



Growing Inequality:
a Novel Integration of
transformations research

Europe at a Crossroads: Mitigating Technological, Migratory, and Trade Shocks

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FOREWORD

by Steven Dhondt (Scientific Coordinator of the GI-NI Project)

The Gini-coefficient is a widely recognised measure representing the income or wealth distribution over a population and has inspired the approach of the “GI-NI” project, which stands for Growing Inequality: A Novel Integration of transformations research. This project wants to better understand the multiple global changes that are exerting pressure on European welfare systems and driving inequality upwards, focusing on three major ‘shocks’ that have become prominent: technological change, globalisation, and migration. All three separately, but also in conjunction, have acute impacts on inequality and skills in Europe.

This publication encompasses three policy briefs that provide an overview of the joint impact of these three shocks affecting our societies. First, it delves into ongoing debates surrounding the potential job losses attributed to digitalisation while also shedding light on the fact that technological change simultaneously creates new job opportunities. The coordinating role of governments as institutions capable of supporting workers is highlighted, enabling worker transitions into growing occupations, particularly those that foster in-person interactions.

Second, the publication addresses the challenges faced by foreign-born workers, particularly women, in terms of employment entry barriers, occupational segregation, and over-qualification. It underscores the significance of migration in addressing skill shortages and the challenges posed by an ageing population. However, it also emphasises the need for a well-functioning migration system and flexible migration policies that are tailored to effectively address these issues. The disparities in the distribution of natives and migrants across occupations are emphasised, with a particular focus on the amplified gender-based disparities. Furthermore, attention is given to the fact that many migrants often find themselves in jobs that do not align with their qualifications, resulting in overqualification. To address these issues and promote equality in labour markets, GI-NI researchers offer recommendations for a common European policy approach that integrates a gender perspective and promotes collaboration among different stakeholders to eliminate barriers faced by migrants.

Third, turning to trade, the text shows that the trade in business services and other services used as intermediate inputs by firms has been increasing at a faster pace than trade in goods since the global financial crisis. This

shift in the nature of globalisation has the potential to impact workers with different capabilities and skills. However, as data shows tightness in labour markets across several European countries, certain types of jobs remain unfulfilled. Given the fast-ageing populations in many European countries, it is unlikely that this tightness in labour markets will be short-lived. The text also emphasises that the negative implications of job displacement due to trade are often long-lasting, as workers may lack the necessary capabilities and skills required for new occupations. It highlights the challenges faced by workers in terms of institutional savings for the period after retiring when switching occupations. To address these challenges, GI-NI researchers suggest the implementation of well-designed upskilling and reskilling policies, as well as lifelong learning activities that extend beyond the scope of the current job.

In short, this publication discusses the impact of protectionist trade policies, which have the potential to support at-risk worker groups but may come at the expense of overall welfare gains. It suggests that domestic policies can also play a crucial role in supporting these workers without sacrificing welfare gains. By providing a comprehensive overview of the implications of technological change, migration, and trade on the future of work and inequality, there is little doubt about the need for proactive policies and interventions to ensure a fair and inclusive labour market.

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New Technologies: End of Work or Structural Change?

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Key findings

This Policy Brief highlights the main mechanisms behind digital transformation as a key driver of inequality and changing skill demands. The Policy Brief indicates – based on the scientific insights of the GI-NI project – how policymakers and stakeholders can respond to the new challenges of the digital transformation to reduce inequality and improve workers' skills. The GI-NI research shows that new technologies have diverse and non-uniform effects on work. According to the GI-NI study, these effects vary across different dimensions. They differ not only among groups of employees but also among types of companies. While new technologies exacerbate existing inequalities among employees, they also give rise to new ones.

These effects require new policies and policy mixes from European, national and regional policymakers:

- Strengthen existing welfare state institutions that deal with unemployment to support workers affected by technology-induced displacement and inequality. Suggestions based on our research of how public employment services could be expanded are:
 - Implement short-cycle education programs that focus on placing displaced workers in companies facing labour shortages.
 - Develop training programmes for workers that focus on cutting-edge technologies. This helps employees cope with technological changes and supports their employers in adopting new technologies to stay competitive.
- Improve job-matching quality and reduce unemployment duration by promoting in-person interactions.
- Be aware of the trade-off between efficiency and equity when deciding policy measures regarding adopting new technologies and consciously choose the desired balance.
- Create targeted programmes to help smaller companies keep pace with technological advancements, reducing the gap between firms and minimising negative competition effects between adopters and non-adopters.
- Improve broadband internet access to assist companies in adapting to technological changes.
- Pair the introduction of performance pay with efforts that promote flexible working hours for women, ensuring that higher-paying firms remain accessible to them.

Findings of the GI-NI project

This Policy Brief highlights the main mechanisms behind the digital transformation as a key driver of inequality and changing skill demands. The Policy Brief indicates – based on the scientific insights of the GI-NI project – how policymakers and stakeholders can respond to the new challenges of the digital transformation to reduce inequality and improve workers' skills.

No large net negative employment effects of new technologies.

New technologies increasingly become able to perform tasks that previously only humans could do. This development is associated with large fears of a “jobless future” in the public debate, fuelled by public alarmists who claim that half of the jobs are “at risk of computerisation”.¹ Scientific research, however, finds no evidence in favour of massive technological unemployment. Negative employment effects of new technologies are limited to specific technologies and individual countries.² Technological change more broadly generates at least as many jobs as it destroys.³ Therefore, the question for the future of work is less about how many jobs we will have and more about which jobs we will have.

Changing Wage Structure and Deteriorating Opportunities for Routine Workers.

While the net employment effects of new technologies are limited, they do lead to large shifts in the structure of jobs, raising inequality and polarisation.⁴ Workers are required to adapt to the change. Particularly workers specialised in routine tasks are exposed to technological change. For them, the adoption of new technologies often implies job displacement, potentially associated with unemployment, and the need to be able to find new, different jobs. Finding new jobs when the demand for the skills of these routine workers declines is difficult for them, often leaving them with periods of unemployment, lower earnings, reduced chances to find suitable jobs and scarring effects of job displacement.⁵

Welfare State Institutions Absorb Displacement Induced Inequality.

Job displacement is not new to the current policy context. Welfare state institutions have already been developed to help workers absorb this shock. Nevertheless, it seems that technology can create more stubborn and difficult adjustments because it affects particular sets of workers that generally do not have great alternatives available to them. Therefore, there is a bigger role for the government than is currently the case to support the transition of workers into growing occupations through information about what are the growing occupations and how they can be made available. However, job mobility cannot successfully be achieved by just digital communication. If we want to really help those impacted by technological impact, we need in-person interaction. Our research suggests that in-person interaction should be encouraged at employment agencies to improve job-match quality and reduce time in unemployment.

¹ See for example Frey and Osborne (2017), whose claims have received widespread attention in the public debate. Among others, Arntz et al. (2017), Nedelkoska and Quintini (2018), Dengler and Matthes (2018), Poulidakas (2018) show such predictions to be massively exaggerated due to methodological problems. Handel (2022) shows that empirical data and official projections from the United States also provide no support for such extreme automation scenarios.

² Graetz and Michaels (2018) for example find no negative employment effects of robots in a cross-country study. Dauth et al. (2021) find positive employment effects for Germany, while Acemoglu et al. (2020) and Acemoglu and Restrepo (2020) find negative effects for France and the USA, respectively.

³ See e.g. Gregory et al. (2022) for Computerization or Autor and Salomons (2018) for new technologies more broadly.

⁴ See, among others, Autor et al. (2003), Goos et al. (2009, 2014), Acemoglu and Autor (2011), and Ross (2017).

⁵ See, among others, Cortes et al. (2017), Bessen et al. (2023), Blien et al. (2021), Goos et al. (2021), Jacobson et al. (1993) and Davis and von Wachter (2011).

Training Programmes Support Workers in Finding New Jobs.

GINI research shows that automation exposed job seekers spend more time in unemployment because the occupations available to them based on their skill set offer poor job-finding opportunities. Directing job seekers more actively towards jobs with better prospects may be one approach that governments can take. Our research supports the efforts made by training programmes such as WorkAdvance⁶, where they retrain adult job seekers in short-cycle education programmes that are directly focused on placing them at companies experiencing labour shortages.⁷ The goal of sectoral work programmes, like WorkAdvance, is to provide job seekers with non-traditional backgrounds the opportunity to attain high-wage jobs in growing sectors. The programmes are typically led by community-based organisations, and combine some up-front screening of applicants, with soft skills (or work-readiness) training and occupational skills training. This may also involve job development and placement. Sector-focused programmes have training components that often are 6 months or less and fill an important niche for dislocated workers and for individuals who may not thrive in traditional college programmes. While there are many more reasons that can make it difficult for workers to reallocate, evidence on these sectoral programmes provide hope that there are ways to support workers in this transition.

Efficiency-Equity-Tradeoff of Technology Adoption.

New technologies help firms to become more productive and employ more workers, raising growth and welfare.⁸ This, however, comes at a cost for non-adopting firms, who suffer from competition effects and declining employment.⁹ This raises an important *equity-efficiency-tradeoff* that policymakers face: On the one hand, technology adoption raises welfare and growth and induces an efficient allocation of workers to productive fast-growing firms. On the other hand, this implies large restructuring costs for workers and firms that suffer from competition. Whether to place more emphasis on efficiency, or on equity ultimately is a policy decision that policymakers should take deliberately when considering policy measures that affect firms' decisions to invest in new technologies.

⁶ WorkAdvance is a retraining project launched in several locations across the U.S.A. WorkAdvance is provided by community-based organizations that provide sectorial employment programs. MDRC provides a comprehensive description and first evaluation in their report: <https://www.mdrc.org/project/workadvance#overview>. Additional scientific evidence on the effectiveness of the program is given by Katz et al. (2022).

⁷ Other examples are the efforts made by the Public Employment Services in France to direct job seekers to firms likely to hire, through their online platform (Behaghel et al., 2022)

⁸ See Dinlersoz and Wolf (2018), Dixon et al. (2019), Koch et al. (2021), Acemoglu et al. (2020), Aghion et al., (2020), Bonfiglioli et al. (2021), and Bessen et al. (2023).

⁹ See Koch et al. (2021) and Acemoglu et al. (2020).

Designing a Fruitful Environment for Adoption Cutting-Edge Technologies.

A potential route for firms and workers suffering from competition effects is adopting new technologies. However, the adoption of cutting-edge technologies requires the right environment, as our GI-NI results highlight. In particular, we find that firms require access to broadband internet to become adopters. There is further a growing divide between small non-adopters and large adopters, with smaller firms risking losing competitiveness. Policymakers could consider establishing targeted programmes to enable smaller firms to keep up with technological advancements so as to dampen the growing divide and prevent negative consequences from competition effects.¹⁰

Cutting-Edge Technologies Require Complementary Skills and Organisational Change.

Firms not only require the right infrastructure but also the right set of skills and complementary organisational change to successfully adopt new technologies, as we find in our GI-NI research. In particular, the adoption of “Industry 4.0” – which covers, for example, Artificial Intelligence, cloud computing, cyber-physical systems, or smart factories – is associated with a large share of the shift in tasks, but only in combination with firm heterogeneity due to scale and composition effects. In particular, the decline of routine tasks is faster among those adopters that are larger, and those adopters who initially have had lower shares of routine tasks grow faster. This indicates that accompanying investments in complementary organisational change and worker training are prerequisites for successfully adopting cutting-edge technologies.¹¹ Policymakers, firms and other stakeholders could develop training programmes for cutting-edge technologies, targeted at workers, not only to help those workers to cope with technological change but also to support their employers in adopting new technologies and remaining competitive such as, for example, the learning factory.¹²

Innovation raises the Gender Wage Gap via Performance Pay.

While such policies could help workers and firms, there remains a risk that innovation negatively affects gender equality. In particular, our research shows that a significant part of the gender wage gap can be attributed to the gender difference in firm-specific wage premia.¹³ These differences are largely driven by women working at firms with a lower wage premium. In particular, women work less often in larger firms which innovate and participate in international trade and are more likely to pay flexible wages. GI-NI research accordingly finds that new technologies which support performance pay can lead to rising gender wage gaps. These results should make policymakers aware of the side effect of new technology that supports performance pay because it strengthens the gender wage gap. Therefore, policymakers should accompany developments in performance pay with other efforts that support flexible working times for women, such that these higher-paying firms remain accessible. The EU work-life balance directive is a step in the right direction. Promoting flexible working times, for example, through part-time work, still leaves a dilemma for mothers and fathers that would like to combine full-time work with parenthood. Therefore, having accessible and affordable childcare is equally important.

¹⁰ See Deliverable 3.1 of the GI-NI project.

¹¹ See Deliverable 3.1 of the GI-NI project.

¹² See Pittich et al. (2020).

¹³ See Deliverable 3.3 of the GI-NI project.

Main Recommendations

The effects of new technologies on work are diverse and not uniform. According to the GI-NI study, these effects vary across different dimensions. They differ not only among groups of employees but also among types of companies. While new technologies exacerbate existing inequalities among employees, they also give rise to new ones. Moreover, the impacts are such that solutions cannot solely rely on digital support for employees. It is essential to address these impacts at the company level as well. This leads us to the following recommendations:

National policymakers should focus on new measures to deal with **employment impacts**:

- Strengthen existing welfare state institutions to support workers affected by technology-induced displacement and inequality.
- Employment agencies need to improve job-matching quality and reduce unemployment duration by promoting in-person interactions. They should implement short-cycle education programmes that focus on placing displaced workers in companies facing labour shortages.
- Develop training programmes for workers that focus on cutting-edge technologies. This helps employees cope with technological changes and supports their employers in adopting new technologies to stay competitive.

EU and national policymakers, regional development agencies:

- Be aware of the trade-off between efficiency and equity when deciding about policy measures regarding the adoption of new technologies and consciously choose the desired balance.
- Create targeted programmes to help smaller companies keep pace with technological advancements, reducing the gap between firms and minimising negative competition effects between adopters and non-adopters.
- Improve broadband internet access to assist companies in adapting to technological changes.
- To deal with gender discrimination, national policymakers should pair the introduction of performance pay with efforts that promote flexible working hours for women, ensuring that higher-paying firms remain accessible to them.

Recommended reading

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This Policy Brief is based on the research of the GI-NI project. For the relevant research, please look at the website of GI-NI: <https://gini-research.org>



Migration in the European Union: nexus to inequality and skills

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Migration is an increasingly significant phenomenon that presents an opportunity for the EU to tackle two key future challenges: an ageing population and skills shortages. Despite the difficulties politicians face in dispelling concerns about migrants being perceived as a threat by certain segments of the local population, it is crucial to recognise the valuable human capital that migrants bring, which can effectively address these pressing challenges in our EU societies.

The GI-NI project seeks to understand how inequality serves as a driving force behind many migration-related problems. Addressing inequality should be a policy priority as it directly impacts the successful integration of migrants. The project has not only examined the global situation with migrants but has also identified several mechanisms that hinder the integration of migrants who are already in the EU.

Key points

One notable finding of the project is that, contrary to expectations, income inequality within migrant countries discourages emigration. This situation leads to missed economic development opportunities for both the origin and destination countries. Additionally, the project highlights that foreign-born workers, particularly women, encounter specific employment entry barriers that result in occupational segregation, deskilling, and over-qualification, thereby exacerbating inequality levels within the labour market. Previous EU policy frameworks have not comprehensively addressed the complexities of migration. In response, GI-NI puts forward a set of recommendations for a common European policy approach that:

- Integrates a gender perspective,
- Promotes collaboration between different stakeholders to eliminate barriers faced by migrants, and
- Enhances equality in labour markets across all member states.

To achieve these objectives, it is essential to provide support to immigrants by facilitating the recognition of qualifications and enabling access to new skills. Likewise, support should be extended to employers and organisations to foster an inclusive culture that embraces diversity and equality. By implementing these measures, we can create a more inclusive and prosperous society for all.

Context: migration, inequality and skills

Human mobility is a longstanding phenomenon that affects every country in the world. Migration can take various forms, including internal or international, permanent or temporary, and voluntary or forced (e.g., refugees). Economic, social, political, or environmental factors in the country of origin or destination can prompt individuals to seek new geographic locations.

According to the United Nations, approximately 281 million people were living outside their countries of birth in 2020, accounting for about 3.6% of the global population of 7.795 billion. The European Union has also experienced significant movement, with Eurostat reporting an increase in the number of third-country nationals over the past decades, surpassing 23 million in 2021, which accounts for 5.3% of the total population. Of these, slightly over half are women (51.05%). The conflict in Ukraine alone has displaced over 8 million refugees across Europe, with 4.8 million registered under the temporary protection system adopted by the EU. However, while migration flows due to armed conflict have surged recently, the majority of individuals migrating to other countries do so for reasons such as work, studies, family reunification, or natural disasters.

The GI-NI project focuses on various aspects of legal international migration and its connection to inequality and skills, yielding the following findings:

Inequality discourages international emigration

Income inequality in third countries within the EU acts as a barrier to potential emigration. However, factors such as migration networks, strong work ethics, education, and income cushion partially mitigate this negative effect. Addressing this challenge requires a multifaceted approach involving policymakers in both origin and destination countries, relevant international organisations, migrant diasporas, and NGOs. Failure to address this issue results in missed economic development opportunities for both origin and destination countries.

Migration is needed to solve skill shortages and issues with an ageing population

Certain European countries face job vacancies that exceed the number of job seekers in specific sectors, such as personal services, healthcare, management, teaching, and electrical and electronic trades. The GI-NI project demonstrates that migration plays a crucial role in alleviating skill shortages in Western European countries. To effectively address this problem, a well-functioning system is needed to identify skill gaps promptly, along with flexible migration policies tailored to the underlying reasons for those shortages. Given Europe's ageing population and low birth rates, immigrants can contribute to replenishing the labour force, albeit not completely eliminating the challenge.

Migration leads to labour niches and occupational segregation

Natives and migrants are not equally distributed across occupations, and these disparities are further magnified when considering gender. Migrant women, in particular, face dual discrimination. Migrants tend to concentrate in specific activity sectors aligned with gender norms, such as construction for males and activities related to households and human health for females. This exacerbates the gender gap. Moreover, migrants are overrepresented in certain low and medium-skilled occupations, primarily in sectors like accommodation and food services. In this segmented labour market, migrants, especially women, encounter barriers to entry into high-skill occupations and upward mobility. Consequently, many migrants end up in jobs that do not match their qualifications, resulting in overqualification.

It is crucial to recognise the immense value of educated migrants as valuable human capital, as they enhance the pool of qualified individuals in the labour market and help address skill shortages in high-skill occupations. To leverage this foreign-born human capital effectively, it is essential to implement measures that reduce inequality, tackle the skill shortage issue, and promote migrants' upward mobility, such as improving the recognition of diplomas.

By embracing these findings and implementing targeted policies, policymakers can promote equality, harness the potential of migrants, address skill gaps, and create an inclusive society that maximises the benefits of migration for both origin and destination countries.

Critique of existing policy options

The EU has made efforts to develop migration policies, starting with the Tampere conclusions in 1999, and later the Global Approach to Migration (GAM) in 2005. The GAM introduced a framework for cooperation and dialogue with third countries and was renewed in 2011 as Global Approach to Migration and Mobility (GAMM). However, the emergence of the asylum and migration crisis in 2015 revealed the limitations of these policies, characterised by incomplete agreements, weak monitoring, policy disharmony, and a lack of solidarity and centralised institutions. In response, the European Commission presented the 'New Pact on Asylum and Migration' in 2020, aiming to enhance cooperation with international partners, reinforce external borders, simplify asylum procedures, and establish a more efficient mechanism for solidarity.



While these new policies introduce novel instruments for labour market management, such as the 'EU Talent Pool' and 'EU Talent Partnership,' they primarily focus on recruitment and matching of skills rather than holistic inclusion. Additionally, joint labour migration policies have mostly targeted highly skilled migration (Blue Card Directive), leaving employment policies largely at the discretion of national governments. Developing a common policy framework for migration within the EU is crucial to ensure consistent integration measures across member states.

The context of each member state plays a significant role in migrant integration, encompassing individual attitudes, organisational openness, and institutional factors. The current EU dominant policy paradigm is focused on the controlled and regulated influx, with strong border protection (“Fortress Europe”), instead of inclusivity and benefits. Anti-immigrant attitudes can create barriers to labour market access, and the degree of openness within organisations also affects migrants’ entry and integration. National institutions, both formal (e.g., labour market institutions) and informal (e.g., cultural norms), further influence immigrants’ outcomes. As a result, migrants face varying obstacles depending on the country, highlighting the need for tailored integration policies.

EU member states have adopted different approaches to support migrant employment, ranging from minor services to conditional programmes targeted at specific groups. In the absence of comprehensive EU-level policies, regional and local governments are increasingly involved in labour integration policy design driven by pragmatic problem-solving and a focus on migrants’ daily realities. However, disparities exist in access to employment opportunities due to categorisations based on immigration status, reinforcing stereotypes and resulting in occupational segregation, deskilling, and barriers to upward mobility.

Bureaucratic processes for recognising foreign qualifications are often lengthy, expensive, and unclear, leading to over-qualification and skill underutilisation among migrants. Active labour programmes prioritise rapid job placement rather than long-term employment prospects and progression. The administrative procedures for admitting and employing immigrants can be restrictive and time-consuming, discouraging employers from recruiting them. Inadequate support structures, insufficient training for employment advisors, and a lack of cooperation among government bodies hinder effective assistance for newly arrived migrants.

Furthermore, European labour market policies inadequately address training opportunities for migrants, which are crucial for upskilling. While some member states incentivise employer-provided training or offer public vocational education, low-skilled job sectors, where migrants often concentrate, are less likely to invest in training. Accessible and affordable language courses for migrants are also lacking.

These entry barriers to occupations and economic sectors contribute to inequality and hinder the integration of migrants in the labour market and society as a whole. Persistent barriers may lead to enduring labour market segmentation processes that impede migrants’ integration based on skills, exacerbating inequality.

To address these challenges, it is imperative to develop comprehensive EU policies that promote inclusivity, streamline recognition of foreign qualifications, simplify administrative procedures, enhance support structures for migrants, and ensure equal access to training opportunities. Cooperation among government bodies and the provision of formal channels for information dissemination are vital to improving the integration process and fostering a more inclusive labour market.

Policy Recommendations and Conclusion

GI-NI proposes several recommendations to mitigate the inequalities issues with migration and migrants:

- **Develop Comprehensive EU Migration Policies:** EU-Policymakers should prioritise the development of comprehensive migration policies within the EU framework. These policies should aim to promote inclusivity, streamline recognition of foreign qualifications, simplify administrative procedures, and ensure equal access to employment opportunities and training for migrants.
- **Enhance Cooperation and Solidarity at the EU and national levels:** Address the lack of policy harmonisation and weak monitoring by fostering greater cooperation and solidarity among EU member states. Centralised institutions should be established to oversee migration processes and ensure consistent integration measures across countries. Multilevel governance should build on cooperation and coordination among EU, national, regional and local authorities.
- **Promote Holistic Inclusion:** Move beyond recruitment-focused approaches and prioritise holistic inclusion of migrants in society. Policies should aim to overcome barriers to integration by addressing anti-immigrant attitudes, promoting openness within organisations, and recognising the influence of national institutions on migrants' outcomes.
- **Tailor Integration Policies:** Recognise the importance of the context of each member state in migrant integration and tailor integration policies accordingly. Local and regional governments should be involved in policy design, leveraging their understanding of migrants' day-to-day realities and fostering pragmatic problem-solving. The gender perspective should be included in these policies, as immigrant women are the most vulnerable group among migrants.
- **Streamline Recognition of Foreign Qualifications:** Simplify and expedite the bureaucratic processes for recognising foreign qualifications. Establish clear guidelines, reduce costs, and ensure transparency to prevent over-qualification and underutilisation of migrant skills in the labour market.
- **Improve Support Structures:** Enhance the effectiveness of support structures for newly arrived migrants, particularly public employment services. Provide adequate training for employment advisors, establish formal channels for accessing information about employment, and promote cooperation among government bodies to better serve the needs of migrants.
- **Address Occupational Segregation and Deskilling:** Take proactive measures to address occupational segregation, especially among migrant women, and the deskilling that often occurs in the labour market. Promote equal opportunities for migrants to access high-skill occupations and provide pathways for upward mobility.
- **Foster Employer Engagement:** Encourage employers, particularly those in low-skilled job sectors, to invest in training programmes for migrants. Incentivise employers to provide in-house training and ensure the availability of accessible and affordable language courses for migrants.

- **Monitor and Evaluate Policies:** Establish mechanisms for monitoring and evaluating the effectiveness of migration and labour market policies. Regularly assess the impact of policies on migrant integration, identify areas for improvement, and make necessary adjustments to achieve desired outcomes.
- **Ensure Long-Term Prospects:** Shift the focus of labour market policies from short-term job placement to long-term employment prospects and career progression for migrants. Develop programmes that support migrants in developing their skills and advancing in their chosen professions.

By implementing these recommendations, policymakers can work towards creating an inclusive and equitable labour market that leverages the skills and talents of migrants while addressing skill shortages, reducing inequality, and promoting social cohesion within the EU. All of this in a context in which the EU does not establish a common framework.

Further reading

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Globalisation: Ways to cope with the unequal distribution of gains and losses

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The GI-NI project tackles how to reduce inequality and improve skills situations in the European Union (EU) considering three major transformations: technological progress, globalisation and migration. This policy brief contributes to a better understanding of ways in which EU and national policymakers could cope with the increasing inequality that comes with the overall gains from intensified trade and foreign direct investment. It provides recommendations for policies at the national and EU level aimed at mitigating the negative consequences for inequality without sacrificing the gains.

Key points

- For economies as a whole, increased globalisation brought substantial welfare gains. The distribution of these gains, however, has been very uneven. In many advanced countries, especially medium-skilled and low-skilled workers have experienced negative labour market outcomes of increased imports from e.g. China;
- Workers exposed to the negative impacts of increased imports are not always able to adapt to this situation. Often, such workers decide to stay put, rather than moving to other regions with better labour market prospects or switching to other occupations (or business functions), which are less exposed to negative consequences of trade;
- Our research shows that workers who are exposed to increased import competition are more likely to move to other regions or switch to other business functions than workers do not experience such a change;
- German workers who moved earned higher wages and were more satisfied with their jobs than workers who did not adapt to increased import competition. Workers who switch to a different business function also earned a higher wage than workers who did not adapt, but their job satisfaction was similar. For Dutch workers who switched occupation also experienced positive effects. Their job satisfaction was higher;
- The results of our research suggest that the negative effects of increased globalisation for workers who are disproportionately exposed to import competition could be alleviated by domestic policies that make it easier to adapt to this phenomenon. Workers who adapt tend to fare better than workers who do not. Such policies could be related to a variety of themes, such as housing, pensions and education (including up- and reskilling in later stages of life).

Context: globalisation, inequality and skills

Ever since the classic treaty of David Ricardo in the early nineteenth century, economists have stressed the positive implications of free trade between countries for their welfare. Several mechanisms have been proposed that cause these welfare gains. If foreign suppliers are allowed to serve the domestic market, consumers generally have more choice and are more likely to find the variant of a product that they prefer most. Prices as faced by consumers are driven down because domestic firms can exert less market power if they face competition from foreign firms. The most well-known mechanisms, however, relates to the welfare-enhancing effects of specialisation. Free trade will induce firms to behave in such a way that countries specialise in producing those good that they can produce relatively cheaply (relatively to other countries), because of productivity differentials and/or differences in the degree to which production factors (such as capital goods, but also labour with various skill levels) are available in countries. These mechanisms have led many economists to advocate free trade, by stressing the positive consequences for welfare of all economies involved.

More recently, however, negative consequences of increased trade have caught the attention, both of academics, policymakers and the general public. In just a few years (roughly between 2002 and the global financial crisis in 2008/2009) China became a manufacturing powerhouse, sometimes referred as the “Factory of the World”. Trade liberalisation, further reductions in transportation costs (containerisation) and especially rapid advances in information and communication technologies permitted this. Almost in parallel, several Eastern European countries integrated into the European economy, at the time they became members of the EU. These significant changes led to situations in which the most advanced countries specialised in activities (such as R&D, management, and marketing-related activities) that mainly require high-skilled workers, while many activities related to fabrication of products (the ‘factory work’) were offshored to Eastern Europe and China by firms that saw opportunities to reduce heir costs of production. Research that is by now known as the ‘China shock-literature’ (e.g. Autor et al.) shows that medium- and low-skilled workers in advanced countries have gained much less from this globalisation of production processes than their high-skilled counterparts. Inequality in terms of employment opportunities and wages along the wage and skills dimensions has increased. It is important to note, however, that these effects are generally stronger for countries that had a relatively large manufacturing sector before the wave of globalisation started.

The inequality-increasing effects of intensified trade and foreign direct investment have led to a backlash against globalisation, and increased protectionism. This effect has been reinforced strongly by concerns about weak enforcement of intellectual property rights protection in China ('technology stealing'), the collapse of trust in the Russian government following the start of the war in Ukraine and the aftermath of the Covid pandemic. Governments have restricted the freedom of firms to do business with suppliers and customers in countries they feel particularly concerned about and firms themselves are reconsidering their sourcing strategies. They weigh the gains from having activities performed in cheap but distant locations against the risks involved and sometimes decide to reshore these activities, or relocate them to less risky places. The term 'deglobalisation' has been used increasingly frequently over the past few years.

The tendencies as just described do by no means mean that policymakers should not be concerned about the inequality aspects of globalisation anymore. First, it remains to be seen to what extent governments will continue limiting trade with China. The strong presence of China in networks of global supply chains has driven down consumer prices in Europe considerably. In view of the recent concerns about soaring inflation in the EU, further restrictions regarding trade with China might be considered unattractive. Second, reshoring means that activities are brought back, but not necessarily that this leads to better labour market outcomes for the workers who performed these activities before they were offshored. Computers and robots might be deployed instead. Hence, the inequality will not automatically be undone. Finally, since the end of the global financial crisis, trade in business services and other services used as intermediate inputs by firms has been rising at a much faster pace than trade in goods. In view of the ever-increasing opportunities to supply such services over long distances, globalisation might well change in nature rather than in degree. Consequently, continued globalisation might hit workers with other capabilities and skills than those who were hit in the first part of this century. Concerns about the effects of globalisation on inequality remain warranted.

Critique of existing policy options

Currently, politicians seem to have polarized opinions about what could be done.

The first group has the opinion that globalization has gone too far and that countries (or groups of similar, like-minded countries) should get more self-sufficient again. The often-used term 'strategic autonomy' reflects this, although it also conveys the feeling that geopolitical tendencies point towards a bipolar or more probably multipolar world, consisting of blocks of countries). The most important downside of this policy option is that the aggregate welfare gains of free trade are sacrificed to fight inequality. As discussed above, such policies will imply upward pressures on prices. Hence, consumers will be worse off, and domestic industries will be less competitive. Insofar the reshored activities cannot be performed more cheaply by machines, robots and computers, workers will be needed. In several European countries, labour markets are currently extremely tight. This implies that other types of jobs cannot be fulfilled. Given the fast ageing of the populations of many European countries, it is not very likely that the tightness of labour markets will appear to be a short-lived phenomenon.

The second group of politicians focuses on the welfare gains from trade and tends to argue that the negative implications for smaller groups of workers are a temporary phenomenon. If labour markets are sufficiently flexible, workers who 'are competed away' by workers elsewhere who are qualified for the job and cheaper will manage to find a job in an industry or activity that is in higher demand, possibly because of trade-induced specialization. Research has shown, however, that the negative implications are often long-lived. The jobs into which these people could transfer often require capabilities and skills that the workers hit by intensified trade do not have and cannot acquire in the short run. Moving to regions where the type of occupation they had before trade intensified is also often a hurdle that is too high, for various reasons.

Policy Recommendations for EU and national policymakers

In GI-NI research, we find evidence that workers who adapt to globalisation often experience labour market outcomes that are superior to those who do stay put. Based on data for German workers, we studied two types of adaptation: (i) moving to a different region, and (ii) switching to a job in a different business function (we considered the business functions 'fabrication', 'R&D', 'management' and 'marketing', and mapped detailed information on the occupations of workers on these functions). First, workers who were exposed to high levels of import competition were more likely to move to another region or to switch to another business function indeed. Second, workers who moved managed to secure higher wages than otherwise similar workers who did not adapt, and the movers also reported higher levels of job satisfaction. Workers who switched to a job in a different business function also did better than their non-switching counterparts, but their job satisfaction was not higher.

In a second study, we focused on workers in The Netherlands. The available data did not allow for investigations into the effect of becoming more resilient to import competition by moving to a different region, but the information on the occupations of workers was much more detailed than for the German case. In this case, we found that switching from one occupation to another one for reasons that can be associated with import competition did not have implications for the wage earnings (relative to otherwise similar workers who did not switch to a different occupation). The effects on job satisfaction were positive, though.

Our research (the results of which should be corroborated by additional studies) suggests that raising the resilience of workers who are 'at risk' of the negative implications of increased globalisation could be enhanced by facilitating two types of adaptation, moving to other regions or switching to jobs in a different occupation or business function. Policies at the national level and policies at the EU level could complement each other.

The policies should enhance the opportunities of workers to be flexible.

- Policymakers cannot do much regarding the sacrifices that need to be made regarding social networks of workers and their families. Frequently, however, housing-related constraints play an important role. If it is difficult to sell or buy a house, or taxes associated with buying houses are high, workers whose job is at risk will find it harder to adapt by moving. Flexible housing markets can lower hurdles to adaptation.
- Policymakers can also lower the costs of adapting to import competition by streamlining pension regulations. In several European countries, workers who adapt by switching from one occupation to another face problems regarding institutional savings for the period after retiring. If job switches do no longer affect the expectations regarding post-retirement income negatively, workers will be less discouraged to adapt by finding jobs in different occupations.
- Switching between occupations or business functions is often hampered by a lack of skills. Workers in one occupation do not possess the required capabilities to be productive in a different one. Well-designed upskilling and reskilling policies could help in lowering such barriers. Policies regarding life-long learning could be helpful in this respect, provided that the educational activities that workers engage in are not exclusively related to the job they have. If, instead, firms and workers would be stimulated to also invest in skills they do not have but might be relevant in other occupations or even functions, these workers would be more resilient against changes in the intensity of import competition and it would be easier to adapt.

In summary: protectionist trade policies can support the groups of workers whose income and well-being are at risk due to increased globalisation, but at the expense of the overall gains in welfare that trade liberalisation brings. Domestic policies, however, can also support these workers, without missing out on the welfare gains.

Conclusions

Increased global trade has generated sizable welfare gains. The unusually rapid globalisation in the 1990s and 2000s have shown that these gains are often very unequally distributed over groups in society. Sizable groups suffer from the negative consequences of import competition, losing their jobs, experiencing low wage growth and not feeling satisfied with their jobs. For these groups in society, these negative impacts are larger than the gains of trade they experience in terms of lower prices for the products they buy. The voice of these groups has become louder. Policymakers thus face the challenge in designing policies that alleviate the negative consequences of trade as felt by these groups of mainly low- and medium-skilled workers, in order to continue to reap the economy-wide benefits of trade liberalisation.

In this policy brief, we report on outcomes of research that focuses on the labour market outcomes of two types of workers who adapt to increased import competition. The first type adapts to these threats, by either moving to another region (where job prospects are better) or by switching to a job in a different occupation (which is less at risk). The second group type does not adapt and stays put. By and large, we find that the labour market outcomes for the type of workers that adapt in one way or another are better than those who do not act in this respect. In summary, adapting pays off and helps in mitigating the negative consequences of trade.

These outcomes suggest that national and EU-wide policies that make it easier for workers to adapt to import competition are worthwhile to consider. Such policies could be related to housing, pensions and education (including reskilling and upskilling). Lowering the costs of adapting to shocks seem a promising way to reducing the inequalities associated with globalisation.

References for further reading

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