct synonym nor measure for job quality.

monthly pay-out for labour, whereas relative income refers to the sum of money respective to the job rank (Frank, 1993). The present study refers to both absolute and relative income when discussing the job aspect pay as the degree of importance and agreement with the statement *'my income is high'* is used (ISSP, 1989).

Second, hours of work are – similarly to wages – strongly correlated with job satisfaction and easily quantifiable and thus observable in data (Clark, 2005). When referring to hours of work, it is important to include the relationship between the desired hours worked and the actual hours worked (Clark, 2005). By considering involuntary part-time work (when preferring to work more hours than actually worked) and over-time work (when preferring to work less hours than actually worked), hours of work illustrates how good workers judge their job arrangement.

Third, the future prospects of a job refer to how workers perceive job security and possibilities for advancing in their job. It is a non-monetary job characteristic that illustrates stability related to adaptation to labour market dynamics (Clark, 1998; Karasek, Brisson, Kawakami, Houtman, Bongers & Amick, 1998). This aspect is important within the context of globalisation as global economies have job-displacing effects that increases job insecurity (Karasek et al., 1998). Together with job autonomy, job security is identified as one of the key aspects of job quality (Gallie, 2003), shaping the motivation, satisfaction, well-being, and productivity of workers (Esser & Olsen, 2012).

Fourth, job difficulty indicates how tough a job could be in terms of physical and mental exhaustion (Clark, 1998). Scholars consistently find a positive relationship between job complexity and job satisfaction (Fried & Ferris, 1987; Judge, Bonon & Locke, 2000). However, Judge and colleagues (2000) suggested the possibility that the relationship is mediated through subjective perception of job characteristics. Up until now, there is no scientific evidence for such mediating effect. However, it is plausible to assume that the effect of job difficulty on job satisfaction is determined by subjectivity as difficulty is best observed through understanding how difficult a job is perceived personally and how workers deal with it (Clark, 1998).

Fifth, job content is dedicated to the psychological aspect in jobs such as having an interesting job, being able to help others in working the job, and whether the work is useful to society (Clark, 1998). The desire to have an enriched job has been central to many studies on job motivators (Herzberg, Mausner & Snyderman, 1959; Turner & Lawrence, 1965). In addition, being able to work independently and plan their own work contributes to a positive job content. Importantly, these two features together measure job autonomy, which is regarded as one of the most essential aspects in a job (Clark, 1998, p.9). As such, having psychological features satisfied is considered a positive contribution to job perception.

At last, sixth, interpersonal relations refer to the strength in relationships workers have with management and colleagues (Clark, 1998). Interpersonal social and professional relationships are identified as a strong predictor for job satisfaction (Adams & Bond, 2000) and the key component of creating job satisfaction at work (Newman & Maylor, 2002; Dunn, Wilson & Esterman, 2005; Utriainen & Kyngas, 2009).

In conclusion, a good job is a satisfying job (Clark, 1998), that not only pays an adequate wage, but also answers the non-monetary needs of people in terms of autonomy and excitement of working. Whenever society lacks these good jobs, scholars identify a market failure in which the labour market is unable to produce a satisfying number of good jobs that have positive external effects (Rodrik & Sabel, 2019).

2.2.4. State of good jobs

In streams of research, scholars find evidence for a dramatic decrease in good jobs – defined as jobs with a lower-than-average wage – and an increase in low-wage jobs (Loveman & Tilly, 1988; Schmitt & Jones, 2012; Rodrik & Sabel, 2019). Defined as a job that pays at least the average wage, with the employer providing health insurance and sponsoring retirement plans, Schmitt and Jones (2012) found a decrease in American good jobs in the period 1979 to 2010. Their findings suggest that merely 25 percent of the US workforce had a good job in 2007; implying that – relative to the economy in 1979 – the US has lost one-third of its capacity to generate good jobs (Schmitt & Jones, 2012, p.1). Similarly, Kalleberg (2011) finds an increasing job quality polarisation between 1970 and 2000.

The pace of technological development is often found to be the explanation for the decrease of the economy's ability to create good jobs (Schmitt & Jones, 2012). Due to the routinisation of jobs, mid-level skilled jobs are replaced by machines (Kalleberg, 2011), which in turn leads to the polarisation of jobs that are hard to become routine (high skill jobs) and jobs that are replaceable by machinery (Levy & Murnane, 2004). Similar to this Autor and colleagues (2015) found evidence for technological developments leading to polarisation on the labour market due to jobs in the middle segment being replaced by technology. Therefore, the rapid pace of technological development seems to have explanatory power for the variance in good jobs.

However, a substantially higher share of college degree workers with good jobs is expected if the decrease in good jobs is rightfully caused by the pace of technological developments (Schmitt & Jones, 2012). As the deterioration of good jobs is potentially caused by technological developments, through which the low-skilled jobs are destroyed, shifted overseas, and replaced, scholars expect a larger increase of high-skilled jobs that are considered good jobs (Kalleberg, 2011). Schmitt and Jones (2012) argue that such pattern is not found in the American good jobs data. However, Temin (2017) finds that economies allow dualistic labour markets to become entrenched, meaning that high-wage and productive jobs and low-wage jobs coexist. As wages rise due to increases in productivity or bargaining power of labour unions, firms tend to adopt technologies that replace workers to economise the use of labour (Rodrik & Sabel, 2019). Here, economies inch closer to an undesirable trade-off between good jobs and employment levels.

Taken into account the similar effects of globalisation and technological advancement on the labour market (Autor et al., 2015; Van Vliet, 2019), it is worthwhile to discuss how globalisation may be the explanatory phenomenon for the changes in job quality. In right-wing populist rhetoric, the liberalisation of the international economy is argued to be the cause of job insecurity and unemployment (Mughan et al., 2003). Their argumentation follows the logic of the compensation hypothesis in which workers are exposed to larger economic risks. Increasing globalisation exposes workers in affluent countries to the risk of becoming unemployed or having to accept lower wages as production is moved overseas (Mughan et al., 2003). Typically, workers have no control over such economic forces. On top of that,

good jobs are becoming scarcer as globalisation pushes *inferior labour market opportunities* overseas. However, this argument is inherently flawed as pushing inferior labour market opportunities – thus bad jobs – overseas does not equal the decrease of good jobs.

2.3. Globalisation, labour market, and education

Previous sections have discussed the theoretical concepts separately. Here, concepts are integrated by reviewing the state-of-the-art and formulating the hypotheses.

The starting point for developing the hypotheses is reflecting on the suggestions of international trade models regarding who wins and who loses from economic globalisation. Following the logic of the Ricardo-Viner, Heckscher-Ohlin, and Stolper-Samuelson trade theories, globalisation will further erode the labour market position of those who are already disadvantaged (Busemeyer & Garritzmann, 2018, p.432). Essentially, the Stolper-Samuelson theorem posits that international trade is dependent on the comparative advantage of countries. Human-capital endowments are central in understanding trade and resources: developing countries are typically well endowed with low-skilled labour leading such countries to export low-skilled labour-intensive goods to develop countries in the industrialised world (Findlay & Kierzkowski, 1983; WTO, 2008, p.123). As a consequence, the demand for low-skilled workers increases in developing countries while it decreases in developed countries, implying increasing inequality between high-skilled and low-skilled workers in industrialised countries (WTO, 2008, p.123). This effect is due to trading with developing countries. In terms of winning and losing, high-skilled workers benefit from globalisation whereas low-skilled workers lose.

Reasoning from the compensation hypothesis, workers would demand compensation for being exposed to the risks of economic globalisation. Within this view, globalisation has a positive influence on the size of the welfare state. As economic competition increases, certain industries and occupational groups can experience shocks that would lead them to demand social policies to compensate for their losses due to international trade (Rodrik, 1998; Lammers, Van Gerven-Haanpaa & Treib, 2018). Therefore, attitudes towards the welfare state may differ as workers with different educational background and skill-level are not impacted the same by globalisation. To illustrate, analyses of outsourcing shows that the demand for middle-skill level is shifting away in Sweden and Japan (Ekholm & Hakkala, 2006;

OECD, 2007). Subsequently, outsourcing has negative effects for the demand of unskilled workers (Hijzen, Gorg & Hine, 2005).

The effects of globalisation on jobs are reflected in the divide of the labour market. Combined with technological advancements, globalisation creates a productive-technological dualism, in which economies have metropolitan areas with advanced productivity thriving on the knowledge economy on one side, and less productive activities failing to contribute nor to benefit from innovation on the other side (Rodrik & Sabel, 2019). In different words, while good jobs and bad jobs coexist in economies, the number of good jobs is drastically decreasing (Rodrik & Sabel, 2019). The compensation hypothesis allows for a line of reasoning that includes the negative effects of globalisation on job quality. Employees are insecure as they are more exposed to the risk of becoming unemployed or having lower wages. Such economic risks are affecting the narrow definition of good jobs, namely low-wage jobs. Additionally, the fear of becoming unemployed – thus job insecurity – poses consequences for the broader approach to good jobs. Continuing with the effect of globalisation on the labour market, engaging in international trade requires skilled labour (Matsuyama, 2007). As such, international trade continues to benefit high-skilled workers as they can take advantage of increasing markets (Epifani & Gancia, 2006). This comparison suggests that the effect of globalisation on jobs is asymmetric for people with different skill levels.

Literature provides support for such effect as Walter (2010) found empirical evidence for the compensation hypothesis among Swiss workers, namely that losers of globalisation are more likely to express feelings of economic insecurity, which in turn increases the preferences for welfare state expansion as they demand compensation for their exposure to risk. Most importantly, Walter (2010) suggests that the effect of exposure to globalisation is highly dependent on the skill level of the individual. Within the context of an advanced economy, well-educated workers benefit, while workers with low levels of education are affected negatively. Prior research also finds evidence for globalisation affecting the number of good jobs. Davis and Harrigan (2007) make use of intra-industry simulation models to showcase that one fourth of existing good jobs are destroyed in the liberalisation model. Intra-industry trade implies diversification instead of product specialisation between countries and stems from

a preference for products within the same sector but from a different country (Krugman, 1980). Different from traditional models, Davis and Harrigan's (2007) model assume involuntary unemployment and wage differences between identical workers. Both assumptions are contingent for good jobs as the former implies that losing a job leads to a situation where a person has no work nor wage. The latter assumption implies that someone working a good job may fear that re-employment pays a lower wage – meaning the good job can turn bad (Davis & Harrigan, 2007).

Thus, globalisation is found to have an effect on good jobs on macro-level as research finds a decrease in good jobs (Davis & Harrigan, 2007). Up until now, microstudies only considered wages and job security (or risk of unemployment) as pillars for job quality (Walter & Maduz, 2009; Cameron, 1978; Katzenstein, 1985; Scheve & Slaughter, 2004; Rodrik, 1998). Therefore, research is yet to study the effects of globalisation on micro-level using a comprehensive understanding of job quality according to the dimensions proposed by Clark (1998; 2005). To assess how globalisation is impacting the perception of job quality of individual workers with different skill levels, the following hypotheses are formulated.

First, the skill level of the worker is expected to positively affect to the perceived job quality. This is to capture the effect of education on perceived job quality. Within the same vein as the idea of Arrow (1997), education level is associated with using information more efficiently for shaping expectations about jobs and labour market choices (Vila & Mora, 2005). As a result, high-educated workers are more likely to benefit from additional non-monetary gains such as independence and healthy working conditions than low-educated workers (Vila & Mora, 2005). These non-monetary gains contribute to the perception of job quality, suggesting that higher education levels lead to a higher perception of job quality. Therefore, the first hypothesis is formulated as follows:

Hypothesis 1: Education level positively affects perceived job quality.

Second, globalisation is expected to affect the perceived job quality of workers differently depending on the skill-level. Reasoning from the Stolper-Samuelson theorem, human-capital endowments explain the tendencies of international trade. In advanced economies, high-skilled workers are considered the abundant factors of production (Walter & Maduz, 2009, p.5; Findlay & Kierzkowski, 1983). With

international trade increasing, high-skilled workers benefit from increasing employment and increasing wages while low-skilled workers become more favoured in less-developed economies (Walter & Maduz, 2009; Michaels, 2007). In different words, high-skilled workers in advanced economies are the winners of globalisation while low-skilled workers are the losers (Walter & Maduz, 2009). Building on the findings that low-skilled workers lose from globalisation (Vila & Mora, 2005; Rodrik & Sabel, 2019) and that levels of education affects non-monetary gains from work (Arrow, 1997), it is expected that people with relatively higher levels of education have a better perception of job quality and people with relatively lower levels of education have a worse perception of job quality as a consequence of globalisation. The hypotheses are:

> **Hypothesis 2a:** Globalisation tends to deteriorate the perceived job quality of relatively low-educated workers.
>
> **Hypothesis 2b:** Globalisation tends to strengthen the perceived job quality of relatively high-educated workers.

The following chapter outlines the methods used for testing the hypotheses.

3. Methodology

3.1. Methodological approach

This study follows a deductive approach to research. First, existing theoretical suggestions about globalisation, good jobs, and education were explored in *Chapter 2*. Next, hypotheses based on existing literature were presented (Bryman, 2016, p.21-3). Data collection is driven by the hypotheses derived from theory (Merton, 1967) as the selected datasets reflect the theoretical concepts as described. Findings from empirical research are analysed to decide whether the hypotheses are supported or not (Bryman, 2016). As such, knowledge about the effect of globalisation on the perceived job quality of workers with different education levels is derived from quantitative data analysis. Subsequently, logical inferences are made based on these findings. It is an inherent positivist approach as the study relies on statistics to reveal how globalisation affects the perception of job quality in society. Ultimately, the implications from the findings are reflected on its ability to be fed back into existing theories.

3.2. Data

This study utilises two datasets to study the effect of globalisation on the perception of job quality. First, data about the level of globalisation measured as the exposure to global economy is retrieved from the National Accounts data of OECD. Time series data of international trade is used to construct the independent variable *globalisation*. Data about international trade includes both import and expert of goods and services as a percentage of the gross domestic product (hereafter: GDP).

Second, data about the perception on job quality is taken from the International Social Survey Programme (hereafter: ISSP) Module on *Work Orientations* (hereafter: WO) dataset. ISSP is a cross-national collaboration that provides data on multiple topics. The dataset consists of four waves: 1989, 1997, 2005, and 2015. The data is collected by distributing surveys on a large scale to over 45 member countries of ISSP (Jutz, Scholz, Braun & Hadler, 2018). In the ISSP survey, nine aspects of a job are

presented: job security, high income, opportunities for advancements, interesting job, allows to work independently, allows to help others, and usefulness to society. Respondents are asked to rank the importance of job characteristics from 1 (very important) to 5 (not at all important). This reflects the job values of respondents. Subsequently, respondents are asked how the job aspects are represented in their own job. This reflects the job outcomes. The dataset is used to construct the dependent variable *perception of job quality* by using the weighted average of job values and job outcomes. The ISSP dataset includes the education level for each observation and thereby allows for the creation of the moderating variable *education*. For ISSP WO, no cumulated datasets exist. The four waves are compiled manually and key variables are harmonised to allow for analysis.

The present study uses STATA 16 to manage the datasets and run the statistical analyses.

3.3. Sample

The sample consists of six advanced economies: Germany, Hungary, Norway, Israel, UK, and US. Sample selection is based on strict criteria of data availability. Data on globalisation is largely available for all countries. However, most importantly, countries must have participated in the ISSP WO survey in all four waves. Data on the perception of job quality is required as it functions as the main focus of this study. As such, countries with ISSP data in three waves or less were excluded from the sample to avoid missing data.

ISSP WO data is divided into three sections, namely: all respondents, respondents in paid work, and respondents not in paid work at the time of participating in the survey. The working population allows for an understanding in behavioural and attitudinal work-related variables such as working conditions, work values, and job characteristics (Jutz et al., 2018). Differently, the not-working-for-pay population allows for an understanding in the ending of employment and the process of job seeking (Jutz et al., 2018). As the scope of this thesis involves the perception of job quality that is described through the job characteristics as judged by workers, the dataset only includes observations of the working population. Implications of the selection of countries are further discussed in *Chapter 5*. *Table 1* provides an overview of the distribution of observations across the sample.

Table 1

Distribution of observations in the sample

Country	Observations	Percentage	Cumulative
Germany	3.623	17.69	17.69
Hungary	2.292	11.19	28.88
Norway	5.077	24.79	53.67
Israel	3.041	14.85	68.51
UK	2.739	13.37	81.89
US	3.710	18.11	100.00
Total	20.482	100	

Note. The number includes observations with missing data for education, job values, and job outcomes. STATA 16 omits these when running the statistical analyses.

3.4. Measures

The key variables in this study are globalisation, perceived job quality (good and bad jobs), and education. This section explains how these variables are measured.

3.4.1. Measuring globalisation

The present study uses the share of international trade as percentage of the GDP to measure the degree of globalisation. Multiple studies have used the measurement of exposure to global trade as an indicator of globalisation. The level of economic integration is often indicated as the sum of import and export as a percentage of the GDP (Dreher, 2006). The share of international trade is calculated by summing the imports and exports of goods and services of a specific country. The trade-to-GDP ratio is computed as follows:

$$G_{ct} = \frac{import_{ct} + export_{ct}}{GDP_{ct}}$$

The import, export, and trade-to-GDP ratio for the sampled countries are tabulated below in *Table 2*. The sample of the six selected countries have a minimal value of 19.41 - illustrating that the corresponding country's share of international trade in GDP is 19.41 percent. The maximal value of the sample is 167.97. Countries with an international trade-to-GDP ratio over hundred may either import more than consumed domestically or export more than produced domestically. *Figure 1* visualises the development in international trade for the period 1989-2015.

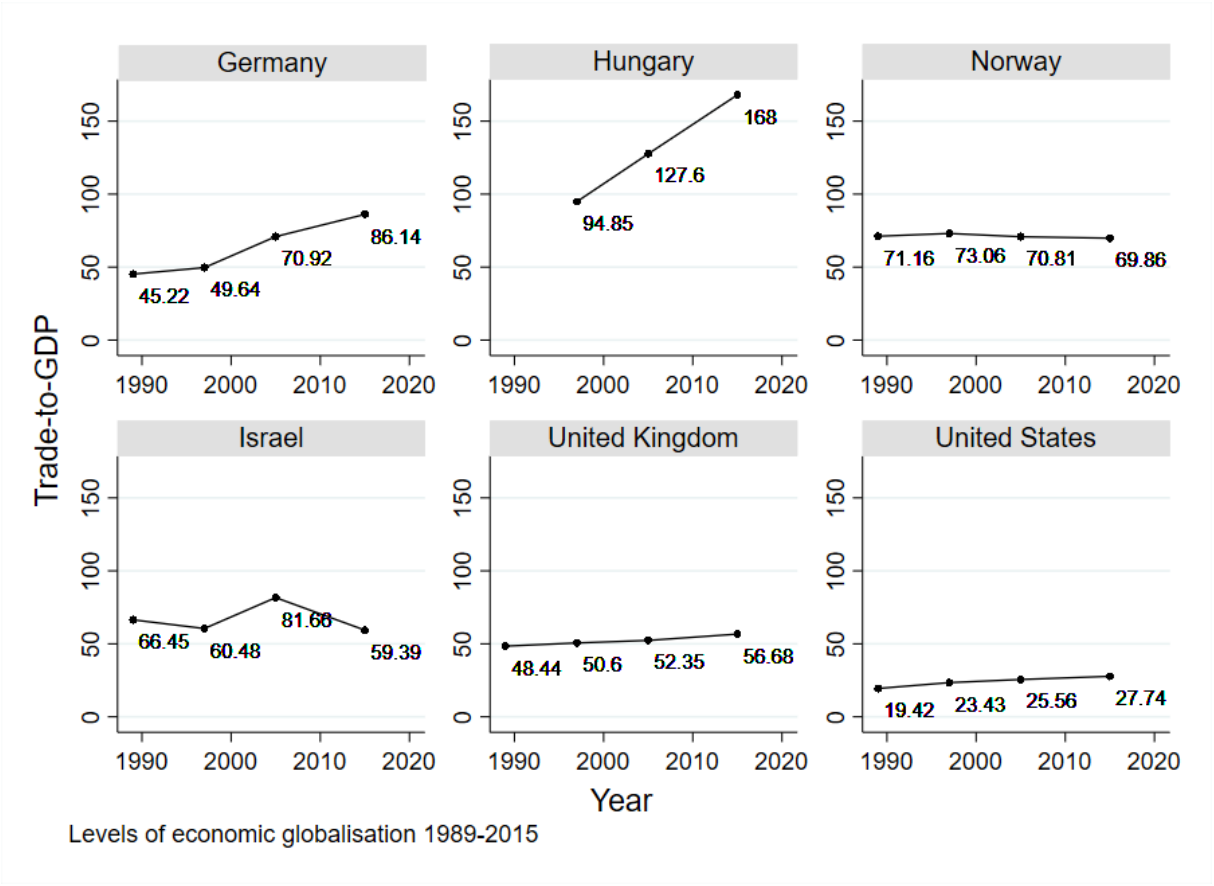
Table 2

Trade-to-GDP ratio in years 1989, 1997, 2005, and 2015 for the six sampled countries

	1989			**1997**			**2005**			**2015**		
	import	*export*	***trade***	*import*	*export*	***trade***	*import*	*export*	***trade***	*import*	*export*	***trade***
Germany	22.92	22.30	**45.22**	24.28	25.36	**49.64**	32.86	38.06	**70.92**	39.29	46.85	**86.14**
Hungary	-	-	-	46.94	47.91	**94.85**	64.95	62.64	**127.59**	79.99	87.98	**167.97**
Norway	33.84	37.32	**71.16**	32.51	40.56	**73.06**	27.41	43.40	**70.81**	32.06	37.80	**69.86**
Israel	35.07	31.38	**66.45**	32.58	27.89	**60.48**	40.89	40.77	**81.66**	28.18	31.21	**59.39**
UK	26.04	22.39	**48.44**	25.05	25.55	**50.60**	27.38	24.97	**52.35**	29.03	27.65	**56.86**
US	10.48	8.94	**19.42**	12.31	11.12	**23.43**	15.54	10.01	**25.56**	15.30	12.44	**27.74**

Figure 1

Levels of economic globalisation in years 1989, 1997, 2005, and 2015 for the six sampled countries



Note. The markers are for trade-to-GDP ratios in 1989, 1997, 2005, and 2015. Data about the international trade of Hungary in 1989 was not available in the OECD National Accounts dataset.

Another way of determining globalisation is through foreign direct investments (FDI). Measuring the flows of capital results into lower absolute levels of globalisation as FDI are more recent phenomena

(Dreher, 2006). However, actual flows can be problematic as policy restriction, economic growth and changes in supply and demand interact. Implications of using the ratio of exports and imports to GDP to measure openness of countries – thus the degree of globalisation – will be discussed in *Chapter 5*.

3.4.2. Measuring perceived job quality: good jobs and bad jobs

Differentiating good jobs and bad jobs can be done using multiple approaches. In the same vein as the theoretical discussion, job quality can be determined based on the remuneration of labour. These approaches are income-centred and merely take the economic compensations of labour into consideration for assessing the job quality (Acemoglu, 1996; Clark, 1998; Kalleberg, 2011). However, as the definitions of good jobs gain broader descriptions that include the judgement of employees, so do the measurements for job quality.

In studies conducted on good jobs, economists tend to rank jobs based on their wages (Acemoglu, 1996). Here, the measurement of job quality is based on the remuneration of labour, meaning that a higher-than-average wage measures a good job and a lower-than-average wage measures a bad job (Acemoglu, 1996; Clark, 1998). However, earnings are a rather incomplete measure for job quality as scholars find that – although earnings remain important – non-monetary characteristics of jobs are seen as twice as important by workers (Jencks et al., 1988). Not only does a wage-focused measurement of job quality limit the scope in which workers can define a job as good or bad, it also does not account for substantial wage dispersions within jobs (Goos & Manning, 2007). Moreover, it proposes a dichotomy: a job can either bad or good and there is nothing else in between these judgements.

In an effort to study the distribution of good and bad jobs, Clark (1998) suggests that a good job is explained through multiple aspects than merely earnings and hours worked. Clark (1998) developed the Job Quality Count (hereafter: JQC) method that compiles six key attributes that characterise good jobs, namely: pay; hours of work; future prospects; job difficulty; job content; and interpersonal relationships. The JQC-method transforms each aspect into a dummy variable and sums all positive outcomes. A high score would suggest a good job, whereas a lower score would suggest a bad job.

Despite the theoretical richness of the method, it assumes that job aspects are equally important to all workers. Treating all job aspects equally can be problematic as individuals in different countries have various appraisals for job aspects (Clark, 2005). To illustrate, one might think it is more important to have good opportunities for advancing in their job than others (Clark, 2005). These differences are reflected in the responses in the WO survey. Summing the positive outcomes of job aspects does not allow for weighting the outcome with the importance of job values as expressed by the individual. For instance, one might have a *quite good* relationship with management while attaching a very low importance to the job aspect. Consequently, the measure based on dichotomous outcomes classifies the response as a contribution to a good job whereas the individual may not do the same as it deems the importance as low.

Therefore, to allow for the subjectivity of respondents to be reflected in the perception of job quality, a weighted average is used. Jencks and colleagues (1988) were among the first scholars to include the importance of job characteristics given by workers in measuring job quality. To study the job satisfaction in Argentina, Brazil, Chile, Hungary, and Ukraine, the scholars Ritter and Anker (2002) used subjective indicators of job satisfaction to construct the Good and Bad Jobs Index (GBJI). Similar to the job aspects proposed by Clark (1998), Ritter and Anker (2002) use the following six variables to measure job satisfaction: pay, non-wage benefits, nature of work, autonomy or independence, opportunities for promotion, and opportunities for upgrading skills (Ritter & Anker, 2002, p.333). These job aspects are reflected in questions asked in the People's Security Survey in which respondents were invited to rank each dimension ranging from 1 (very dissatisfied) to 5 (very satisfied). The six dimensions together compile a total score for job satisfaction and is referred to as the GBJI (Anker & Ritter, 2002; Muñoz de Bustillo, Fernandez-Macias, Anton & Esteve, 2009). As six dimensions are summarised, the GBJI ranges between 6 (very dissatisfied) and 30 (very satisfied).

However, the GBJI does not include the importance of each job value given by the respondents. To incorporate the subjectiveness in job values, the Subjective Quality of Working Life Index (SQWLI) weights each attribute to the relevance given by individual workers, allowing for a purely subjective measure (Muñoz de Bustillo et al., 2009, p.98). The measure covers the following dimensions:

remuneration, social-realisation, relationships, time, conditions, and security (Muñoz de Bustillo et al, 2009, p.98). Different from the data collected in ISSP WO, each dimension is represented by three indicators. The SQWLI is calculated by combining the importance given by each worker (ranging between 1 = very unimportant and 6 = very important) with the worker's satisfaction with each aspect (ranging between -3 = very dissatisfied and 3 = very satisfied) (Muñoz de Bustillo et al., 2009, p.98-99; Vinopal, 2009). The measure used for this study requires a different approach due to the data collected in ISSP WO.

The ISSP WO survey asks respondents to rate seven job aspects on a scale from one to five, in which 1 = very important and 5 = not important at all. The job values are listed in *Column 2* of *Table 3* below. The importance of having personal contact with other people is only measured in 2015 and is therefore not included in the measure. Following, respondents are asked to rate how the job values are applicable to their own job. The job outcomes are listed in *Column 3* of *Table 3*.

Table 3

Items for measuring perceived job quality

Job aspect	**Job values (importance)**	**Job outcomes**
Pay	High income	My income is high
Future prospects	Job security	My job is secure
Future prospects	Opportunities for advancement	My opportunities for advancement are high
Job content	An interesting job	My job is interesting
Job content	Work independently	I can work independently
Job content	Help other people	I can help other people
Job content	Useful to society	My job is useful to society

Note. The wording of survey questions can slightly differ across four data waves. The questions tabulated here are based on the most recent ISSP survey conducted in 2015.

The ISSP dataset does not measure all job aspects as identified by Clark (1998). As a consequence, the importance of the job aspects working hours, job difficulty, and interpersonal relationships cannot be included in this measure. Together with the use of the ISSP WO dataset, this causes a different operationalisation than previously suggested by Clark (1998), Ritter and Anker (2002), and the SQWLI (Muñoz de Bustillo et al., 2009; Vinopal, 2009). To assess the reliability of the scale, the Cronbach's alpha is calculated in STATA. The alpha command specifies CA= .69, implying that the scale is reliable

within an acceptable range (Van Griethuijsen, Van Eijck & Haste, 2015; Taber, 2018). The implications regarding the validity and reliability of the measure will be discussed in *Chapter 5*.

The distinction made in the ISSP WO survey regarding the *importance* of job aspects (job values) according to the respondent and the *actual* rating of the job aspects (job outcomes) allows for the construction of a weighted average for each respondent. The weighted average is calculated as follows:

$$Job\ quality\ weighted\ average = \frac{\sum_{i=1}^{n}(x_i * w_i)}{\sum_{i=1}^{n} w_i}$$

where:

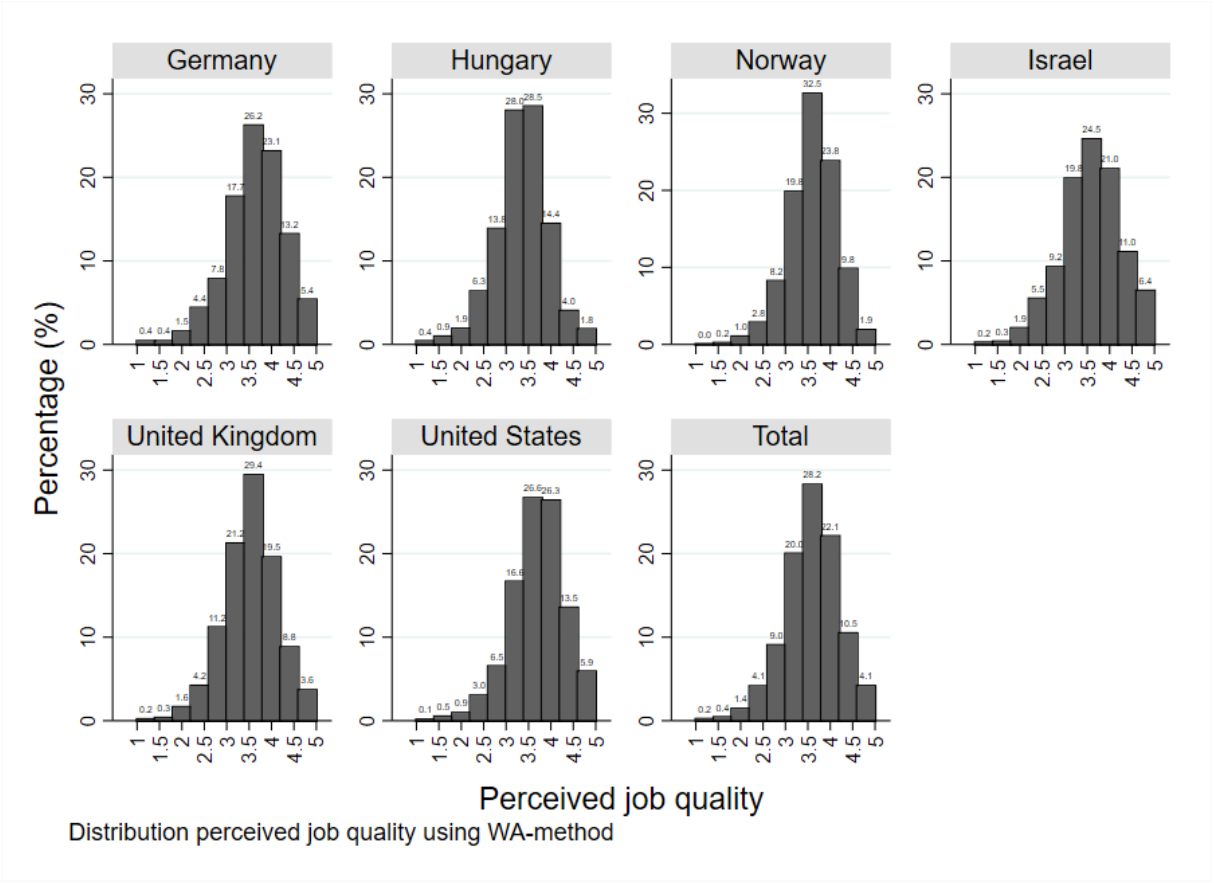
w is the weight thus subjective importance as expressed by the individual (*i*) with values ranging between 1 (not important) and 5 (very important). The original values of the dataset are recoded to match the order of values with an escalating importance. The -3 to 3 range of the SWQLI is not applied to maintain alignment with the values already defined in the ISSP dataset.

x is the value of the job aspect applicable to the job according to the individual.

The weighted average ranges from one to five. One corresponds to a very bad job, while five corresponds to a very good job. The values in between illustrate the variations in the perceived job quality among respondents. Using the weighted average method, workers have an average perceived job quality of M=3.58 (SD=.61). The distribution of good jobs using the weighted average method is illustrated in *Figure 2* on the next page.

Figure 2

Distribution of good jobs using weighted average method for the six sampled countries



Note. The weighted average (WA) is computed over years 1989, 1997, 2005, and 2015.

3.4.3. Measuring education

Levels of education are given for each observation in the ISSP WO dataset. The dataset includes the highest completed degree of education for each participating country. However, the classification of education level is different across countries within data waves. To illustrate, the 1989 dataset distinguishes eight values for education levels in Germany, whereas the classification used among respondents from the US is less detailed with six values. Similarities between countries exists, but differences in educational levels would lead to a cloudy analysis if not recoding to harmonised values.

Moreover, datasets differ as the 1989 survey only presents education levels specific to countries (such as the Germany and US example above) but surveys following in 1997, 2005, and 2015 include an internationally standardised *degree* variable allowing for comparison between countries. Despite the effort of ISSP to internationally standardise the variable, levels of education are not fully consistent

across the different waves of data. The 1997 dataset distinguishes eight levels of education, whereas the 2005 and 2015 datasets respectively distinguish six and seven. In addition, the 1997 dataset has a focus on completion and incompletion of education levels (e.g. secondary complete and secondary complete), whereas the 2005 dataset alternates between completion and the area below and above the threshold for completion (e.g. above lowest qualification, higher secondary completed, and above higher secondary level). The standardised classification in the 2015 dataset resembles the levels proposed by the International Standard Classification of Education (ISCED).

In an effort to harmonise the variable *education* across all countries in all datasets, the levels of education are recoded using ISCED. The framework is introduced by the United Nations Educational, Scientific, and Cultural Organisation (UNESCO) in 1976 to increase the international comparability of education levels and educational fields in research and data collection (UNESCO Institute for Statistics, 2012). The revised version ISCED 2011 distinguishes nine education levels as illustrated in the first and second column of *Table 4* below. Using the description of ISCED levels and national mappings of ISCED levels to education systems, matching levels of education with ISCED levels would create missing values for education levels in countries within datasets and across datasets. Therefore, a more concise classification for education is required.

Based on ISCED 1997, Steedman and McIntosh (2001) use the ISCED levels to further categorise education levels in low (ISCED 0-2), intermediate (ISCED 3) and high (ISCED 5-7). An identical approach is used by Fouarge, Schils, and De Grip (2013). Both studies suggest that ISCED 2 is the cut-off point for defining low skilled workers, implying that ISCED 0-2 illustrates low-educated workers. However, the classification of Fouarge and colleagues (2013) does not take into account the revised version of 2011 in tertiary education is further elucidated. Thus, as levels of education differ across countries and ISSP datasets, three categories for education are created in accordance with the approach of Eurostat (n.d.) as illustrated in *Table 4*. Eurostat uses three aggregates that categorises the levels in low (ISCED 0-2), intermediate (ISCED 3-4), and high (ISCED 5-8). Subsequently, education levels are recoded to 1 = low, 2 = intermediate, 3 = high. Utilising the aforementioned education classification yields a distribution of education levels across countries as illustrated in *Figure 3*.

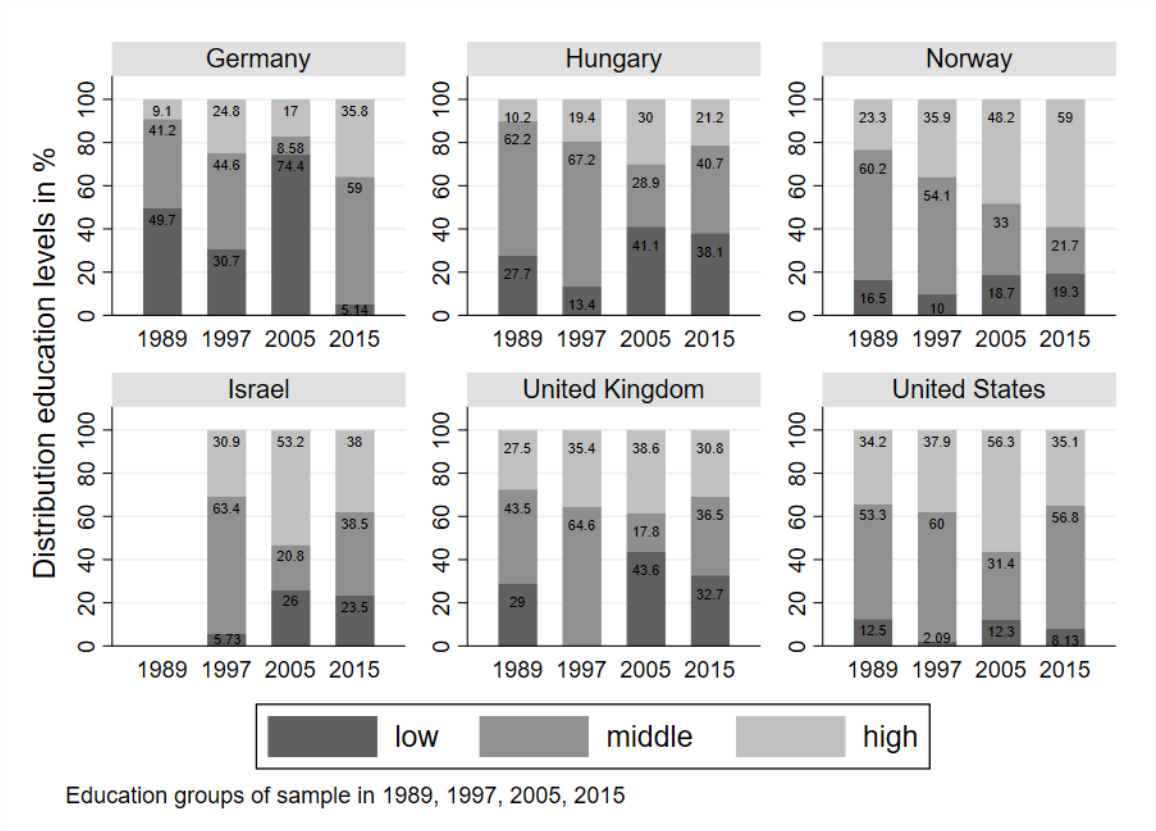
Table 4

Levels of education according to ISCED 2011. Derived from the International Standard Classification of Education, UNESCO Institute for Statistics (2012).

Level	Description (ISCED)	Explanation (ISSP, 2015)	Category (Eurostat)
ISCED 0	Early childhood education	No formal education	Low
ISCED 1	Primary education	Elementary education	Low
ISCED 2	Lower secondary education	Secondary completed does not allow entry to university: obligatory school	Low
ISCED 3	Upper secondary education	Programs that allow entry to university	Middle
ISCED 4	Post-secondary non-tertiary education	Other upper secondary programs toward labour market or technical formation	Middle
ISCED 5	Short-cycle tertiary education	Also technical school at a tertiary level	High
ISCED 6	Bachelor's or equivalent level	Bachelor	High
ISCED 7	Master's or equivalent level	Master	High
ISCED 8	Doctoral or equivalent level	Doctoral	High

Figure 3.

Distribution of education levels in years 1989, 1997, 2005, and 2015 for the six sampled countries



Note. Data about education levels in 1989 for Israel are not available in the ISSP dataset.

4. Analysis

4.1. Regression model

The regression model uses the interaction between globalisation and education levels to measure its effect on the perceived job quality. To study whether globalisation strengthens the job quality effect for workers with high education levels, and weakens the job quality effect for workers with low education levels, the following equation is estimated:

$$Q_{ict} = \alpha + \beta_1 E1_{ict} + \beta_2 E3_{ict} + \beta_3 G_c + \beta_4 E1_{ict} G_c + \beta_5 E3_{ict} G_c$$

where:

Q_{ict} is the perceived job quality of individual worker *i* from country *c* in year *t*.

E_{ict} is education level for each individual (*i*) from country *c* in year *t*, in accordance with the three education classifications derived from ISCED levels: low (E_1), middle (E_2), and high (E_3). To illustrate, E_1 equals 1 if low education is applicable and E_1 equals 0 if low education is not applicable. E_2 is the classification for workers with middle-level education and serves as the reference group, therefore it is not included in the estimated equation. Further explanation about the middle-education group will follow.

G_c is globalisation, defined as the intensity of international trade for each country (*c*).

$E_{ict}G_c$ is the interaction term of education level and globalisation. The interaction term functions to test the influence of globalisation as a third variable in the relationship between education level and perceived job quality.

The regression model adds gender, country, year, and age dummies as control variables.

The gender dummy (1= female, 0= male) controls for the gender – perceived job quality differential. For instance, prior research into gender effects suggests that male respondents were more likely to experience lower levels of job satisfaction than female respondents (Shields & Ward, 2001).

Country dummies for Germany, Hungary, Norway, Israel, and UK control for country specific effects. Differences in perceived job quality between countries could exist. To illustrate, prior research in cross-country differences in job satisfaction of EU-citizens confirms that Danish workers have a relatively lower standard for job satisfaction than Dutch workers (Kristensen & Johansson, 2006, p.14). The US dummy is omitted because of collinearity.

Year dummies for 1997, 2005 and 2015 control for time effects. Controlling for time effects ensures that variance in the perceived job quality is not inadequately attributed to globalisation. The year dummy for 1989 is omitted because of collinearity.

Age dummies control for age effects on the perceived job quality. Prior research suggests that job satisfaction increases with age due to an increasing job fit over time (Wright & Hamilton, 1978).

Hypothesis 1 suggests that education level is positively related to perceived job quality such that workers with a relatively higher education level perceive relatively higher levels of job quality. This hypothesis is built on the assumption that relatively high-educated workers benefit more from non-monetary gains that contribute to job quality than low-educated workers (Arrow, 1998; Vila & Mora, 2005). Therefore, it is expected that $\beta_1 < 0$ such that workers with low levels of education perceive lower levels of job quality relative to the reference group (E_2) and $\beta_2 > 0$ such that workers with high levels of education perceive higher levels of job quality relative to the reference group (E_2).

Hypotheses 2a and *2b* suggest globalisation affects the perceived job quality of workers with low and high education background differently. Building on the Stolper-Samuelson theorem, high-skilled workers are likely to benefit from increasing employment and increasing wages while low-skilled workers are likely to experience lower wages and becoming favourable in less-developed economies (Walter & Maduz, 2009; Vila & Mora, 2005; Rodrik & Sabel, 2019). The interaction terms in the estimated equation function to capture the additional effect of globalisation on the perceived job quality

for both the low- and high-educated group. Therefore, it is expected that $\beta_4 < 0$ such that globalisation tends to deteriorate the perceived job quality of low-educated workers relative to middle-educated workers and $\beta_5 > 0$ such that globalisation tends to strengthen the perceived job quality of high-educated workers relative to middle-educated workers.

4.2. Empirical findings

The multiple linear regression model is performed in three steps to test the relationship between education and the perceived job quality and the effect of economic globalisation on this relationship. The first specification captures the effect of education on the perceived job quality for the low education and high education group, the second model adds the main and interaction effect of globalisation, and the third model incorporates gender, country, year, and age dummies. The results of the multiple linear regression are given in *Column 1-3* of *Table 5*.

As education is operationalised in three levels, *Hypothesis 1*, that expects education level is positively related to perceived job quality, is structured as:

> **Hypothesis 1a:** Relative to middle-educated workers, low-educated workers have a lower perceived job quality.
>
> **Hypothesis 1b:** Relative to middle-educated workers, high-educated workers have a higher perceived job quality.

Model 1 regresses the weighted average of perceived job quality with low education and high education. Perceived job quality scores were significantly predicted by low education (*B*= -.113, *p*= .000) and high education (*B*= .216, *p*= .000). The results suggest that workers with low education were more likely to be located in the lower categories of perceived job quality than middle-educated workers, whereas workers with high levels of education with more likely to be located in higher categories of perceived job quality than middle-educated workers.

In *Model 2*, the main effect of globalisation on perceived job quality is significant, *B*= -.002, *p*= .000. Moreover, the perceived job quality scores are significantly predicted by the interaction terms ‘low education x globalisation’ (*B*= -.001, *p*= .002) and ‘high education x globalisation’ (*B*= .001, *p*= .001).

This suggests that the additional effect of globalisation on the perceived job quality is negative for relatively low-educated workers but less negative for relatively high-educated workers.

Table 5

Linear Regression Model of Good Job Perception for Low and High Education Groups
DV: Perception of job quality

	Model (1)	**Model (2)**	**Model (3)**
(Constant)	3.534 (.007)***	3.666 (.016)***	3.734 (.032)***
Low education	-.113*** (.0119)	-.014 (.028)	-.052 (.030)
High education	.216*** (.010)	.136*** (.024)	.126*** (.024)
Globalisation	-	-.002*** (.0002)	-.002*** (.0005)
Low education x globalisation	-	-.001** (.0004)	-.001* (.0004)
High education x globalisation	-	.001*** (.0004)	.001* (.0004)
Dummy variables			
Gender (1=female, 0=male)	-	-	-.034*** (.009)
Germany	-	-	.065** (.024)
Hungary	-	-	-.097* (.049)
Norway	-	-	-.004 (.026)
Israel	-	-	.003 (.025)
UK	-	-	-.107*** (.020)
1997	-	-	-.055*** (.014)
2005	-	-	.002 (.015)
2015	-	-	.149*** (.015)
Age 16-24	-	-	-.145*** (.030)
Age 25-34	-	-	-.045 (.028)
Age 35-44	-	-	-.042 (.028)
Age 45-54	-	-	-.053 (.028)
Age 55-64	-	-	-.029 (.029)
Observations	17,683	17,117	17,117
Adjusted R^2	.044	.053	.082

Note. Standard errors are in parentheses. * $p<.05$; ** $p<.01$; *** $p<.001$. Middle education group is the reference group.

However, analysing the effects without including control variables in the regression model possibly illustrates biased results. Therefore, the third regression model controls for gender, country, year, and age effects. In *Model 3*, the main effect of low education on the perceived job quality is not significant (*B*= -.052, *p*= .080). Therefore, there is no empirical support for *Hypothesis 1a* that suggests relatively low-educated workers have lower levels of perceived job quality (with middle-educated workers as the reference group).

Next, high education significantly predicts the perceived job quality (*B*= .126, *p*= .000) providing support for *Hypothesis 1b*. The positive coefficient for high education suggests that relatively higher-educated workers perceive higher levels of job quality respective to the reference group of middle-educated workers. The coefficient signifies that one unit increase in education (thus from middle to high) causes an increase of .126 in perceived job quality.

When including control variables, the main effect of globalisation on the perceived job quality remains significant, *B*= -.002, *p*= .000. The negative coefficient suggests that globalisation has a negative effect on the perceived job quality regardless of skill level, implying an overall decline in perceived job quality when international trade increases. For *Hypothesis 2a* and *Hypothesis 2b,* this main effect is required to interpret the additional effects.

First, the interaction term 'low education x globalisation' significantly predicts perceived job quality, *B*= -.001, *p*= .017. The additional negative effect of the interaction term suggests that the overall negative effect of globalisation on the perceived job quality is more negative on balance for relatively lower educated workers. This provides support for *Hypothesis 2a* that suggests that globalisation tends to deteriorate the perceived job quality of relatively low-educated workers.

Second, the interaction term 'high education x globalisation' significantly predicts the perception of job quality, *B*= .001, *p*= .004. The additional effect is positive, suggesting that the negative effect of globalisation is less negative on balance for relatively higher educated workers. This finding supports *Hypothesis 2b* that suggests that the effect of globalisation tends to strengthen the perceived job of relatively high-educated workers. The positive interaction effect does not cancel out the negative main

effect of globalisation, implying that the notion of *'strengthen'* should be interpreted as less negative for relatively high-educated workers.

The significant findings are able to support *Hypotheses 1b, 2a,* and *2b* but should be interpreted carefully. First, the increase in perceived job quality for relatively higher-educated workers is rather small if contextualising the predicted .126 increase against the range of 1-5 that measures the variable perceived job quality. Thus, although *Hypothesis 1b* is empirically supported, the effect is little.

Within the same vein, the main effect of globalisation and the coefficients of both interaction terms suggest a minor change in the perception of job quality as the interpretation of the actual change is dependent on how globalisation is measured. To illustrate, an increase of the trade-to-GDP ratio from 127.6 percent in 2005 to 168 percent in 2015 for Hungary would imply an additional .04 change in the perceived job quality for relatively high-educated workers. Again, this effect is small in context as the perceived job quality is measured on a scale of 1-5.

Finally, *Model 3* has a small effect size (adjusted R^2 = .082). This implies that, despite the significant findings, the regression model does not account for much variation in the perception of job quality.

To summarise, the results indicate that relatively high-educated workers tend to perceive higher levels of job quality (*Hypothesis 1b)*. However, there is no support for relatively low-educated workers perceiving lower levels of job quality (*Hypothesis 1a)*. Subsequently, globalisation has an overall negative effect on the perceived job quality of workers regardless of the skill level. Globalisation tends to deteriorate the perceived job quality of relatively low-educated workers as the additional negative effect of globalisation worsens the perceived job quality (*Hypothesis 2a)*. Differently, globalisation tends to favour the perceived job quality of relatively high-educated workers as the positive additional effect partially reduces the negative main effect of globalisation (*Hypothesis 2b).*

As a consequence, the effect of globalisation is more negative for relatively low-skilled workers but less negative for relatively high-skilled workers. For both groups, the effect of globalisation on the perceived job quality is small, suggesting that although significant effects are observed, the changes in perceived job quality caused by globalisation and education level are trivial.

4.3. Control variables

Model 3 includes control variables for gender, country, year, and age.

The coefficient for gender is negative in the multiple linear regression (*B*= -.034, *p*= .000), meaning that female respondents are more likely to perceive lower levels of job quality compared to male respondents. This implies male respondents are more likely to report a higher perceived job quality – which is in contrast with prior empirical evidence that suggests male respondents were more likely to experience lower levels of job satisfaction than female respondents (Shields & Ward, 2001). However, the negative coefficient is small, suggesting that the significant change in perceived job quality is little.

The country dummy for Germany significantly predicts perceived job quality in the multiple linear regression (*B*= .065, *p*= .006). This suggest that German respondents were more likely to perceive a higher job quality than non-German respondents. Moreover, the country dummy for Hungary suggest a negative relationship with perceived job quality (*B*= -.097, *p*= .047). The coefficient implies that Hungarian respondents were more likely to perceive a relatively lower job quality than non-Hungarian respondents. The relationship between the UK country dummy and perceived job quality is negatively significant (*B*= -.107, *p*= .000), suggesting that respondents from the UK were more likely to perceive relatively lower levels of job quality than non-UK respondents. The US dummy is omitted from the equation due to multicollinearity and other country dummies did not have significant results. The findings suggest that country specific effects exist for the effect of globalisation on the perceived job quality. Given the size of the coefficients, merely small changes in perceived job quality are accounted by country effects.

Year dummy 1997 is a negative significant predictor for perceived job quality (*B*= -.055, *p*= .000), whereas year dummy 2015 is a positive significant predictor for perceived job quality (*B*= .150, *p*= .000). The former suggests that respondents in 1997 were more likely to perceive relatively lower scores of job quality. The latter suggests that respondents in 2015 were more likely to perceive relatively higher scores of job quality. This suggests that time effects are present when measuring the perceived job quality among workers in different waves. Similar to prior interpretations of coefficients, the size of the coefficients suggests that time effects cause little change in the perceived job quality.

The age group 16-24 shows a negative significant effect on the perceived job quality (*B*= -.150, *p*= .000). This suggests that workers of the young age category are likely to perceive a relatively lower job quality than workers in non-16-24 age category. Although this change is rather small, it is partially in line with the assumption that job satisfaction increases with age due to a better job fit that grows with experience (Wright & Hamilton, 1978). Other age dummies did not have significant results.

To summarise, male respondents were more likely to report higher levels of perceived job quality contrary to prior research (Shields & Ward, 2001). Country and time specific effects exist, providing support for international differences in how jobs are evaluated among workers from different countries in different moments in time (Kristensen & Johansson, 2006). Furthermore, age could be of effect in predicting perceived job quality . Again, these effects are minor proportionally to the scale that measures the perceived job quality.

5. Conclusion

5.1. General discussion

The growing inequality due to globalisation leads researchers to question how workers are affected in their perspectives and policy preferences. To this end, the purpose of this thesis was to study the effect of globalisation on the perception of job quality among workers with different skill levels. Job quality is conceptualised along good jobs and bad jobs: the better a job, the higher the job quality and the worse a job, the lower the job quality. The measure for job quality is based on prior research into good job indices (Muñoz de Bustillo et al, 2009) and uses job values and job outcomes to compute a weighted average for the subjective job quality on individual level. The measure defines job quality in monetary and non-monetary aspects, namely: pay, future aspects, and job content (Clark, 1998).

Based on quantitative analysis of ISSP WO and OECD National Accounts data using a sample of six advanced economies (Germany, Hungary, Norway, Israel, UK, and US), it can be concluded that increasing (economic) globalisation significantly affects the perception of job quality differently for relatively high- and low-skilled workers but this effect is presumably trivial. The present study suggests that globalisation is more destructive to the perceived job quality of relatively low-skilled workers but less destructive to the perceived job quality of relatively high-skilled workers. As such, the effect of globalisation on the perception of job quality seems to be asymmetric for workers with different skill levels. However, it should be noted that this effect is small and perhaps negligible as the predicted change in perceived job quality is minor, suggesting that analysing the perceived job quality to test the Stolper-Samuelson theorem and its extension provides thin support (Findlay & Kierzkowski, 1983).

The small effect size for *Model 3* suggests that other predictors not included in the regression model affect the perceived job quality. This is plausible as the measure for perceived job quality captures three out of six dimensions of job quality (Clark, 1998). To illustrate, work relationships are previously found to be a strong predictor for job satisfaction (Adams & Bond, 2000). Similarly, the importance and

outcome of interpersonal relationships could predict the perceived job quality. Additionally, technological progress is conditional on skills and affects employment levels and job composition (Autor et al., 2015) which in turn can affect the job quality. Moreover, the subjective measure for job quality could be of effect on the outcome as the self-assessment of individuals changes the weight objective measures for job quality would attach to job characteristics, leading to different results than previously captured in (macro)studies using objective measures (e.g. Davis & Harrigan, 2007 and Acemoglu, 2001).

5.2. Theoretical implications

The empirical findings have theoretical implications for the existing body of knowledge. First, prior research into the effect of globalisation on individuals suggested that low-skilled workers were more likely to lose from globalisation than high-skilled workers as their wages decreased and unemployment risks grew (Walter, 2010; Walter & Maduz, 2009). However, research was yet to examine whether this pattern is true for the broader conceptualisation of job quality, that also encapsulates job content and job security (Clark, 1988). The small effect of globalisation on the perceived job quality implies that the distinct effect of globalisation on good jobs on macro-level as captured by Davis and Harrigan (2007) is not apparent on micro-level. Instead, it seems to resemble the findings of Hainmueller and Hiscox (2006) who argue that skill level does not affect the preferences of individuals within the context of globalisation.

Returning to the theoretical discussion in *Chapter 2*, the evidence for *Hypothesis 1b* nuances prior conclusions that education level has a positive effect on satisfaction levels with work aspects (Vila & Mora, 2005) and that workers with high education will likely benefit from additional non-monetary gains such as healthy working conditions, greater independence, and desired responsibility, contributing to a better job satisfaction (Vila & Mora, 2005, p.409-410; Vila, 2000). This study suggests that although these effects can be present, they have minor implications on the perceived job quality.

Moreover, the results nuance the Samuelson-Stolper theorem and theoretical assumption of Findlay and Kierzkowski (1983) that advanced economies have high-skilled workers in abundance, creating a comparative advantage (Walter & Maduz, 2009). The implication following this theory is that high-

skilled workers benefit from globalisation as their wages and employment increase, while low-skilled workers lose from globalisation with lower wages and higher unemployment risks (Walter & Maduz, 2009). As illustrated in the results, relatively low-educated workers lose by perceiving a more negative job quality while relatively high-educated workers win by perceiving a less negative job quality. Together with the minuscule change in perceived job quality as a result of globalisation, the hypothesised implications of the Samuelson-Stolper theorem and the Findlay and Kierzkowski extension are recognisable but not imposing.

As prior research has questioned whether changes in job quality is rightfully caused by technological advancements (Schmitt & Jones, 2012), the results encourage the potential of further researching the interplay between globalisation and technological advancements in affecting the perceived job quality of workers with different skill levels. Given the thin support for globalisation affecting job quality, it is worthwhile to research whether technological change explains differences in perceived job quality among low-skilled and high-skilled workers.

Second, the significant but trivial results regarding education and job quality underscores the importance of understanding the precise role of education in the impact of globalisation on society. The results suggest that the asymmetric effect of globalisation depending on the skill level of the worker is negligible. This is in contrast with prior studies that attribute a vast role to education in defining the effects of globalisation on individuals. To illustrate, scholars in the field of political economics find evidence for globalisation reinforcing the phenomenon of *education premiums*, which are wage differentials between high-educated and low-educated workers caused by public education spending and tax-transfer policies (Weisstanner & Armingeon, 2018). This implies that the academic debate concerning inequality and the role of education is in need of more finesse of the knowledge about how education exactly determines preferences and perspectives in a globalising world.

Third, the present study feeds into the academic discussion about measuring job quality. Prior research is inconclusive about measuring job quality as many approaches exist depending on factors such as the discipline of the authors and data sources (Muñoz de Bustillo et al., 2009). To illustrate, Kalleberg and colleagues (2000) are sociologists and use wage, access to health insurance, and pension benefits as

determinants for job quality. Diversely, Ritter and Anker (2002) as economists use the satisfaction of workers with income, social benefits, interest, autonomy, skills, and advancements to measure job quality. The measure used in this study adopts a strong subjective focus by including the importance of each job characteristic given by workers themselves (Jencks et al., 1988). Using job values and job outcomes to compute a weighted average allows for a worker-oriented approach that grounds findings at the individual level. Subsequently, the indicators used are relevant contributors to job quality (Clark, 1998). The findings suggest that using such type of measure yields meaningful results that contribute to existing research. This implies that the inconclusiveness in research regarding the measure of job quality does not have to be problematic. Instead, recognising the clear purpose of each measure allows the academic debate to differentiate findings in e.g. micro- versus macrolevel and objective versus subjective approaches. To illustrate, the effects of globalisation on workers with different skill levels is trivial when using a fully subjective approach for perceived job quality at the individual level.

5.3. Limitations, strengths, and recommendations for future research

As with all studies in the scientific realm, this thesis is not without limitations. Future studies in the field of globalisation, education, and job quality may build their research foci and research methods on the recommendations following from the limitations and strengths of the present study.

First, the measure for job quality includes three of the six key dimensions of job quality as previously defined by Clark (1998). Due to limitations in the ISSP WO dataset, the job values and job outcomes of hours of work, job difficulty, and interpersonal relations were not captured in the measure. As a consequence, the measure is theoretically less rich as other relevant predictors for job quality are missing. This has implications for the content validity of the measure as the six dimensions identified within the knowledge domain of good jobs are not fully reflected in the measure for job quality. According to research in good jobs, hours of work are strongly correlated with job satisfaction. Including the value and outcome of hours of work would allow analysis to define whether people are working involuntary part-time or involuntary over-time that shapes the subjective job quality (Clark, 2005). Next, job difficulty addresses physical and mental exhaustion associated with the job (Clark, 2005). As prior research suggests that the positive relationship between job complexity and job satisfaction is mediated

by the subjective perception of job characteristics (Judge et al., 2000), further research would benefit from a measure that includes job difficulty in both values and outcomes.

Moreover, interpersonal relations are considered strong predictors for job satisfaction that could contribute to a positive job quality (Adams & Bond, 2000). By including the job values and outcomes for hours of work, job difficulty, and interpersonal relationships, the measure for job quality can grow stronger in validity. The value and outcome for interpersonal relationships will be measured in the ISSP WO survey starting in 2015. It is important to note that the current measure already captures a range of relevant contributors to job quality (Clark, 1998; Muñoz de Bustillo, 2009). To illustrate, job security and autonomy (under job content) are identified as one the key aspects contributing to a positive job quality (Gallie, 2003). As such, including the three aforementioned dimensions will function as additional contributors that complete the theoretical proposition of six key dimensions of job quality. Differently, other conceptualisations of job quality suggest that additional labour protection mechanisms such as collective bargaining rights and regulations against arbitrary dismissal define a good job (Rodrik, 2019). This could be another way of enriching the current measure for perceived job quality if data for these aspects are available.

Second, the share of international trade as percentage of the GDP was used to measure the degree of (economic) globalisation. This is a commonly used measure in the field of political economy as it captures trade openness (e.g. Rodrik, 1998; Weisstanner & Armingeon, 2018). However, to satisfy multiple aspects of globalisation, Dreher (2006) introduces the KOF-index (acronym for Konjunkturforschungsstelle) which includes social and political perspectives in measuring globalisation. By including data on embassies in countries and membership in international organisations to measure the political engagement, and including data on personal contact, information flows – and even the number of McDonald's restaurants per capita, the KOF-index accounts for multiple dimensions of globalisation (Dreher, 2006).

Differently, the effects of both globalisation and technological developments on the labour market occurred in the same period and lead to similar effects in the labour market (Iversen & Cusack, 2000; Van Vliet, 2019). Autor and colleagues (2013) were amongst the first scholars to disentangle the

concepts by studying the effects of Chinese imports on the US labour market to trace the effects of globalisation separately from technological developments. Therefore, future research could either tailor their approach by including social and political perspectives or focus economic globalisation on the imports from China to enrich the commonly used measure for globalisation.

Third, the six sampled countries were selected based on data availability in all four waves of ISSP WO data to allow for country and year effects to be included in the regression model. But excluding observations with missing data is potentially harmful if the remaining observations are different from the deleted observations (Penn, 2007, p.2). To illustrate, countries such as Denmark, France, and Czech Republic were excluded from the analysis as it did not have data for WO in 1989. All of these countries have different values for globalisation and could provide different results.

Therefore, selecting countries based on data availability and eliminating countries based on its non-availability of data in certain waves could be of effect on the results. However, the analyses included country specific effects, meaning that it accounted for potential differences resulting from e.g. national policies regarding work and wages. Nevertheless, further research could benefit from using a larger sample that includes more countries with different values for globalisation. Doing so allows for a more accurate analysis of the effect of globalisation on perceived job quality across countries. Additionally, further studies could analyse the specific effects for each country, assuming that the effect is different given the significance of country dummies.

Fourth, education was recoded from eight values to three to align observations within and across data waves. Education was categorised differently for countries within the 1989 dataset and the internationally standardised variable for education was different for 1997, 2005, and 2015. Therefore, a categorisation as explained in *Table 4* was required to recode respondents into low, middle, and high education. Reducing the details of education by recoding causes a loss of information, possibly reducing the measurement accuracy (De Waal & Willenborg, 1999; Fernandes, Malaquias, Figueiredo, Da Rocha & Lins, 2019). To ensure consistency, education levels were strictly recoded according to ISCED levels. However, further research into education effects would benefit from a more specific categorisation of education with subcategories under low, middle, and high education level as defined by ISCED. This

would for instance allow scholars to understand the threshold that decides whether workers are more likely to be negatively affected or more likely to be positively affected.

Aside from the limitations, it is important to discuss the strengths and contributions of this study. First, by studying perceived job quality, this study contributes to the understanding of the micro-implications of the compensation hypothesis. Effects of globalisation at the individual level are mainly focused on the demand for welfare state expansion (Walter & Maduz, 2009). Studying the perceived job quality provides new insights into the consequences of being exposed to economic risks that underlie the perspectives and policy preferences of workers. Although the coefficients point at a minor effect, the present study suggests that the consequences of globalisation could be heterogenous for high- and low-skilled workers. Following the compensation hypothesis and prior research, the exposure to economic risks increases the preference to demand for welfare state expansion (Walter, 2010) but it is beyond the scope of this study to research whether low-skilled workers disadvantaged by globalisation are actually demanding more welfare. Therefore, future studies may want to include the voting behaviour of workers with different skill levels to assess the consequences of job quality perceptions.

Second, developing a measure for job quality based on the ISSP WO dataset contributes to the inconclusive debate about an adequate approach to measuring job quality (Muñoz de Bustillo et al., 2009). Prior research suggests that a subjective approach to measuring job quality helps revealing the changes in the objective measure of job quality over time (Green, 2006; Brown et al., 2007). Therefore, the contribution of this measure is not in making claims for an adequate approach to measuring job quality that should decide in the most appropriate level of analysis nor the degree of objectivity (Muñoz de Bustillo et al., 2009).

Instead, it highlights the strengths of the measure used and positions the findings within this context. As such, the theoretical discussion could extend its scope by not merely focusing on *how* job quality should be measured but also paying attention to how these perceptions of quality are reinforced or weakened by factors such as globalisation and education. For example, the match between the job and the skills of the worker could be a valuable addition to the six dimensions of a good job (Clark, 2005). The gap between the job and the skills is expressed in over- or under-education or over- and under-skilling

(Clark, 2005, p.5). This implies that the attitudes shaping the perception of job quality, can be strengthened by the gap between the possessed skills and required skills of the job. Following, future research can study the role of the skills match in determining the perceived job quality of workers with different education levels.

5.4. Policy recommendations and practical implications

Aside from the theoretical implications, the present study makes contributions to the acknowledgement of job quality in policymaking and practice. One practical implication is about executing public policies regarding job quality that intersects with the rising inequality as an effect of globalisation and the role of skill level in this equation. For instance, several supranational and intergovernmental organisations have committed to strengthening job quality (Muñoz de Bustillo et al, 2009; Findlay et al., 2017). While academics and politicians are raising job quality as a pressing problem, Findlay and colleagues (2017) argue that improving job quality in an increasingly globalised world can be challenging (p.2). However, the results of the present study suggest that although the problem of job quality exists, it is not strongly associated with increasing globalisation nor with the different skill levels of workers. Moreover, the results suggest that the effects of globalisation are possibly not reflected in how job quality is *perceived* as the measure explicitly weighs job values and job outcomes at the individual level. This implies that positioning policymaking in job quality within the framework of increasing globalisation could be risky as its weak association could redirect focus from the issue that is partially situated at the individual level.

Second, scholars suggest that attaining more good jobs contributes to gaining economic efficiency and tackling inequality due to labour market divide in good jobs and bad jobs (Rodrik & Sabel, 2019). Despite the significant effect of globalisation on the perceived job quality for workers with different skill levels, the size of the coefficients suggest that the effect is trivial. This implies that policy making would not benefit much by merely focusing on the issue of tackling the effect of globalisation on the job quality of workers with different skill levels. Therefore, the effort to create more good jobs to reduce inequality might not be directly visible in how jobs are perceived differently by low-skilled versus high-skilled workers. This suggests that policy makers could retain the different effects caused by education level in mind but would benefit from broadly targeted job quality policies such as closing the skills gap

for workers on all levels (Findlay et al., 2017; Clark, 2005). However, focusing on different skill levels could be of value if policymakers attach importance to the symbolism of distinguishing the potential asymmetric effects of globalisation on the perceived job quality in the public eye.

Third, the outbreak of COVID-19 is affecting the perception of security at work and is causing large job losses (International Labour Organisation, 2020; Blustein & Guarino, 2020). Inequality is expected to increase as workers in knowledge economies were able to continue working from home, while workers outside the knowledge-infused employment sector are suffering job loss or worsening working conditions such as exposure to the coronavirus (Blustein & Guarino, 2020, p.704). In dealing with the aftermath of the crisis and its marks on the (international) labour market, the results of this study imply that policies aimed at improving job quality do not strictly have to be targeted at different skill levels. Instead, interventions directly targeted at either one of the good job dimensions are helpful. For instance, more good jobs can be attained when raising the wages and improving work conditions that respectively contribute to the dimensions pay and job content (Kalleberg 2011; Osterman & Schulman, 2011).

Finally, the present study provides a pre-COVID-19 analysis of the perceived job quality in a globalising era. It allows for comparison with a post-COVID-19 analysis in which job values and job outcomes gain new dimensions. To illustrate, the pandemic adds a novel dimension to job security as international trade is put under pressure and heavily affected sectors (such as tourism and hospitality) are unsure of their existence in the future (Akkermans, Richardson & Kraimer, 2020). Paving the way for comparative analyses contributes to understanding the effects of a pandemic on the labour market situated at micro-level, allowing practitioners to create well-founded policies.

References

Acemoglu, D. (1996). *Good Jobs Versus Bad Jobs: Theory and Some Evidence*. Massachusetts Institute of Technology (MIT), Department of Economics.

Acemoglu, D. (2001). Good jobs versus bad jobs. *Journal of labor Economics*, *19*(1), 1-21.

Adams, A., & Bond, S. (2000). Hospital nurses' job satisfaction, individual and organizational characteristics. *Journal of advanced nursing*, *32*(3), 536-543.

Akkermans, J., Richardson, J., & Kraimer, M. (2020). The Covid-19 crisis as a career shock: Implications for careers and vocational behavior.

Albrow, M., & King, E. (Eds.). (1990). *Globalization, knowledge, and society: readings from international sociology*. Sage.

Al-Rodhan, N. R., & Stoudmann, G. (2006). Definitions of globalization: A comprehensive overview and a proposed definition. *Program on the Geopolitical Implications of Globalization and Transnational Security*, *6*(1-21).

Ardanaz, M., Murillo, M. V., & Pinto, P. M. (2013). Sensitivity to issue framing on trade policy preferences: evidence from a survey experiment. *International Organization*, 411-437.

Arrow, H. (1997). Stability, bistability, and instability in small group influence patterns. *Journal of Personality and Social Psychology*, *72*(1), 75.

Autor, D., Dorn, D. and Hanson, G. (2013) The China syndrome: Local labor market effects of import competition in the United States. American Economic Review 103(6): 2121-2168.

Autor, D., Dorn, D. and Hanson, G. (2015) Untangling trade and technology: Evidence from local labor markets. *The Economic Journal* 125(584): 621-646.

Blanchflower, D.G., Oswald, A.J. and Warr, P.B. (1993). *Well-Being Over Time in Britain and the USA*. Dartmouth College, mimeo.

Blustein, D. L., & Guarino, P. A. (2020). Work and unemployment in the time of COVID-19: the existential experience of loss and fear. *Journal of Humanistic Psychology*, *60*(5), 702-709.

Bonoli, G. (2013). *The origins of active social policy: Labour market and childcare policies in a comparative perspective*. Oxford University Press.

Brown, A., Charlwood, A., Forde, C., & Spencer, D. (2007). Job quality and the economics of New Labour: a critical appraisal using subjective survey data. *Cambridge Journal of Economics*, *31*(6), 941-971.

Bryman, A. (2016). *Social research methods*. Oxford university press.

Brynjolfsson, E., & McAfee, A. (2014). *The second machine age: Work, progress, and prosperity in a time of brilliant technologies*. WW Norton & Company.

Burgoon, B. (2001). Globalization and welfare compensation: disentangling the ties that bind. *International organization*, *55*(3), 509-551.

Burtless, G., Lawrence, R.Z., Litan, R.E., Shapiro, R.J., 1998. Globaphobia: Confronting Fears about Open Trade. Brookings, Washington, DC.

Cain, P. S., & Treiman, D. J. (1981). The dictionary of occupational titles as a source of occupational data. *American Sociological Review*, 253-278.

Cameron, D. R. (1978). The expansion of the public economy: A comparative analysis. *The American Political Science Review*, 1243-1261.

Cerrato, A., Ferrara, F. M., & Ruggieri, F. (2018). Why Does Import Competition Favor Republicans? *Available at SSRN 3147169.*

Clark, A. (2005). What makes a good job? Evidence from OECD countries. In *Job quality and employer behaviour* (pp. 11-30). Palgrave Macmillan, London.

Clark, A. E. (1998). Measures of job satisfaction: What makes a good job? Evidence from OECD countries.

Colantone, I., & Stanig, P. (2016). Global competition and Brexit. *BAFFI CAREFIN Centre Research Paper*, (2016-44).

Colantone, I., & Stanig, P. (2018). The trade origins of economic nationalism: Import competition and voting behavior in Western Europe. *American Journal of Political Science*, *62*(4), 936-953.

Cox, G. (1999). The digital crowd: some questions on globalization and agency. *Design Issues*, *15*(1), 16-25.

Dal Bó, E., Finan, F., Folke, O., Persson, T., & Rickne, J. (2017). Who becomes a politician? *The Quarterly Journal of Economics*, 132(4), 1877-1914.

Davis, D. R., & Harrigan, J. (2011). Good jobs, bad jobs, and trade liberalization. *Journal of international Economics*, *84*(1), 26-36.

De Waal, T., & Willenborg, L. C. R. J. (1999). Information loss through global recoding and local suppression. *Netherlands Official Statistics*, *14*, 17-20.

Dreher, A. (2006). Does globalisation affect growth? Evidence from a new index of globalisation. *Applied economics*, *38*(10), 1091-1110.

Dreher, A., Sturm, J. E., & Ursprung, H. W. (2008). The impact of globalisation on the composition of government expenditures: Evidence from panel data. *Public Choice*, *134*(3-4), 263-292.

Dunn, S., Wilson, B., & Esterman, A. (2005). Perceptions of working as a nurse in an acute care setting. *Journal of Nursing management*, *13*(1), 22-31.

Ekholm, K., & Hakkala, K. (2006). The effect of offshoring on labour demand: evidence from Sweden (No. 654). IUI Working Paper.

Epifani, P., & Gancia, G. (2006). Increasing returns, imperfect competition, and factor prices. *The Review of Economics and Statistics*, *88*(4), 583-598.

Erickson, B. H. (2017). Good networks and good jobs: The value of social capital to employers and employees. In *Social capital* (pp. 127-158). Routledge.

Esser, I., & Olsen, K. M. (2012). Perceived job quality: Autonomy and job security within a multi-level framework. *European Sociological Review*, *28*(4), 443-454.

Eurostat (n.d.). *International Standard Classification of Education (ISCED).* Retrieved on October 3, 2020 via < https://ec.europa.eu/eurostat/statistics-explained/index.php/International_Standard_Classification_of_Education_(ISCED)#Implementation_of_ISCED_2011_.28levels_of_education.29 >.

Fernandes, A., Malaquias, C., Figueiredo, D., da Rocha, E., & Lins, R. (2019). Why Quantitative Variables Should Not Be Recoded as Categorical. *Journal of Applied Mathematics and Physics*, *7*(07), 1519.

Findlay, P., Warhurst, C., Keep, E., & Lloyd, C. (2017). Opportunity knocks? The possibilities and levers for improving job quality. *Work and Occupations*, *44*(1), 3-22.

Findlay, R., & Kierzkowski, H. (1983). International trade and human capital: a simple general equilibrium model. *Journal of Political Economy*, *91*(6), 957-978.

Fouarge, D., Schils, T., & De Grip, A. (2013). Why do low-educated workers invest less in further training? *Applied Economics*, *45*(18), 2587-2601.

Frank, R.H. (1993). *"Local Status, Fairness and Wage Compression Revisited"*. Cornell University.

Fried, Y., & Ferris, G. R. (1987). The validity of the job characteristics model: A review and meta-analysis. *Personnel psychology*, *40*(2), 287-322.

Gajendran, R. S., & Harrison, D. A. (2007). The good, the bad, and the unknown about telecommuting: meta-analysis of psychological mediators and individual consequences. *Journal of applied psychology*, *92*(6), 1524.

Gallie, D. (2003). The quality of working life: is Scandinavia different? *European sociological review*, *19*(1), 61-79.

Garritzmann, J. L., Busemeyer, M. R., & Neimanns, E. (2018). Public demand for social investment: new supporting coalitions for welfare state reform in Western Europe? *Journal of European Public Policy*, *25*(6), 844-861.

Goos, M., & Manning, A. (2007). Lousy and lovely jobs: The rising polarization of work in Britain. *The review of economics and statistics*, *89*(1), 118-133.

Green, F. (2006). *Demanding work: The paradox of job quality in the affluent economy*. Princeton University Press.

Griethuijsen, R.A., Eijck, M.W., Haste, H., Brok, P.J., Skinner, N.C., Mansour, N., Gencer, A.S. and BouJaoude, S., 2015. Global patterns in students' views of science and interest in science. *Research in science education*, *45*(4), pp.581-603.

Hainmueller, J., & Hiscox, M. J. (2006). Learning to love globalization: Education and individual attitudes toward international trade. *International Organization*, 469-498.

Hassner, R. E., & Wittenberg, J. (2015). Barriers to entry: Who builds fortified boundaries and why? *International Security*, 40(1), 157-190.

Häusermann, S., Kurer, T., & Schwander, H. (2015). High-skilled outsiders? Labor market vulnerability, education, and welfare state preferences. *Socio-Economic Review*, 13(2), 235-258.

Hays, J. C., Ehrlich, S. D., & Peinhardt, C. (2005). Government spending and public support for trade in the OECD: An empirical test of the embedded liberalism thesis. *International Organization*, *59*(2), 473-494.

Hemerijck, A. (2013). *Changing welfare states*. Oxford University Press.

Herzberg, F. M., & Mausner, B. & Snyderman, B.B. (1959) The motivation to work. *Aufl., NewYork-London*.

Hijzen, A., Görg, H., & Hine, R. C. (2005). International outsourcing and the skill structure of labour demand in the United Kingdom. *The Economic Journal*, *115*(506), 860-878.

Hodge, R., & Siege, P., and Peter Rossi. 1964. Occupational Prestige in the US, 1925—1963. *American Journal of Sociology*, 60, 286-307.

International Labour Organization. (2020). *ILO Monitor: Covid-19 and the world of work*.

Iversen, T. and Cusack, T.R. (2000) The Causes of Welfare State Expansion: Deindustrialization or Globalization? *World Politics*, 52(3), 313–349.

Jencks, C., Perman, L., & Rainwater, L. (1988). What is a good job? A new measure of labor-market success. *American journal of sociology*, *93*(6), 1322-1357.

Jensen, J. B., Quinn, D. P., & Weymouth, S. (2017). Winners and losers in international trade: The effects on US presidential voting. *International Organization*, 71(3), 423-457.

Judge, T. A., Bono, J. E., & Locke, E. A. (2000). Personality and job satisfaction: The mediating role of job characteristics. *Journal of applied psychology*, *85*(2), 237.

Jurgensen, C. E. (1978). Job preferences (What makes a job good or bad?). *Journal of Applied psychology*, *63*(3), 267.

Jutz, R., Scholz, E., Braun, M., & Hadler, M. (2018). The ISSP 2015 Work Orientations IV Module.

Kalleberg, A. L. (2011). *Good jobs, bad jobs: The rise of polarized and precarious employment systems in the United States, 1970s-2000s*. Russell Sage Foundation.

Kalleberg, A. L., Reskin, B. F., & Hudson, K. (2000). Bad jobs in America: Standard and nonstandard employment relations and job quality in the United States. American Sociological Review, 65, 256–278

Karasek, R., Brisson, C., Kawakami, N., Houtman, I., Bongers, P., & Amick, B. (1998). The Job Content Questionnaire (JCQ): an instrument for internationally comparative assessments of psychosocial job characteristics. *Journal of occupational health psychology*, *3*(4), 322.

Katzenstein, P. J. (1985). *Small states in world markets: Industrial policy in Europe*. Cornell University Press.

Kristensen, N., & Johansson, E. (2008). New evidence on cross-country differences in job satisfaction using anchoring vignettes. *Labour economics*, *15*(1), 96-117.

Krugman, P. (1980). Scale economies, product differentiation, and the pattern of trade. *The American Economic Review*, *70*(5), 950-959.

Kuo, J., & Naoi, M. (2015). Individual attitudes. *The Oxford handbook of the political economy of international trade*, 99-118.

Lammers, I., van Gerven-Haanpää, M. M., & Treib, O. (2018). Efficiency or compensation? The global economic crisis and the development of the European Union's social policy. *Global social policy*, *18*(3), 304-322.

Leamer, E. E., & Levinsohn, J. (1994). *International trade theory: the evidence* (No. w4940). National Bureau of Economic Research.

Levy, F., & Murnane, R. J. (2004). Education and the changing job market. *Educational leadership*, 62(2), 80.

Lòpez-Villavicencio, A., & Ortiz, L. A. R. (2017). Is globalisation taking away jobs? An empirical assessment for advanced economies.

Loveman, G. W., & Tilly, C. (1988). *Good jobs or Bad jobs: what does the US evidence say?* International Labour Organization.

Marx, K. (1967). *Capital* (S. Moore & E. Aveling, Trans.). New York: International. (Original work published 1867).

Matsuyama, K. (2007). Beyond icebergs: Towards a theory of biased globalization. *The Review of Economic Studies*, *74*(1), 237-253.

Merton, R. K. (1967). *On theoretical sociology: five essays, old and new* (No. HM51 M392).

Mughan, A., Bean, C., & McAllister, I. (2003). Economic globalization, job insecurity and the populist reaction. *Electoral Studies*, *22*(4), 617-633.

Muñoz de Bustillo, R., Fernandez-Macias, E., Antón, J. I., & Esteve, F. (2009). Indicators of job quality in the European Union. *Brussels: European Parliament*.

Newman, K., & Maylor, U. (2002). Empirical evidence for "the nurse satisfaction, quality of care and patient satisfaction chain". *International Journal of Health Care Quality Assurance*.

Osterman, P., & Shulman, B. (2011). *Good Jobs America*. Russell Sage Foundation.

Penn, D. A. (2007). Estimating missing values from the general social survey: An application of multiple imputation. *Social Science Quarterly*, *88*(2), 573-584.

Pieterse, J. N. (1994). Globalisation as hybridisation. *International sociology*, *9*(2), 161-184.

Pollin, R., Garrett-Peltier, H., Heintz, J., & Scharber, H. (2008). *Green recovery: A program to create good jobs & start building a low-carbon economy* (No. peri_report). Political Economy Research Institute, University of Massachusetts at Amherst.

Rehm, P. (2009). Risks and redistribution: An individual-level analysis. *Comparative political studies*, *42*(7), 855-881.

Rehm, P. (2016). Who supports the welfare state? Determinants of preferences concerning redistribution. In *Social justice, legitimacy, and the welfare state* (pp. 65-90). Routledge.

Ritter, J. A., & Anker, R. (2002). Good jobs, bad jobs: Workers' evaluations in five countries. *Int'l Lab. Rev.*, *141*, 331.

Rodrik, D. (1997, October). Globalisation, social conflict, and economic growth. In *Conferencia de Raúl Prebisch. Ginebra. Versión revisada (en inglés) disponible en http://www.ksg.harvard.edu/rodrik/global.pdf* (Vol. 24).

Rodrik, D. (1998). Has globalisation gone too far? *Challenge*, *41*(2), 81-94.

Rodrik, D. (2018, March 29). Globalization Has Contributed to Tearing Societies Apart. *Pro-Market*. Retrieved on March 23, 2020 via <https://promarket.org/globalization-contributed-tearing-societies-apart/>.

Rodrik, D. (2019, February 7). The Good Jobs Challenge. *Project Syndicate*. Retrieved March 22, 2020 via < https://www.project-syndicate.org/commentary/how-countries-can-create-middle-class-jobs-by-dani-rodrik-2019-02?barrier=accesspaylog >.

Rodrik, D., & Sabel, C. (2019). Building a good jobs economy. *Work. Pap., Harvard Univ., Cambridge.*

Scheve, K. F., & Slaughter, M. J. (2001). Labor market competition and individual preferences over immigration policy. *Review of Economics and Statistics*, *83*(1), 133-145.

Scheve, K., & Slaughter, M. J. (2004). Economic insecurity and the globalization of production. *American Journal of Political Science*, *48*(4), 662-674.

Schmitt, J., & Jones, J. (2012). *Where Have All the Good Jobs Gone?* Washington, DC: Center for Economic and Policy Research.

Shields, M. A., & Ward, M. (2001). Improving nurse retention in the National Health Service in England: the impact of job satisfaction on intentions to quit. *Journal of health economics*, *20*(5), 677-701.

Smith, V. (2013). Good jobs bad jobs: The rise of polarized and precarious employment systems in the United States 1970s to 2000s. *Social Forces*, 91, 1105-1109.

Steedman, H., & McIntosh, S. (2001). Measuring low skills in Europe: how useful is the ISCED framework? *Oxford Economic Papers*, 53(3), 564-581.

Swank, D., & Steinmo, S. (2002). The new political economy of taxation in advanced capitalist democracies. *American Journal of Political Science*, 642-655.

Taber, K. S. (2018). The use of Cronbach's alpha when developing and reporting research instruments in science education. *Research in Science Education*, *48*(6), 1273-1296.

Temin, P. (2017). *The Vanishing Middle Class. Prejudice and Power in a Dual Economy*, MIT Press, Cambridge, MA.

Thewissen, S. H., & van Vliet, O. P. (2018). Chinese Imports and Domestic Employment Across 18 OECD Countries. *VOX CEPR Policy Portal*, (6 september 2018).

Turner, A. N., & Lawrence, P. R. (1965). *Industrial jobs and the worker: An investigation of response to task attributes*. Harvard University, Division of Research, Graduate School of Business Administration.

UNESCO Institute for Statistics. (2012). *International standard classification of education: ISCED 2011*. Montreal: UNESCO Institute for Statistics.

Utriainen, K., & Kyngäs, H. (2009). Hospital nurses' job satisfaction: a literature review. *Journal of nursing management*, *17*(8), 1002-1010.

Van Vliet, O. P. (2019). *Globalisering, migratie en technologische vooruitgang: gevolgen voor arbeidsmarkt en sociale zekerheid.* Leiden University.

Venkatesh, V. (2020). Impacts of COVID-19: A research agenda to support people in their fight. *International Journal of Information Management*, 102197.

Vila, L. E., & García-Mora, B. (2005). Education and the determinants of job satisfaction. *Education Economics*, *13*(4), 409-425.

Vinopal, J. (2009, March). The Instrument for empirical surveying of subjectively perceived quality of life. In *Proceedings of the conference Working Conditions and Health and Safety Surveys in Europe: Stocktaking, Challenges and Perspectives, European Trade-Union Institute, Brussels, Belgium* (pp. 18-19).

Walter, S. (2010). Globalisation and the welfare state: Testing the microfoundations of the compensation hypothesis. *International Studies Quarterly*, *54*(2), 403-426.

Walter, S., & Maduz, L. (2009). How globalization shapes individual risk perceptions and policy preferences: A cross-national analysis of differences between globalization winners and losers. *Weatherhead Center for international Affairs Working Paper*, (09-0015).

Weisstanner, D., & Armingeon, K. (2018). *How redistributive policies reduce market inequality: Education premiums in 22 OECD countries* (No. 735). LIS Working Paper Series.

Wright, J. D., & Hamilton, R. F. (1978). Work satisfaction and age: Some evidence for the 'job change' hypothesis. *Social Forces*, *56*(4), 1140-1158.