

Globalisation, economic uncertainty and labour market regulations: Implications for the COVID-19 crisis

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Abstract

This paper empirically analyses the effects of globalisation on labour market regulations. We also interact globalisation measures with economic uncertainty, and they serve as potential determinants of de jure labour market conditions. For this purpose, we consider new innovative globalisation and economic uncertainty indices (the Revisited KOF Globalisation and the World Uncertainty) in a panel dataset of 136 countries from 2000 to 2017. The findings indicate that globalisation promotes labour market flexibility, while economic uncertainty decreases it. We also find that the interaction of globalisation with economic uncertainty positively affects labour market flexibility. The findings are robust to various sensitivity analyses, that is, different estimation procedures and globalisation indicators, including various controls and excluding outliers.

KEYWORDS

economic uncertainty, globalisation, labour market regulations

JEL CLASSIFICATION

E24; F66; E32; C33

1 | INTRODUCTION

One of the crucial economic problems of the 21st century in many countries is the deterioration of labour market conditions and protections, especially for unskilled workers (Berliner et al., 2015). Various studies indicate that this is happening due to globalisation and offshoring (Davies

& Vadlamannati, 2013; Olney, 2013; Ranjan, 2013; Rudra, 2008). There is also a significant impact of globalisation on collective bargaining, and the potential weakening of unions due to globalisation is one important mechanism through which the labour market conditions of unskilled workers are deteriorating (Hessami & Baskaran, 2015). Jobs of unskilled workers are even disappearing altogether due to globalisation (Autor et al., 2013). Globalisation also reduces public employment, an alternative to private-sector jobs (Gozgor et al., 2019).

These arguments about the impact of globalisation on labour markets stem from two issues. First, through global value chains (GVCs), the production process is internationalised. Production is divided into various stages, and each stage is completed in a different country. GVCs create a large-scale extension of labour division and stimulate competitive pressure (Wood, 1998). GVCs put pressure on real wages, standardised production regulations and demanded high levels of efficiency of workers. Thus, GVCs provide cheaper production, and most countries can choose to import products (e.g. from China) rather than produce them domestically. Overall, GVCs affect labour market institutions and outcomes (Autor et al., 2013).

The second issue is the race to the bottom. Governments deregulate labour markets to provide more profit to investors by increasing their revenues or decreasing their costs. By providing benefits, countries expect to receive higher investments in a competitive global system. At this stage, governments can decrease hiring/firing costs, severance payments and minimum wages. They can also change union laws to decrease workers' collective bargaining rights and military conscription duration to control the labour supply. Overall, GVCs, trade (imports) shocks and increased competition cause a race to the bottom for workers' wages. These issues are mainly responsible for the deterioration of labour market conditions and protections (Autor et al., 2013; Potrafke, 2013).

As discussed in Section 2 below, the empirical findings on globalisation's effects on labour market regulations are mixed. There are several reasons for the lack of coherence across studies. First, there are various indicators of labour market regulations (e.g. employment protection, minimum wage, unemployment benefits, union density, etc.). These measures vary significantly, even across countries with similar development levels (Gwartney et al., 2020). For example, labour markets are less regulated in Anglo-Saxon countries than Scandinavian countries, and these countries are at similar per capita income levels. Labour market regulations also vary significantly across developing countries (Gwartney et al., 2020). Therefore, we use the overall index of labour market regulations to handle this issue, capturing different labour market dynamics (Potrafke, 2013). Second, various globalisation measures (e.g. financial openness, foreign direct investments, offshoring, outsourcing, trade openness, etc.) are available. However, these are not the sole variables representing globalisation. Globalisation is a concept that includes these economic variables as well as social and political dimensions. Therefore, it is necessary to consider the impact of globalisation's economic, social and political aspects on labour market regulations as a whole. The KOF globalisation indices provided by Gygli et al. (2019) are designed for this purpose. Our paper uses the revisited KOF globalisation indices to address this issue in empirical studies (see, e.g. Potrafke, 2019).

In addition, the COVID-19 pandemic can increase the pressures of globalisation on labour since it shows the potential of decoupling work from physical presence in the workplace. When the COVID-19 pandemic ends, most work will be done using online tools, that is, there will be less sharing of physical offices and factory-based work. The COVID-19 pandemic shows the potential of labour flexibility since workers can work from home with flexible hours instead of working offices or factories with regular hours. Therefore, we



should expect more flexibility in labour market regulations in the post-COVID-19 era. In line with the race to the bottom hypothesis, labour competition will increase once the pandemic ends.

In this paper, unlike previous studies, we include economic uncertainty in investigating globalisation's effects on labour market regulations. When examining the impact of globalisation on labour market regulations, it is important to consider the role of economic uncertainty for several reasons. First, firms may stall hiring in times of economic uncertainty since economic uncertainty increases the risk of making the costly mistake of new hiring (Pries, 2016). This is referred to as the 'real option' channel (Bernanke, 1983).¹ Second, when economic uncertainty increases, the risk premium rises and the cost of investing with external financing (credit) increases, reducing opportunities for new job creation. This is referred to as the 'risk premium' channel (Arellano et al., 2019). Third, risk aversion may cause firms to avoid investing in new projects on the supply side. On the demand side, risk aversion may also increase households' precautionary saving motivation, reducing aggregate demand. This is referred to as the 'risk aversion' channel (Basu & Bundick, 2017). Therefore, policymakers can increase the labour market's rigidities to protect jobs and earnings to prevent further household demand decline. Policymakers can even try to increase demand with fiscal policies, for example increase public employment and workers' compensation (Fernández-Villaverde et al., 2015).

Governments can create a more flexible labour market to reduce the cost of hiring 'inefficient workers' in times of economic uncertainty. In other words, governments can relax hiring and firing regulations. In addition, in times of increased economic uncertainty, union bargaining power will decrease since workers have fewer opportunities to find better jobs. Simultaneously, economic uncertainty can lead to more flexible working hour regulations, such as working at night, on weekends, or having fewer holidays. In short, economic uncertainty should cause more flexible labour market regulations due to the real option and the risk premium channels; however, it should cause stricter labour market conditions due to the risk aversion channel.

This paper analyses the effects of economic globalisation and economic uncertainty measures on labour market flexibility using under-researched 21st century data (from 2000 to 2017) in 136 countries. Following the empirical strategy in Potrafke (2013), where he uses traditional globalisation indices, our paper uses the new datasets of Gygli et al. (2019) to measure globalisation. More importantly, we include the role of economic uncertainty in this debate. We find empirical support for the race to the bottom hypothesis, since globalisation promotes labour market flexibility. However, we observe that globalisation has a less positive impact on labour market flexibility during times of greater economic uncertainty. Therefore, we should expect stricter labour market conditions when globalisation decreases and economic uncertainty increases, such as in the COVID-19 era. Following our results, we suggest that a more flexible labour market will emerge for the post-COVID-19 period if globalisation increases and economic uncertainty decreases.

The structure of the remaining parts of the paper is as follows. In Section 2, we explain our theoretical models and review the previous empirical literature. In Section 3, we outline our empirical model and estimation procedures and explain the data. In Section 4, we present our empirical findings. In Section 5, we check the robustness of the results. Section 6 concludes the paper.

¹Therefore, economic uncertainty negatively affects labour market outcomes (e.g. higher unemployment) (Schaal, 2017).

2 | LITERATURE REVIEW

2.1 | Theoretical models

Globalisation causes systems competition based on the mobility of production factors (Sinn, 2004). Competition among free-market economies can produce a 'race to the bottom' in labour market regulations (Rudra, 2008; Sinn, 1997). Following the race to the bottom hypothesis, various theoretical models show how globalisation can affect labour market regulations. For instance, Boulhol (2009) indicates that globalisation affects labour market regulations via capital mobility and trade liberalisation, which leads to an inter-sectoral reallocation of the factors of production (from the highly unionised sectors to deregulated sectors).² In a globalised world economy with capital mobility and free trade, investors may invest in countries where workers have less bargaining power. Baskaran and Hessami (2012) and Schulze and Ursprung (1999) also point out how nation-states adjust fiscal (or generally social) policies due to the pressures created by globalisation. Therefore, governments may choose to deregulate labour markets because they fear global firms will invest in other economies.

In terms of the theoretical background, a standard Heckscher-Ohlin (H-O) framework may also be useful. Here, foreign capital flows to countries with abundant production factors; if idle labour in particular countries is abundant and foreign direct investments (FDIs) are labour-intensive, they will settle there. In this framework, factor abundance matters and the regulatory framework in which such abundance 'occurs'. For instance, a country may be diving in large unemployment, but procedures to fire a worker may be that stringent, that abundance (low wages) itself is not a trigger for FDIs to settle there. Therefore, expanding the H-O framework, for example, the theory early developed by Olson (1971) on workers' bargaining power, can explain globalisation's effects on labour market regulations. In line with the H-O framework, Hessami (2011) shows that globalisation affected various social groups differently.

Global value chains and trade liberalisation enhance firms' bargaining power (leading to labour market flexibility) since they can import production factors instead of producing them (Boulhol, 2009). This can change the unemployment rate and labour market regulations. However, the model in Felbermayr et al. (2013) predicts that more generous unemployment benefits in one open economy affect unemployment in the domestic economy and other countries. Countries' size, trade costs and real wages' rigidity determine unemployment spillover at this stage. Felbermayr et al. (2013) also consider the panel dataset of 20 OECD countries and confirm the model's predictions when controlling for institutions and business cycles. Therefore, following Felbermayr et al. (2013), we also control for business cycles. Differently, we use the novel measure of the World Uncertainty Index (WUI), and we also include various institutional quality indicators in the robustness checks.

Furthermore, the compensation hypothesis indicates that globalisation (trade and financial openness) redounds the government's role in markets (Rodrik, 1998). Because workers (the losers of globalisation) will demand compensation (e.g. unemployment benefit payments, unemployment insurance and job-protection regulations) against risks, economies will be more globalised. Governments should respond to these demands by providing broader public facilities (Rodrik, 2011).

²Note that in newer models with heterogeneous firms, capital mobility and trade liberalisation can affect labour market regulations, which leads to an intra-sectoral reallocation of the factors of production (see, e.g. Melitz and Redding, 2014).



In short, there should be more labour protection in countries with hyper-globalisation. Following the compensation hypothesis provided by Rodrik (1998, 2011), we control for the size of government and absolute redistribution in our empirical estimations.

2.2 | Previous empirical papers

Globalisation (trade openness or financial openness) affects labour market indicators (e.g. unemployment rates and wages) and labour market regulations (see, e.g. Autor et al., 2013; Dutt et al., 2009; Gaston & Nelson, 2004). Researchers have also investigated the effects of globalisation on domestic economic policies, including labour market regulations (see, e.g. Mosley, 2008; Neumayer & De Soysa, 2006; Rudra, 2008).³

2.2.1 | Studies on OECD countries

Several empirical studies examine the effects of globalisation indicators on labour market regulations in OECD countries. For instance, Algan and Cahuc (2006) observe that trade openness was positively associated with the index of employment protection in OECD countries from 1970 to 1999. Using data for 17 OECD countries from 1980 to 1999, Dreher and Gaston (2007) indicate that social globalisation reduced union membership. However, the economic and political aspects of globalisation did not significantly affect union membership. Fischer and Somogyi (2009) also find that trade openness increased unemployment benefits in OECD countries from 1961 to 2007. In another empirical analysis from 1985 to 2003, the authors observe that globalisation decreased the protection of full-time jobs but increased the protection of part-time jobs in OECD countries.

Similarly, Felbermayr et al. (2012) indicate that trade openness was positively related to unemployment benefits from 1961 to 2007. However, using a panel dataset of 20 OECD countries from 1982 to 2003, Potrafke (2010) shows that globalisation (measured by KOF indices of globalisation) does not significantly affect various indicators of labour market regulations. Olney (2013) also demonstrates that FDI led to fewer employment protection rules in a panel dataset of 30 OECD countries from 1985 to 2007. This evidence aligns with the race to the bottom hypothesis and means that OECD countries competitively provide more flexible labour standards to attract FDI.

2.2.2 | Studies focused on other countries

Several studies focus on both developing and developed economies. For instance, Busse (2004) indicates that trade openness positively affected labour standards in a panel dataset of 71 developing economies from 1970 to 2000. However, Mosley and Uno (2007) state that trade openness negatively affected labour rights, but FDI promoted labour rights in a panel dataset of 90 countries from 1985 to 2002. Davies and Vadlamannati (2013) consider the panel dataset of 135 countries from 1985 to 2002, separating them into OECD and non-OECD countries. They find

³There is also extensive literature examining the impact of globalisation on employment using either industry-level or firm-level data. Refer to Hummels et al. (2018) for a survey of these papers.

that increased trade openness leads to more flexible labour standards due to competition for investment among countries. Potrafke (2013) uses different estimation procedures and concludes that globalisation (measured by KOF indices of globalisation) does not significantly affect labour market regulations (measured by the economic freedom of the world indicators). This evidence is robust to the panel dataset of 49 countries from 1970 to 2009 with the 5-year averaged data and for 137 countries from 2000 to 2009 with annual data. Our paper uses similar indicators for globalisation and labour market regulations and the annual dataset estimation procedure in Potrafke (2013). We also include the role of business cycles (economic uncertainty) measured by the WUI.

Furthermore, Vadlamannati (2015) observes that social globalisation promotes labour rights in developing economies—a finding in line with the compensation hypothesis. Hessami and Baskaran (2015) use a panel dataset of 44 countries from 1980 to 2009 and show that globalisation decreases unionisation. However, there are no significant effects of globalisation on decentralisation and government intervention in collective bargaining. Berdiev and Saunoris (2018) study globalisation's effects on the shadow economy using an annual panel dataset of 119 countries from 2000 to 2007. They find that globalisation reduces the development of the shadow economy, meaning that globalisation suppresses the benefits of the shadow economy, such as avoiding higher labour costs through hiring and firing regulations and minimum wage laws.

Moreover, Reinsberg et al. (2019) investigate globalisation's effects (measured by the International Monetary Fund's policy interventions) on labour rights in a panel dataset of 70 developing countries from 1980 to 2014. The authors obtain mixed results for the effects of globalisation indicators on collective labour rights. Petreski (2020) also examines globalisation's effects (measured by manufacturing exports and FDI) on labour market indicators in 25 transition economies from 1996 to 2016. The author obtains heterogeneous results: While globalisation promotes the labour market conditions in the Central European transition economies, it decreases collective bargaining and wages and worsens working conditions in the Commonwealth of Independent States. Furthermore, it creates more jobs in the Southeast European transition economies, distorting wages and working conditions. In a further study, Petreski (2021) analyses globalisation's effects on labour share (a measure of workers' bargaining power) in an industry-level panel dataset for 23 transition economies from 2000 to 2015. The author observes that globalisation results in stagnant labour shares in low-skilled industries. However, labour shares in highly-skilled industries are not significantly affected by globalisation shocks.

Overall, previous papers indicate that the 'race to the bottom' hypothesis can be valid (e.g. Davies & Vadlamannati, 2013) as countries compete to lower production costs by increasing labour market flexibility. Alternatively, globalisation leads to stricter (protective) labour market regulations, as the compensation hypothesis suggests (e.g. Vadlamannati, 2015). In addition, globalisation does not impact labour market regulations (e.g. Potrafke, 2013). We contribute to this literature by including the novel index of the WUI to capture the effects of changing economic policies and business cycles as a potential driver of labour market flexibility. In so doing, we observe the validity of the 'race to the bottom' hypothesis in the globalisation-labour market regulation nexus in a panel dataset of 136 countries from 2000 to 2017.



3 | DATA, MODELS AND ESTIMATION PROCEDURES

3.1 | Data

3.1.1 | Panel data sample

Our sample covers the period between 2000 and 2017. Following Berdiev and Saunoris (2018) and Potrafke (2013), the data frequency is annual. The beginning date of the sample is related to the availability of annual data on labour market flexibility. We also use annual data to model short-term fluctuations (business cycles), which is why we consider the WUI. The sample includes 136 developed and developing countries, as listed in the Table S1. Following World Bank (2021a), we classify countries as low-income, middle-income and high-income economies. The high-income economies are defined as those with a per capita gross national income (GNI) higher than \$12,536 in the fiscal year 2021. The countries with a GNI lower than \$12,536 are defined as low-income and middle-income economies (World Bank, 2021a). Finally, we consider the OECD and non-OECD countries.

3.1.2 | Labour market flexibility

We use the labour market flexibility (*LMF*) index as the dependent variable. We also consider six sub-indices of the *LMF*: (i) hiring regulations and minimum wage (*HRMW*), (ii) hiring and firing regulations (*HFR*), (iii) centralised collective bargaining (*CCB*), (iv) hours regulations (*HORe*), (v) mandated cost of worker dismissal (*MCWD*) and (vi) conscription (*CON*). The related data are obtained from Gwartney et al. (2020). All indicators are defined as the index from 0 to 10, and higher levels indicate greater flexibility (freedom).⁴

3.1.3 | Uncertainty measure

We consider the *WUI* to capture business cycles' effects on labour markets (Felbermayr et al., 2013). The *WUI* is a novel indicator that tracks uncertainty across countries by text mining the country reports of the Economist Intelligence Unit (EIU). The data are obtained from Ahir et al. (2019). The *WUI* is calculated by counting the word 'uncertain' (or variant) in the EIU's country reports. A greater value of the *WUI* indicates a higher level of uncertainty.⁵

3.1.4 | Globalisation measures

One of the main variables of interest is the KOF indices of globalisation, and the data are obtained from Gygli et al. (2019). The revisited version of the KOF indices of globalisation provides de facto and de jure measures of the overall index and economic, political and social globalisation indices. Following Gozgor (2018), we use the indices in logarithmic form. In addition, following

⁴For details, visit <https://www.fraserinstitute.org/economic-freedom/approach>.

⁵For details, visit <https://worlduncertaintyindex.com/>.

Potrafke (2013, 2015), we use the indices' lagged values to address potential endogeneity and reverse causality concerns.

We first provide the results for the overall globalisation index ($\ln KOF_OGI_{t-1}$), the de facto overall globalisation index ($\ln KOF_OGdfI_{t-1}$), and the de jure overall globalisation index ($\ln KOF_OGIdj_{t-1}$) as well as the economic globalisation index ($\ln KOF_EGI_{t-1}$), the social globalisation index ($\ln KOF_SGI_{t-1}$), and the political globalisation index ($\ln KOF_PGI_{t-1}$). Secondly, we further investigate the components of the economic globalisation index and provide the results for indices of de facto economic globalisation ($\ln KOF_EGIdf_{t-1}$) and de jure economic globalisation ($\ln KOF_EGIdj_{t-1}$), as well as trade globalisation ($\ln KOF_TRGI_{t-1}$), de facto trade globalisation ($\ln KOF_TRGIdf_{t-1}$), de jure trade globalisation ($\ln KOF_TRGIdj_{t-1}$), financial globalisation ($\ln KOF_FINGI_{t-1}$), de facto financial globalisation ($\ln KOF_FINGIdf_{t-1}$) and de jure financial globalisation ($\ln KOF_FINGIdj_{t-1}$). In short, we use 14 indices of overall globalisation and economic globalisation. Note that de jure indices are based on globalisation policies, such as agreements, regulations and taxes. De facto indices are based on globalisation outcomes, such as foreign investments, international trade and technology.⁶

3.1.5 | Main controls

Following Potrafke (2010, 2013) and Felbermayr et al. (2013), we use the total population in the logarithmic form to capture country size. Following Potrafke (2010, 2013) and Rodrik (1998), we also consider government consumption (percentage of current purchasing power parity (PPP) and gross domestic product (GDP)) to capture the size of government in the economy. The related data are obtained from Feenstra et al. (2015). Both indicators are defined as the main controls. Note that these controls are in line with the empirical models in Potrafke (2013).

3.1.6 | Additional controls

We use various additional controls in the robustness checks. We include the age-dependency ratio to capture the ageing population's effect on labour market flexibility (Gozgor & Ranjan, 2017). Urban population and population density are included in the model and are considered alongside city size and migration within the country. (Bernal-Verdugo et al., 2012). Note that population is treated as exogenous in the system generalised method of moments (GMM) estimations. The macroeconomic stance is measured by the inflation rate and the current account balance (Potrafke, 2019). These data are obtained from the World Bank (2021b). Furthermore, we include income inequality and redistribution indices to control their effect on labour market flexibility (Dabla-Norris et al., 2015; Rodrik, 2011). The related data are obtained from Solt (2020).

We also include various measures of institutional quality, which can also affect labour market flexibility (Felbermayr et al., 2013; Potrafke, 2010, 2013, 2015). Therefore, we consider the indices of democracy, executive constraints and *polity2*, and the related data are obtained from Marshall and Gurr (2020). We also consider the index of the legal system and property rights, and the related data come from Gwartney et al. (2020). Furthermore, we use indices of political regimes and a typology of political institutions, with related data provided by Bjørnskov and Rode (2020). A higher level of indices indicates a higher level of institutional quality. Another measure is the

⁶For details, visit <https://www.kof.ethz.ch/en/forecasts-and-indicators/indicators/kof-globalisation-index.html>.

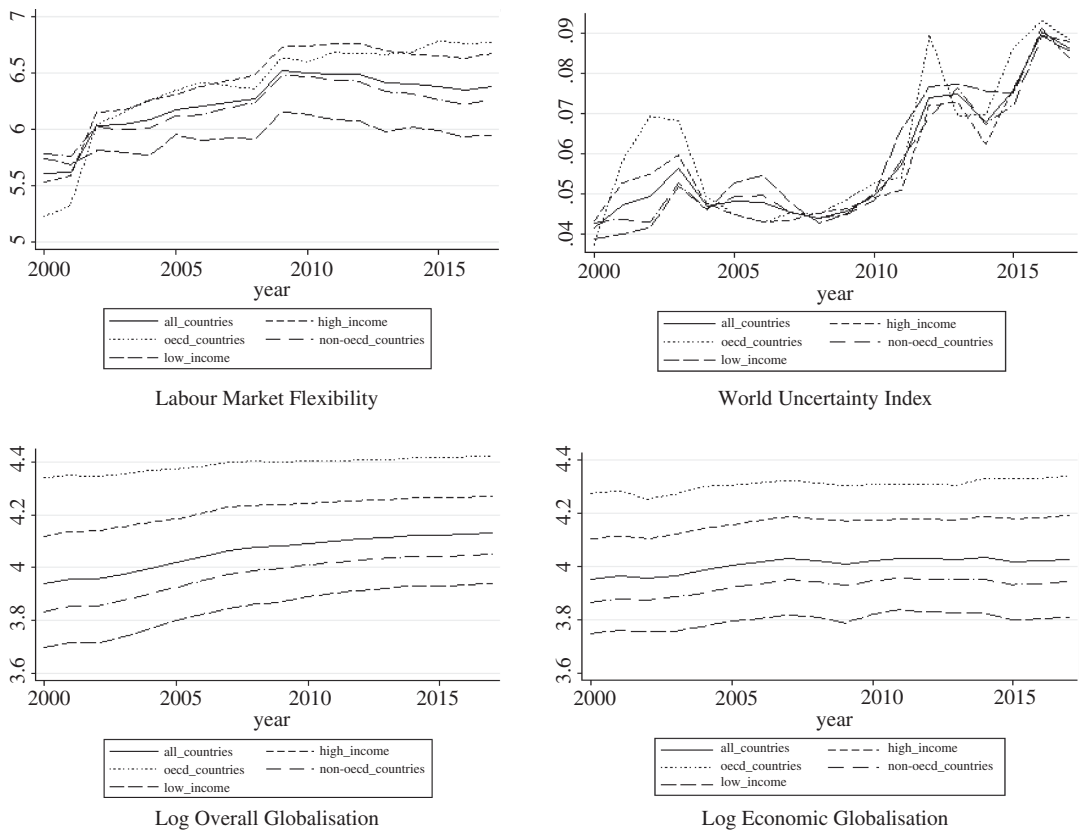


FIGURE 1 Main indicators, 2000–2017

index of the freedom of the press, with related data obtained from Freedom House (2020). A higher level of this index means a lower level of institutional quality.

Figure 1 illustrates the main indices (labour market flexibility, the WUI, log overall globalisation and log economic globalisation) in different country groups (full sample, high-income, low- and middle-income, OECD and non-OECD countries) from 2000 to 2017.

Details of all variables and a summary of descriptive statistics are reported in Table S2. The correlation matrix for the *LMF*, the *WUI*, globalisation indices and main control variables are also provided in Table S3.

3.2 | Empirical models and estimation procedures

We estimate the following empirical models:

$$LMF_{i,t} = \gamma_0 + \gamma_1 WUI_{i,t-1} + \gamma_2 \ln KOF_GI_{i,t-1} + \gamma_3 WUI_{i,t-1} * \ln KOF_GI_{i,t-1} + \gamma_4 X_{i,t-1} + \vartheta_t + \vartheta_i + \varepsilon_{i,t} \quad (1)$$

$$LMF_{i,t} = \beta_0 + \beta_1 WUI_{i,t-1} + \beta_2 \ln KOF_EGI_{i,t-1} + \beta_3 WUI_{i,t-1} * \ln KOF_EGI_{i,t-1} + \beta_4 X_{i,t-1} + \vartheta_t + \vartheta_i + \varepsilon_{i,t} \quad (2)$$

TABLE 1 Globalisation, WUI and LMF (2000–2017)

Regressors	LMF (1)	LMF (2)	LMF (3)	LMF (4)	LMF (5)	LMF (6)
$\ln POP_{t-1}$	−0.579*** (0.146)	−0.400*** (0.141)	−0.416*** (0.142)	−0.263** (0.120)	−0.862*** (0.159)	−0.499*** (0.145)
$\ln GOV_SIZE_{t-1}$	−1.242*** (0.396)	−1.323*** (0.398)	−1.259*** (0.397)	−1.216*** (0.407)	−1.535*** (0.394)	−1.451*** (0.397)
WUI_{t-1}	−14.75*** (4.390)	−12.36*** (3.824)	−13.88*** (4.653)	−4.458 (3.335)	−7.834*** (2.881)	−7.382*** (2.756)
$WUI_{t-1} * Globalisation Index_{t-1}$	3.582*** (1.067)	3.049*** (0.941)	3.353*** (1.119)	1.164 (0.836)	1.938*** (0.717)	1.881*** (0.693)
$\ln KOF_OGI_{t-1}$	1.986*** (0.204)	−	−	−	−	−
$\ln KOF_OGIdf_{t-1}$	−	1.295*** (0.154)	−	−	−	−
$\ln KOF_OGIdj_{t-1}$	−	−	1.976*** (0.221)	−	−	−
$\ln KOF_EGI_{t-1}$	−	−	−	0.667*** (0.146)	−	−
$\ln KOF_SGI_{t-1}$	−	−	−	−	1.163*** (0.114)	−
$\ln KOF_PGI_{t-1}$	−	−	−	−	−	0.814*** (0.093)
Observations	2,100	2,100	2,100	2,100	2,100	2,100
Countries	136	136	136	136	136	136
R-squared (Within)	0.0674	0.0559	0.0586	0.0246	0.0709	0.0592

Note: The dependent variable is the index of labour market flexibility (LMF). The constant term, country FE and period FE are included. The robust standard errors are in parentheses. *** $p < 0.01$ and ** $p < 0.05$.



$$LMF_{i,t} = \delta_0 + \delta_1 LMF_{i,t-1} + \delta_2 WUI_{i,t-1} + \delta_3 \ln KOF_GI_{i,t-1} + \delta_4 WUI_{i,t-1} * \ln KOF_GI_{i,t-1} + \delta_5 X_{i,t-1} + \vartheta_t + \vartheta_i + \varepsilon_{i,t} \quad (3)$$

As the dependent variable, we consider $LMF_{i,t}$, the index of labour market flexibility. We also use various sub-indices of $LMF_{i,t}$ in country i at time t . In the system GMM estimations, we include the lagged labour market index ($LMF_{i,t-1}$) in country i at time $t-1$. $\ln KOF_GI_{i,t-1}$ and $\ln KOF_EGI_{i,t-1}$ are various KOF overall globalisation and economic globalisation indices in country i at time $t-1$. $WUI_{i,t-1}$ is the World Uncertainty Index (WUI) in country i at time $t-1$. We also include the interaction term of the WUI with globalisation ($WUI_{i,t-1} * \ln KOF_GI_{i,t-1}$) and the interaction term of the WUI with economic globalisation ($WUI_{i,t-1} * \ln KOF_EGI_{i,t-1}$). $X_{i,t-1}$ indicates a vector of control variables in the country i at time $t-1$. ϑ_t , ϑ_i , and $\varepsilon_{i,t}$ captures ‘period fixed-effects (FE)’, ‘country FE’ and ‘error terms’, respectively. Robust standard errors are clustered by country level, which pools annual observations to account for the possible autocorrelation in the error term.

Equations (1) and (2) are estimated using FE estimations, a traditional estimation procedure in the empirical literature (see, e.g. Potrafke, 2015). However, due to their global size and importance, many multinational companies negotiate with governments and agree on labour regulation changes to invest in the country. Hence, reverse causation occurs between the current globalisation level (e.g. FDI inflows) and future variation in labour market regulations. From that viewpoint, fixed-effect estimations could be easily contested for validity. Therefore, we also use system GMM estimations to estimate Equation (3) following previous papers (e.g. Potrafke, 2013). Our estimates with the annual data in level form do not suffer from spurious regression since we confirm that the dependent variables (indicators of labour market flexibility) are stationary according to Pesaran's (2007) panel unit root test.

The system GMM estimations, introduced by Arellano and Bover (1995) and Blundell and Bond (1998), can solve potential problems of endogeneity and reverse causality, that is, labour market flexibility can affect globalisation (Bellak & Leibrecht, 2011; Berliner et al., 2015). In the system GMM estimations, we provide the Sargan test results to determine whether there are over-identifying restrictions. If we cannot reject the null hypothesis, there are no over-identifying restrictions, and the required assumption is satisfied. Furthermore, we need to find the significant first-order autocorrelation following the AR (1) autocorrelation test. However, we must not reject the null hypothesis of second-order autocorrelation validity following the AR (2) autocorrelation test (Roodman, 2009). Instruments are also collapsed following Roodman (2009), and two-stage GMM estimators are used.

4 | EMPIRICAL FINDINGS

4.1 | Overall Globalisation and Labour Market Flexibility

Table 1 reports the benchmark estimation findings for Equation (1), and the index of LMF is the dependent variable. The findings of $\ln KOF_OGI_{t-1}$, $\ln KOF_OGIdf_{t-1}$ and $\ln KOF_OGIdj_{t-1}$ are provided in columns (1), (2) and (3), and the findings of $\ln KOF_EGI_{t-1}$, $\ln KOF_SGI_{t-1}$ and $\ln KOF_PGI_{t-1}$ are reported in columns (4), (5) and (6).

The findings show that $\ln KOF_OGI_{t-1}$ increases labour market flexibility. One standard deviation (0.276 per cent) increases in $\ln KOF_OGI_{t-1}$ leads to a 2.38 standard deviation (3.43 point)

increase in the index of *LMF*. We also consider $\ln KOF_OGIdf_{t-1}$ and $\ln KOF_OGIdj_{t-1}$. Finally, we use $\ln KOF_EGId_{t-1}$, $\ln KOF_SGId_{t-1}$ and $\ln KOF_PGId_{t-1}$. These globalisation indicators are positively associated with labour market flexibility. One standard deviation rises in the $\ln KOF_EGId_{t-1}$ lead to a 0.87 standard deviation increase in the index of *LMF*. In addition, the effects of one standard deviation increase in $\ln KOF_SGId_{t-1}$ and $\ln KOF_PGId_{t-1}$ are 2.01 standard deviation and 1.49 standard deviation increases in the index of *LMF*. Therefore, the impact is highest in social globalisation, and it is the lowest in economic globalisation. All related coefficients are statistically significant at the 1% level.

Furthermore, the lagged *WUI* (WUI_{t-1}) reduces the flexibility of the labour market. In addition, globalisation's interaction with the lagged *WUI* ($WUI_{t-1} * Globalisation Index_{t-1}$) also positively affects labour market flexibility. The related coefficients are statistically significant at the 1% level, except for column (4). The corresponding coefficients in column (4) are statistically insignificant.

When we analyse the controls, both $\ln POP_{t-1}$ and log lagged $\ln GOV_SIZE_{t-1}$ are negatively associated with each regression's labour market flexibility. The related coefficients are statistically significant at the 5% level at least.

4.2 | Economic globalisation and labour market flexibility

Table 2 provides the results of the benchmark estimation for Equation (2). The findings of $\ln KOF_EGIdf_{t-1}$ and $\ln KOF_EGIdj_{t-1}$ are reported in columns (1) and (2). The results of $\ln KOF_TRGI_{t-1}$, $\ln KOF_TRGIdf_{t-1}$ and $\ln KOF_TRGIdj_{t-1}$ are provided in columns (3), (4) and (5). Finally, the findings of $\ln KOF_FINGId_{t-1}$, $\ln KOF_FINGIdf_{t-1}$ and $\ln KOF_FINGIdj_{t-1}$ are reported in columns (6), (7) and (8).

The results indicate that all indicators of economic globalisation promote labour market flexibility. The related coefficients are statistically significant at the 10% level at least, except for $\ln KOF_FINGIdj_{t-1}$. In addition, WUI_{t-1} decreases labour market flexibility. On the other hand, ($WUI_{t-1} * Globalisation Index_{t-1}$) positively impacts labour market flexibility. However, most of the related coefficients are insignificant for these measures. When we look at the controls, $\ln POP_{t-1}$ increases labour market flexibility. In contrast, $\ln GOV_SIZE_{t-1}$ is negatively related to labour market flexibility. The related coefficients are statistically significant at the 10% level at least.

4.3 | Overall globalisation and sub-indices of labour market flexibility

Table 3 reports the results of the benchmark estimation for the sub-indices of the *LMF*. The findings of *HRMW*, *HFR*, *CCB*, *HORE*, *MCWD* and *CON* are provided in columns (1), (2), (3), (4), (5) and (6), respectively. The results state that $\ln KOF_OGId_{t-1}$ increases *HRMW*, *HORE* and *CON*. The coefficients of the related variables are statistically significant at the 5% level at least. However, KOF_OGId_{t-1} decreases the *HFR*, *CCB* and *MCWD*, and only the coefficient of *MCWD* is statistically significant.

Furthermore, WUI_{t-1} decreases the level of sub-indices of labour market flexibility. In addition, ($WUI_{t-1} * Globalisation Index_{t-1}$) improves the sub-indices of labour market flexibility. The coefficients of *HFR* and *MCWD* are statistically significant at the 5% level at least. Regarding the controls, both indicators of $\ln POP_{t-1}$ and $\ln GOV_SIZE_{t-1}$ have mixed effects on the sub-indices of labour market flexibility.

T A B L E 2 Economic globalisation, WUI and LMF (2000–2017)

Regressors	LMF (1)	LMF (2)	LMF (3)	LMF (4)	LMF (5)	LMF (6)	LMF (7)	LMF (8)
$\ln POP_{t-1}$	0.200* (0.119)	0.345*** (0.120)	0.227* (0.122)	0.244** (0.120)	0.278** (0.121)	0.335*** (0.119)	0.234** (0.119)	0.346*** (0.120)
$\ln GOV_SIZE_{t-1}$	-1.311*** (0.403)	-1.348*** (0.410)	-1.341*** (0.406)	-1.372*** (0.405)	-1.420*** (0.406)	-1.275*** (0.408)	-1.371*** (0.404)	-1.439*** (0.411)
WUI_{t-1}	-1.340 (3.163)	-4.772* (2.785)	-2.238 (2.748)	-1.250 (2.495)	-3.222 (2.060)	-5.495 (3.435)	-4.175 (2.974)	-3.460 (2.795)
$WUI_{t-1} * Globalisation Index_{t-1}$	0.364 (0.793)	1.269* (0.700)	0.621 (0.697)	0.273 (0.639)	0.886* (0.522)	1.425* (0.854)	1.070 (0.736)	0.942 (0.702)
$\ln KOF_EGIdj_{t-1}$	0.693*** (0.116)	-	-	-	-	-	-	-
$\ln KOF_EGIdj_{t-1}$	-	0.215* (0.122)	-	-	-	-	-	-
$\ln KOF_TRGIdj_{t-1}$	-	-	0.410*** (0.112)	-	-	-	-	-
$\ln KOF_TRGIdj_{t-1}$	-	-	-	0.358*** (0.089)	-	-	-	-
$\ln KOF_TRGIdj_{t-1}$	-	-	-	-	0.203** (0.082)	-	-	-
$\ln KOF_FINGIdj_{t-1}$	-	-	-	-	-	0.433*** (0.125)	-	-
$\ln KOF_FINGIdj_{t-1}$	-	-	-	-	-	-	0.548*** (0.098)	-
$\ln KOF_FINGIdj_{t-1}$	-	-	-	-	-	-	-	0.009 (0.095)
Observations	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100
Countries	136	136	136	136	136	136	136	136
R-squared (Within)	0.0327	0.0142	0.0195	0.0192	0.0167	0.0207	0.0335	0.0108

Note: The dependent variable is the index of labour market flexibility (LMF). The constant term, country FE and period FE are included. The robust standard errors are in parentheses. *** $p < 0.01$, ** $p < 0.05$ and * $p < 0.10$.

TABLE 3 Globalisation, WUI and sub-indices of LMF (2000–2017)

Regressors	HRMW (1)	HFR (2)	CCB (3)	HORE (4)	MCWD (5)	CON (6)
$\ln POP_{t-1}$	-0.423 (0.356)	-0.302 (0.220)	-0.007 (0.205)	-2.334*** (0.324)	3.606*** (0.260)	-3.977*** (0.401)
$\ln GOV_SIZE_{t-1}$	-4.826*** (0.965)	-0.960 (0.615)	0.517 (0.573)	-2.339*** (0.876)	-0.294 (0.704)	0.655 (1.071)
WUI_{t-1}	-16.41 (10.69)	-18.09*** (7.006)	-2.291 (6.527)	-3.915 (9.751)	-19.05** (7.642)	-17.66 (12.01)
$WUI_{t-1} * \ln KOF_OGI_{t-1}$	3.800 (2.601)	4.244** (1.691)	0.561 (1.575)	1.069 (2.371)	4.713** (1.857)	4.429 (2.923)
$\ln KOF_OGI_{t-1}$	0.901** (0.396)	-0.269 (0.335)	-1.318*** (0.312)	6.553*** (0.452)	-0.318 (0.357)	6.066*** (0.561)
Observations	2,099	1,925	1,925	2,100	2,068	2,113
Countries	136	132	132	136	136	136
R-squared (Within)	0.0179	0.0065	0.0150	0.1103	0.1441	0.0695

Note: The dependent variable is the sub-indices of labour market flexibility (LMF). The constant term, country FE and period FE are included. The robust standard errors are in parentheses. *** $p < 0.01$ and ** $p < 0.05$.

5 | ROBUSTNESS CHECKS

5.1 | Different country groups

We also consider the estimations for different country groups, and the related results are provided in Table 4. The first column in Table 4 provides the findings for low-income and middle-income economies, and the second column reports the findings for high-income economies. We report the results for non-OECD and OECD countries in columns (3) and (4), respectively.

The findings show that $\ln KOF_OGI_{t-1}$ increases labour market flexibility. The related coefficients are statistically significant at the 1% level. Furthermore, WUI_{t-1} decreases labour market flexibility. Note that $(WUI_{t-1} * Globalisation\ Index_{t-1})$ also positively affects labour market flexibility in all countries. However, the related coefficients are insignificant, except for the results for low-income and middle-income economies. When we analyse the controls, $\ln POP_{t-1}$ decreases labour market flexibility. However, $\ln GOV_SIZE_{t-1}$ is positively related to labour market flexibility. The related coefficients are statistically significant at the 10% level at least.

5.2 | System GMM estimations

Table 5 shows the system GMM estimation results for the model in Equation (3). The results of $\ln KOF_OGI_{t-1}$, $\ln KOF_OGIdf_{t-1}$ and $\ln KOF_OGIdj_{t-1}$ are reported in columns (1), (2) and (3), and the findings of $\ln KOF_EGI_{t-1}$, $\ln KOF_SGI_{t-1}$ and $\ln KOF_PGI_{t-1}$ are provided in columns (4), (5) and (6). The results indicate that all lagged log globalisation indices spur labour market flexibility, and the related coefficients are statistically significant at the 1% level.

Furthermore, WUI_{t-1} decreases the flexibility of the labour market. In addition, $(WUI_{t-1} * Globalisation\ Index_{t-1})$ positively affects labour market flexibility. The related coefficients are statistically significant at the 10% level at least. When we investigate the controls, both the indicators of $\ln POP_{t-1}$ and $\ln GOV_SIZE_{t-1}$ are negatively related to labour market flexibility in each regression. The coefficients for $\ln POP_{t-1}$ are statistically significant at the 1% level, and however, the coefficients for $\ln GOV_SIZE_{t-1}$ are statistically insignificant. Potrafke (2013) finds the positive

TABLE 4 Robustness test I: globalisation, WUI and LMF (Different Country Groups, 2000–2017)

Regressors	Low-income & middle-income economies (1)	High-income economies (2)	Non-OECD countries (3)	OECD countries (4)
$\ln POP_{t-1}$	−0.296* (0.171)	−2.064*** (0.261)	−0.417*** (0.143)	−0.902* (0.558)
$\ln GOV_SIZE_{t-1}$	1.728*** (0.383)	1.808* (0.926)	1.701** (0.389)	3.067** (1.389)
WUI_{t-1}	−9.281* (5.264)	−39.82 (28.44)	−5.337 (5.410)	−3.416 (30.86)
$WUI_{t-1} * \ln KOF_OGI_{t-1}$	2.183* (1.305)	9.341 (6.464)	1.260 (1.341)	0.961 (7.003)
$\ln KOF_OGI_{t-1}$	1.051*** (0.212)	5.777*** (0.693)	1.456*** (0.206)	8.385*** (0.769)
Observations	1,421	679	1,539	561
Countries	95	41	103	33
R-squared (Within)	0.0701	0.1643	0.0550	0.2674

Note: The dependent variable is the index of labour market flexibility (LMF). The constant term, country FE and period FE are included. The robust standard errors are in parentheses. *** $p < 0.01$, ** $p < 0.05$ and * $p < 0.10$.

TABLE 5 Robustness test II: system GMM estimations (Globalisation, WUI and LMF, 2000–2017)

Regressors	LMF (1)	LMF (2)	LMF (3)	LMF (4)	LMF (5)	LMF (6)
$\ln POP_{t-1}$	-0.926*** (0.051)	-0.874*** (0.051)	-1.033*** (0.051)	-0.532*** (0.077)	-0.856*** (0.055)	-0.816*** (0.060)
$\ln GOV_SIZE_{t-1}$	-0.458 (0.588)	-0.647 (0.573)	-0.211 (0.609)	-0.451 (0.630)	-0.937 (0.617)	-0.659 (0.668)
WUI_{t-1}	-65.89** (28.05)	-44.07* (24.12)	-73.40** (30.21)	-3.521** (1.404)	-59.82*** (13.88)	-71.40*** (14.21)
$WUI_{t-1} * Globalisation Index_{t-1}$	15.93** (6.912)	10.70* (5.997)	17.61** (7.383)	0.959* (0.501)	14.56*** (3.505)	17.74*** (3.618)
$\ln KOF_OGI_{t-1}$	2.285*** (0.251)	-	-	-	-	-
$\ln KOF_OGIdf_{t-1}$	-	1.808*** (0.219)	-	-	-	-
$\ln KOF_OGIdf_{t-1}$	-	-	3.020*** (0.286)	-	-	-
$\ln KOF_EGI_{t-1}$	-	-	-	2.868*** (0.256)	-	-
$\ln KOF_SGI_{t-1}$	-	-	-	-	0.950*** (0.140)	-
$\ln KOF_PGI_{t-1}$	-	-	-	-	-	0.796*** (0.141)
Observations	2,100	2,100	2,100	2,100	2,100	2,100
Countries	136	136	136	136	136	136
Sargan Test	4.20 [0.938]	4.01 [0.947]	4.33 [0.931]	4.07 [0.944]	4.10 [0.943]	4.01 [0.947]
AR (1)	-12.7 [0.000]	-12.9 [0.000]	-12.5 [0.000]	-12.8 [0.000]	-12.9 [0.000]	-13.0 [0.000]
AR (2)	-0.19 [0.848]	-0.31 [0.758]	-0.04 [0.971]	-0.05 [0.959]	-0.20 [0.844]	-0.13 [0.899]

Notes: The dependent variable is the index of labour market flexibility (LMF). The constant term and the lagged dependent variable are included. The robust standard errors are in parentheses, and the p-values are in brackets. ***p < 0.01, **p < 0.05 and *p < 0.10.



effects of population and government size on labour market flexibility in the system GMM estimations. However, the author finds a negative impact of population on labour market flexibility in cross-sectional data estimations.

Finally, the required diagnostics are satisfied in each regression. The results of the Sargan test indicate that there is no issue with over-identifying restrictions. The findings of the AR(1) and AR(2) autocorrelation tests show that there is a significant first-order autocorrelation, but there is no second-order autocorrelation.

5.3 | Including macroeconomic indicators

According to previous literature (see, e.g. Potrafke, 2013, 2015), macroeconomic indicators can change globalisation's effects on labour market flexibility. Therefore, we also include additional controls (defined in the lagged form) in the benchmark estimations. The related results are reported in Table 6.

Following Gozgor and Ranjan (2017), we add the age-dependency ratio, which can change globalisation's effects on labour market flexibility due to the social security system's role. Urban population is also included to capture rural-urban transformation and migration, affecting labour market flexibility (Bernal-Verdugo et al., 2012). At this stage, country size is measured by population density. Furthermore, the macroeconomic stance is measured by the inflation rate and the current account balance (Potrafke, 2019). Finally, we include the roles of redistributive policies and income inequality in the globalisation-labour market flexibility nexus (Dabla-Norris et al., 2015; Rodrik, 2011). All results indicate that the coefficients of WUI_{t-1} ($WUI_{t-1} * \ln KOF_OGIt-1$) and $\ln KOF_OGIt_{-1}$ are in line with the benchmark estimations and are statistically significant at the 1% level.

5.4 | Including institutional quality measures

The previous papers also indicate that institutional quality can change globalisation's effects on labour market flexibility (Potrafke, 2010, 2013, 2015). At this stage, we add various institutional quality measures (again defined in the lagged form) in the benchmark estimations. The related findings are provided in Table 7.

We control for the indices of democracy, executive constraints and *polity2* provided by Marshall and Gurr (2020). The index of the freedom of the press of Freedom House (2020) is also included. The index of the legal system and property rights introduced by Gwartney et al. (2020) is added to the benchmark estimations. Finally, the indices of political regimes and typology of political institutions of Bjørnskov and Rode (2020) are included. In each regression, the effects of globalisation on labour market flexibility align with the benchmark estimations. The related coefficients are statistically significant at the 1% level.

5.5 | Additional sensitivity analyses

We provide additional sensitivity analyses to check the robustness of the main findings. The related findings are reported in Table 8. Firstly, we exclude the extreme observations for overall globalisation, world uncertainty and labour market flexibility indices. Following Fang et al. (2021) and Jha and Gozgor (2019), extreme observations are defined as observations more than two standard deviations away from the mean values. Secondly, we investigate whether our

TABLE 6 Robustness test III: including macroeconomic indicators (Globalisation, WUI and LMF, 2000–2017)

Including	Indicator	LMF
Results of benchmark regression	WUI_{t-1}	-14.75*** (4.390)
	$WUI_{t-1} * \ln KOF_OGI_{t-1}$	3.582*** (1.067)
	$\ln KOF_OGI_{t-1}$	1.986*** (0.204)
Age-dependency ratio $_{t-1}$	WUI_{t-1}	-15.94*** (4.361)
	$WUI_{t-1} * \ln KOF_OGI_{t-1}$	3.820*** (1.061)
	$\ln KOF_OGI_{t-1}$	2.389*** (0.204)
Urban population $_{t-1}$	WUI_{t-1}	-13.11*** (4.418)
	$WUI_{t-1} * \ln KOF_OGI_{t-1}$	3.163*** (1.075)
	$\ln KOF_OGI_{t-1}$	1.777*** (0.215)
Log population density $_{t-1}$	WUI_{t-1}	-16.11*** (4.111)
	$WUI_{t-1} * \ln KOF_OGI_{t-1}$	3.911*** (1.072)
	$\ln KOF_OGI_{t-1}$	1.986*** (0.203)
Inflation rate $_{t-1}$	WUI_{t-1}	-14.69*** (4.486)
	$WUI_{t-1} * \ln KOF_OGI_{t-1}$	3.554*** (1.090)
	$\ln KOF_OGI_{t-1}$	2.111*** (0.217)
Current account balance $_{t-1}$	WUI_{t-1}	-12.07*** (4.593)
	$WUI_{t-1} * \ln KOF_OGI_{t-1}$	2.925*** (1.114)
	$\ln KOF_OGI_{t-1}$	2.112*** (0.221)
Absolute redistribution $_{t-1}$	WUI_{t-1}	-15.02*** (5.145)
	$WUI_{t-1} * \ln KOF_OGI_{t-1}$	3.553*** (1.238)
	$\ln KOF_OGI_{t-1}$	2.196*** (0.220)
Income inequality $_{t-1}$	WUI_{t-1}	-19.18*** (5.037)
	$WUI_{t-1} * \ln KOF_OGI_{t-1}$	4.536*** (1.211)
	$\ln KOF_OGI_{t-1}$	2.170*** (0.217)

Note: The dependent variable is the index of labour market flexibility (LMF). The robust standard errors are in parentheses.

*** $p < 0.01$.

findings are sensitive to excluding specific regions. Following Jha and Gozgor (2019), we separately exclude the observations for the Middle East and North Africa (MENA), Latin America and the Caribbean (LAC), sub-Saharan African (SSA) and developing East Asia countries. These additional results are also in line with the baseline regressions. The related coefficients are statistically significant at the 5% level at least.

Overall, we observe that globalisation increases labour market flexibility while economic uncertainty decreases it. Furthermore, the interaction of globalisation with economic uncertainty also positively affects labour market flexibility.

6 | CONCLUSION

This paper investigates globalisation's impact on labour market flexibility via its interaction with economic uncertainty, serving as potential determinants of labour market flexibility. We



TABLE 7 Robustness test IV: including institutional quality measures (Globalisation, WUI and LMF, 2000–2017)

Including	Indicator	LMF
Results of benchmark regression	WUI_{t-1}	−14.75*** (4.390)
	$WUI_{t-1} * \ln KOF_OGI_{t-1}$	3.582*** (1.067)
	$\ln KOF_OGI_{t-1}$	1.986*** (0.204)
Democracy _{t−1}	WUI_{t-1}	−12.85*** (4.575)
	$WUI_{t-1} * \ln KOF_OGI_{t-1}$	3.134*** (1.111)
	$\ln KOF_OGI_{t-1}$	2.183*** (0.213)
Executive constraints concept _{t−1}	WUI_{t-1}	−12.64*** (4.569)
	$WUI_{t-1} * \ln KOF_OGI_{t-1}$	3.085*** (1.109)
	$\ln KOF_OGI_{t-1}$	2.237*** (0.214)
Polity2 _{t−1}	WUI_{t-1}	−14.76*** (4.419)
	$WUI_{t-1} * \ln KOF_OGI_{t-1}$	3.581*** (1.074)
	$\ln KOF_OGI_{t-1}$	1.995*** (0.206)
Freedom of the press _{t−1}	WUI_{t-1}	−13.84*** (4.393)
	$WUI_{t-1} * \ln KOF_OGI_{t-1}$	3.361*** (1.068)
	$\ln KOF_OGI_{t-1}$	2.002*** (0.203)
Legal system and property rights _{t−1}	WUI_{t-1}	−15.57*** (4.401)
	$WUI_{t-1} * \ln KOF_OGI_{t-1}$	3.789*** (1.070)
	$\ln KOF_OGI_{t-1}$	1.911*** (0.211)
Political regimes _{t−1}	WUI_{t-1}	−14.75*** (4.409)
	$WUI_{t-1} * \ln KOF_OGI_{t-1}$	3.583*** (1.072)
	$\ln KOF_OGI_{t-1}$	1.987*** (0.205)
Typology of political institutions _{t−1}	WUI_{t-1}	−13.17*** (4.689)
	$WUI_{t-1} * \ln KOF_OGI_{t-1}$	3.171*** (1.141)
	$\ln KOF_OGI_{t-1}$	2.054*** (0.206)

Note: The dependent variable is the index of labour market flexibility (LMF). The robust standard errors are in parentheses.

*** $p < 0.01$.

consider new globalisation and economic uncertainty indices within a panel dataset of 136 countries from 2000 to 2017. We find that globalisation promotes labour market flexibility, while economic uncertainty decreases labour market flexibility. The interaction of globalisation with economic uncertainty also positively affects labour market flexibility. Our findings are robust to various sensitivity analyses, that is, different estimation procedures, different globalisation indicators (including various controls) and excluding outliers.

We conclude that globalisation has a less positive impact on labour market flexibility in times of greater uncertainty. At this stage, governments should monitor economic uncertainty at the domestic and global levels to analyse the potential impact of globalisation on labour market flexibility. Our findings indicate that policy decisions that will make labour markets more rigid (less flexible) should be expected during periods when globalisation decreases and the level of economic uncertainty increases, such as in the COVID-19 era. The end of the COVID-19 pandemic should increase the level of globalisation and decrease the level of economic uncertainty.

TABLE 8 Robustness test V: sensitivity analyses (Globalisation, WUI and LMF, 2000–2017)

Sensitivity analysis	Indicator	LMF
Results of Benchmark Regressions	WUI_{t-1}	-14.75*** (4.390)
	$WUI_{t-1} * \ln KOF_OGI_{t-1}$	3.582*** (1.067)
	$\ln KOF_OGI_{t-1}$	1.986*** (0.204)
Excluding Extreme Units of LMF Index	WUI_{t-1}	-14.53*** (4.421)
	$WUI_{t-1} * \ln KOF_OGI_{t-1}$	3.518*** (1.073)
	$\ln KOF_OGI_{t-1}$	1.982*** (0.204)
Excluding Extreme Units of Globalisation Index	WUI_{t-1}	-11.11** (4.564)
	$WUI_{t-1} * \ln KOF_OGI_{t-1}$	2.698** (1.108)
	$\ln KOF_OGI_{t-1}$	2.277*** (0.222)
Excluding Extreme Units of WUI	WUI_{t-1}	-24.12*** (5.879)
	$WUI_{t-1} * \ln KOF_OGI_{t-1}$	5.831*** (1.419)
	$\ln KOF_OGI_{t-1}$	2.066*** (0.211)
Excluding MENA Countries	WUI_{t-1}	-17.87*** (4.339)
	$WUI_{t-1} * \ln KOF_OGI_{t-1}$	4.328*** (1.056)
	$\ln KOF_OGI_{t-1}$	1.569*** (0.216)
Excluding LAC Countries	WUI_{t-1}	-17.36*** (4.875)
	$WUI_{t-1} * \ln KOF_OGI_{t-1}$	4.223*** (1.178)
	$\ln KOF_OGI_{t-1}$	2.160*** (0.222)
Excluding SSA Countries	WUI_{t-1}	-21.99*** (6.658)
	$WUI_{t-1} * \ln KOF_OGI_{t-1}$	5.219*** (1.585)
	$\ln KOF_OGI_{t-1}$	2.401*** (0.261)
Excluding Developing Asian Economies	WUI_{t-1}	-14.67*** (4.213)
	$WUI_{t-1} * \ln KOF_OGI_{t-1}$	3.558*** (1.075)
	$\ln KOF_OGI_{t-1}$	1.996*** (0.205)

Note: The dependent variable is the index of labour market flexibility (LMF). The robust standard errors are in parentheses.

*** $p < 0.01$ and ** $p < 0.05$.

Therefore, in line with the race to the bottom hypothesis, we should expect more flexibility in labour market regulations during the post-COVID-19 era.

Finally, the empirical evidence in this paper is limited over the period 2000–2017. Therefore, future papers can focus on globalisation's effects on other labour market indicators (e.g. public employment, unemployment, wages, etc.), including the data of the COVID-19 era.

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DATA AVAILABILITY STATEMENT

All data used in this paper are publicly available, and the details are provided in the "Online Data Appendix Table II". The data that support the findings of this study are available from the corresponding author upon reasonable request.

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