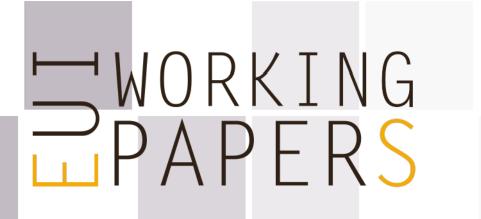


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Covid-19 and Systemic Resilience: Rethinking the Impacts of Migrant Workers and Labour Migration Policies

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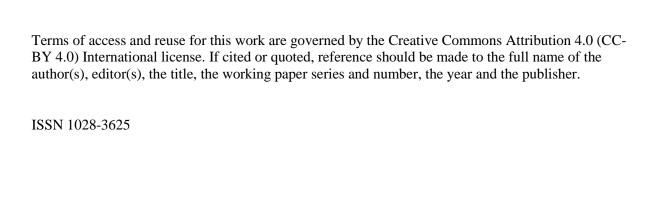
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Abstract

This paper argues that concerns about the resilience of essential services require a reassessment of the impacts of migrant workers and the design of labour migration and related public policies. The Covid-19 pandemic highlighted the high share of migrants among 'key workers' who deliver essential services, notably in agriculture and food production, health services and social care. We review existing insights on the role of migrant workers in essential services, which emphasise employers' incentives as well as different national policies and institutional settings. We introduce the notion of systemic resilience to this context and outline key determinants of systemic resilience that have been identified in several disciplines but not yet applied in the field of labour migration. Given the importance of essential services, the paper argues that bolstering resilience should be a key objective for policy makers, and systemic resilience should be a criterion in impact assessments of migrant workers and in the design of labour migration and related policies. We find that this requires broader approaches to consider entire systems for the provision of essential goods and services, more attention to the medium and long run, and thinking beyond the protection of domestic workers. As an agenda for new migration research, we discuss three types of comparative analysis needed to examine the various ways in which migrant workers might affect systemic resilience.

Keywords

Covid-19, essential services, systemic resilience, migrant workers, labour migration polices

1. Introduction^{*}

One of the central policy challenges posed by the Covid-19 pandemic has been how to protect and maintain essential economic activities and public services such as agriculture and food production, health services and social care, as well as key digital and non-digital infrastructure including transport and logistics. In the spring and summer of 2020, the health emergency and associated bans on movement within and across countries led to severe labour market shocks, including sharp increases in labour demand (e.g. in the health sector) and/or reductions in labour supply (e.g. in agriculture and the care sector). The outbreak of Covid-19 thus raised urgent questions for research and policy about the factors that promote and impede the resilience of the provision of essential goods and services during the current pandemic and anticipated future health shocks.

While governments restricted movement and access to workspaces at the height of the pandemic, certain jobs were declared 'essential', exempting them from the most severe restrictions and in some cases governments even requiring certain workers to go to work. Migrants play an important role in essential sectors in many high-income countries (e.g. Gelatt 2020; Fernández-Reino et al. 2020; Fasani and Mazza 2020). Consequently, these migrants - including those typically considered 'low-skilled' workers such as crop pickers, food processors, care assistants, and cleaners in hospitals – have in many such countries been designated 'key workers' whose supply needs to be protected and in some cases even expanded during the health emergency. For example, in spring 2020 the Italian government granted temporary legal status to migrants employed irregularly in agriculture and the care sector. Austria and Germany admitted migrants to work on farms and in care homes exempting them from their international travel bans. In the United States, arrangements were made to ensure foreign farm workers could obtain work visas even as normal consular operations were suspended. The United Kingdom announced the automatic extension of expiring visas of migrant doctors, nurses, and paramedics. These measures were widely accepted as necessary responses to the Covid-19 emergency but they raise important questions about whether, why, and to what extent migrant workers are 'needed' to provide essential services questions that have been the focus of research interest in recent years – and migrants' role in ensuring longer term resilience.

Resilience can be broadly understood as the ability to withstand, recover from, and adapt to unexpected external shocks (OECD 2020a). It has featured in some aspects of public administration and policy, including military and public health matters, but the role of migration and migrants in the resilience of essential economic activities and services has remained unexplored. Moreover, research on demand for migrant labour has primarily focused on employers' incentives and has not considered either the essential nature of these sectors nor the potential effects that prioritising *systemic resilience* might have on the demand for migrant workers. Indeed, except for resilience of destination country institutions in the case of irregular migration flows (Geddes 2015, Paul and Roos 2019), the concept of systemic resilience has been notably absent from research on migration and migration policy (Bourbeau, 2015).

This paper addresses this gap by beginning to build a theoretical basis for a new research agenda and policy debates about the role of migrant workers in the provision and resilience of essential services during the current pandemic and similar future shocks. It analyses why and how a concern for the resilience of essential services should make us rethink how the impacts of migrant workers are assessed and how labour migration and related public policies are designed. We integrate key insights on the role of migrant workers in addressing labour and skills shortages (section 2) and the (essentially

* This paper contributes to the "Migrants and Systemic Resilience Hub" (MigResHub), a new initiative based at the EUI's Migration Policy Centre (MPC) and developed in collaboration with Migration Mobilities Bristol at the University of Bristol.

This paper builds on the discussion in a research note prepared by the authors for the International Organization for Migration (IOM) in early 2020 (https://publications.iom.int/system/files/pdf/systematic-resilience.pdf).

disconnected) studies of the resilience of systems (section 3) to suggest how considerations of systemic resilience can be built into analyses and policy debates about the effects and regulation of labour migration (section 4). While the politics, governance, and strategies of resilience can be expected to vary across countries with different institutions and policies, taking systemic resilience seriously as a policy goal requires thinking transnationally and considering migrants' role and contributions not only in essential sectors in particular countries but also along global supply chains. Our discussion of key elements of a future research agenda on how migrants can shape systemic resilience (section 5) thus emphasises the importance of comparative institutional analysis that takes a transnational approach.

While our analysis is motivated by Covid-19 and the role of migrants in shaping systemic resilience to the current pandemic and similar future *health shocks*, the paper is also relevant for shocks with similar characteristics as the current pandemic, especially with regards to its transnational reach, relative suddenness of onset and impact, and threat to human health. Examples of shocks that may share these characteristics with Covid-19 and other pandemic shocks include environmental shocks with transnational reach (e.g. major earthquakes, tsunamis, and extreme weather events), man-made disasters (e.g. nuclear meltdowns), and failures of international infrastructure (e.g. protracted breakdowns of power networks or pipelines). These scenarios can all create challenges for essential services to continue operating in a suddenly more difficult and somewhat dangerous environment. Other types of shocks such as financial and economic shocks raise different issues (e.g. Strauss-Kahn 2020) and therefore require different policy responses with their own specific implications for the role of migrant labour in supporting systemic resilience.

2. Past learning: A need for migrant workers?

Many of the issues relevant to asking why and to what extent migrant workers are 'essential workers' are similar to those at the heart of the long-standing debates about the role of migrants in filling labour and skills shortages in specific occupations. The terms are familiar: employers and labour users often claim that migrant workers are "needed to do the jobs that local workers cannot or will not do". Sceptics argue that these claims often reflect employers' preferences for recruiting exploitable migrant workers over improving wages and employment conditions. Importantly, while migrants often represent a substantial share of the workforce in essential sectors, these shares vary significantly between countries (Fasani and Mazza, 2020) and these cross-country variations are linked to differences between national institutional and public policy frameworks for providing essential goods and services, and their interlinkages with global supply chains (e.g. Ruhs and Anderson 2010).

To analyse these issues, it is instructive to turn to the insights of the long-standing economic and sociological research literature on the characteristics and determinants of labour and skills shortages, employer demand for migrant labour, and alternative policy responses (e.g. Waldinger and Lichter 2003; Ruhs and Anderson 2010). Firstly, there is no universally accepted definition of a labour or skills 'shortage' and no single optimal policy response. Notably, the definition of shortage typically underlying employers' calls for migrant workers is that demand for labour exceeds supply at the prevailing wages and employment conditions. Raising wages should reduce shortages, but employers may be reluctant or unable to do so. Thus, considerations of wages and conditions as well as systemic constraints need to be central to debates about labour shortages, including in essential services. In particular, the relationship between flexibility for the employer (as potentially resilience enhancing) and precarity for the worker (which may undermine resilience) merits closer interrogation.

Similarly, how 'skills' are defined and understood in analyses and debates about 'skills shortages' is highly contentious. What is recognised and legitimated as 'skill' is socially constituted, unavoidably politicised, and often heavily gendered (Steinberg 1990; Bryant and Jaworski 2011; Sawchuk 2008; Fenwick 2006; Guo 2015). While in most immigration systems skill is treated as credentialised, acquired through education and measured through earnings, outside immigration regimes 'skills' has come to be used far more flexibly. The concept of 'soft skills' has been developed and applied to employee qualities and personal characteristics including attitude, presentation, social interaction etc. (Sawchuck 2008).

Employer-defined and constituted skills are likely to vary considerably by company, context, and country (Griuglis and Vincent 2009) and soft skills can be used to refer to characteristics that increase employer control over the workforce. Thus any discussion of 'skills shortages' needs to note that, in some occupations, the skills and 'work ethic' demanded by employers are partly or largely a reflection of employer preference for a workforce over which they can exercise particular mechanisms of control and/or that is prepared to accept wages and employment conditions that do not attract enough local workers.

In some states the Covid-19 pandemic saw public acknowledgement that 'low skilled' workers were providing services critical to social and economic functioning. Establishing resilience as a desirable goal might therefore require new ways of analysing and valuing unskilled or low-skilled workers' socioeconomic contributions. It may also require rethinking how skill is understood in practice, particularly the tendency to assume an association between skill and specialization. This association shapes understandings of the nature of skill with workers who have a large number of generalized competences and are often labelled 'low skilled'.

Previous research has also found that one reason employers seek to employ migrant workers is the additional means of control over migrants extended by immigration requirements, as workers are often not free to leave sponsoring employers (e.g. Anderson 2010). This highlights that immigration controls are not neutral 'taps' allowing in the necessary number of workers, but actively shape employment relationships and rights, creating a labour force with often quite specific constraints that differentiate them from citizens. During the pandemic, for example, some US employers saw migrant workers as less likely to become infected, because they were assigned to on-site accommodation and discouraged from contacts with the local population. Employers may also recruit migrants as a way of accessing networks of workers who can be hired for short periods at short notice. Such factors may support efficiency and resilience, but if so, at what cost to migrant workers themselves?

In theory, employers may respond to perceived staff shortages in different ways (Ruhs and Anderson 2010). These include: (i) increasing wages and/or improving working conditions to attract more citizens who are inactive, unemployed, or employed in other sectors, and/or to increase the working hours of the existing workforce (this may require a change in recruitment processes and greater investment in training and up-skilling); (ii) making the production process less labour-intensive by, for example, increasing the capital and/or technology intensity; (iii) relocating to countries with lower labour costs; (iv) switching to production (provision) of less labour-intensive commodities and services; and (v) employing migrant workers. Not all of these alternatives will be available to employers across different sectors and occupations – but the point remains that immigration is not the only nor necessarily the best response to a shortage, which also applies to essential services (compare Martin 2020).

Reliance on migrant workers in specific sectors and occupations partly reflects national 'system effects' that 'produce' domestic labour shortages. System effects arise from the institutional and regulatory frameworks of the labour market and from wider public policies such as immigration, welfare, education and training as well as housing policies (see, for example, Afonso and Devitt 2016; Wright 2012; Ruhs and Anderson 2010). Both system effects and social context are often outside the control of individual employers and workers and may be significantly (but not exclusively) influenced by the state. System effects point to the difficulty of constructing and implementing labour migration policy in isolation from labour market policy and wider economic and social policies and institutions. Cross-country differences in institutional and regulatory frameworks are an important reason behind substantial variation across countries in the reliance on migrant labour in the same occupation. This likely implies cross-country variation also in resilience strategies for the provision of essential services.

Finally, it is important to recognise that the role migrants can and should play in addressing perceived labour and skills shortages is a deeply political issue. Whether the best answer is more immigration, higher wages, greater mechanisation, or another alternative critically depends on whose interests policy is meant to serve, and how competing interests (e.g. between employers, workers from the domestic

labour market, employment and recruitment agencies etc.) are evaluated and managed. For analyses and debates about the role of migrants in shaping systemic resilience, this implies a politics of systemic resilience just as there is a politics of labour and skills shortages. This politics will influence how resilience is defined and measured, how it is governed, and – at least to some extent – which resilience strategies are given priority. Empirical research in this context therefore needs to consider carefully definitions and measurement issues and account for the strong role of policies and institutions (section 5).

3. Systemic resilience

While research on systemic resilience has been largely disconnected from migration analyses and policies, some of its basic concepts and insights are highly relevant to debates about the resilience of essential services, and how it may be shaped by migrant labour, during and after Covid-19.

The notion of a system's resilience originated in natural sciences such as physics and ecology, where it captures the tendency of the system (e.g. an ecosystem) to "bounce back" to roughly the state that prevailed before the shock. When this notion was imported into different fields of social science, however, it was recognised that systems in social science are typically in some process of evolution (see e.g. Robinson and Carson 2016). In this context, a system is considered resilient when its evolution is not permanently "thrown off course" (see Figure 1): after the shock, the system eventually returns to the evolutionary path that prevailed before the shock. A resilient system might also "bounce forward", emerging from the adjustment to the shock on a path that eventually rises above the initial path.

Figure 1 suggests a basic way to measure systemic resilience, which is a precondition for comparing systems in terms of their resilience. The total decline in the system's performance following the shock may be termed "total impact". The total impact should not be confused with the shock itself – the size of the total impact also reflects the resilience of the system, so that more resilient systems normally exhibit smaller total impacts from a given shock than less resilient systems. Another aspect is the total recovery time needed before the initial path is reached again: in more resilient systems, the total recovery time would typically be shorter than in less resilient systems. The two aspects can be combined into a single measure of systemic resilience, captured by the shaded area in Figure 1. It indicates the overall loss of performance that occurred following the shock. The lower the overall loss of performance, the more resilient the system. In some cases, a system will therefore be found more resilient than another even when it has experienced a greater impact, as this can be outweighed by a shorter total recovery time, and vice versa. Of course, the magnitudes of the 'impact' and 'recovery time' will critically depend on how the 'performance' of the system is defined and measured in the first place. Like defining and measuring resilience, this is also a political issue.

Various social sciences – including geography, management science, economics, development studies and public health – have produced and debated more detailed definitions of systemic resilience (e.g. Brand and Jax 2007). While the notion itself has remained rather vague, there is a striking similarity with regards to the features of a resilient system that have been identified. Here we consider two of these features, often called "flexibility" and "social capital" or "networks". In a figurative sense, a system may be hard to break (resilience) if it bends (flexibility) and/or if its fibres are supported by strong connections (social capital and networks).

Flexibility is used in a broad sense, as capacity to adapt within a short to medium time horizon. This may entail changing a process, the inputs employed in the process, the desired outputs or even replacing a process by an altogether different activity. For example, a business organisation can exhibit flexibility at the level of individual employees, who find workarounds and adjust their work schedules, and equally at the levels of organisational structures or corporate strategy (Woods 2006, Eichhorst et al. 2010). Inputs such as materials and suppliers may be changed as well as the outputs produced or where outputs are marketed.

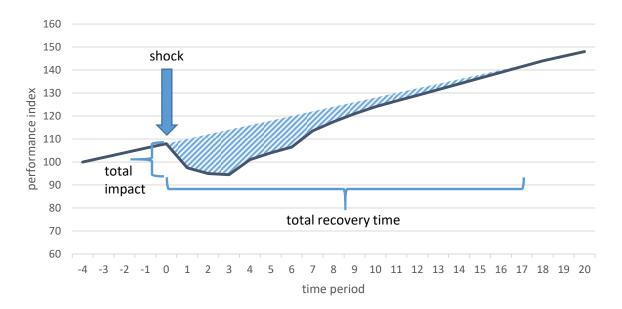


Figure 1: Illustration of systemic resilience

This example is also useful to illustrate the trade-off between flexibility and efficiency, i.e. using inputs to maximum effect. A frequently mentioned way to build flexibility and thereby resilience is the maintenance of several options to reduce dependence on a single option (see e.g. Martin and Sunley 2015). This, however, entails additional costs (Kamalahmadi and Parist 2016). Another way to build flexibility is diversity (see e.g. Mitchell and Harris 2012): a diverse system may be less dependent on any single element and exhibit greater capacity to adapt due to a greater diversity of individual experiences and ideas.

Under the heading of social capital and networks, a range of connections between (groups of) individuals has been described that support or reinforce individual actions. For example, hospital staff with a strong sense of making a common effort and commitment to each other may be invaluable for the hospital's resilience (Kruk et al. 2015). This involves very practical aspects such as sharing information, peer learning and stepping in for colleagues. Experimental evidence indicates that team building enables teams to better adapt to new challenges (Randall et al. 2011). Networks can function as a resource that can be drawn on during crises, be it based on a shared interest or based on reciprocity. Sufficiently large networks can provide insurance: the parts of the network that are currently unaffected by a shock can assist the parts currently most affected. Social capital and networks also relate to flexibility – a strong sense of community or highly responsive networks can allow for a rapid temporary increase in staff levels, for example.

Finally, the cross-cutting role of structural policies and institutions for resilience has been widely noted (e.g. Briguglio et al. 2005; OECD 2012). Through standards and regulations, policies can severely limit the scope for flexibility at the level of individuals, organisations or entire sectors of the economy. Similarly, centralised institutions can undermine the creation and functioning of decentralised networks. However, policies can also enforce a minimum scope for flexibility and risk-sharing: certain preparations and crisis interventions benefit the system as a whole even though it is not individually rational for (most) private entities to engage in them. In an extreme case, private businesses may be mandated to temporarily switch production towards medical equipment, for example. More frequently, however, policies and institutions exert influence by – knowingly or not – encouraging some choices while discouraging others. This can lead to significant differences in systems across countries, with important consequences for the resilience of these systems.

4. Introducing 'systemic resilience' into the analysis and regulation of labour migration

If resilience of the provision of essential goods and services is an important policy goal this will have consequences for research and policy on migration. It implies the need to rethink how the impacts of migrant labour are assessed and how labour migration and wider public policies are designed. This section highlights four areas of change that such a rethink would entail.

Shifting the focus to transnational systems

Migrants' impacts and labour migration policies are often defined in terms of occupations or skill levels and are virtually always approached in a national context (e.g. Migration Advisory Committee 2012). For example, a question typically raised about migrant admission policies is whether migrants address skills and labour shortages in specific occupations. However, considering resilience requires that entire systems be the unit of reference. The isolated assessment of migrants' employment in a particular occupation or skill level and in a single country misses potential effects on the functioning of the systems they are embedded in, including effects on systemic resilience.

Existing research on how systems shape the demand for migrant labour has mainly focused on the role of *national* institutions and policies. Attention to resilience requires broadening the analysis of systems to consider transnational supply chains, and how these interact with national policies. For example, a system for the provision of a particular essential good may include domestic production and supply chains as well as trade in intermediate or final products and associated supply chains abroad. Supply chains typically involve several economic sectors – the food supply chain involves agriculture, food processing, transport, wholesale and retail trade. Migrants can be important in numerous roles along supply chains both domestically and abroad. Half of the global supply of medical gloves appears to be produced by migrants in Malaysia, and developments during the Covid-19 pandemic partly undermined their ability to continue producing and exporting medical gloves (Khadka 2020). Resilience mechanisms often work across borders and demand international collaboration. This raises questions about when national borders enhance and when they undermine resilience.

For labour immigration policies, consideration of systemic resilience reinforces the relevance of the situation in migrants' origin countries. While migration policies of destination countries reflect their own national interest, the resilience of essential services is part of these national interests and requires a more transnational approach to impact analysis and policymaking on labour migration than is typically the case. Currently, most high-income countries' labour immigration policies are discussed and designed unilaterally with little (if any) consideration of the consequences for migrants' countries of origin (Ruhs 2013). More cooperative labour migration policies such as bilateral or multilateral migration schemes based on agreed standards and communication channels with origin countries could improve systemic resilience. For example, in a crisis, destination countries could draw on such schemes to quickly increase the supply of migrant labour with certain skills or work experience, such as nurses or returning seasonal workers.

If resilience strategies in destination countries lead to a greater demand for migrant labour, this can threaten resilience in origin countries. Global care chains, e.g. nurses from Europe going to the US while nurses from the Philippines go to Europe, are an example of how emigration can create shortages in migrants' countries of origin (Yeates 2010). By seeking to increase resilience of their essential services, destination countries could therefore 'export' vulnerabilities to origin countries. If on the other hand the resilience strategies in destination countries lead to lower demand for migrant labour, this would reduce remittance flows to origin countries. When this happens as a crisis response, e.g. due to border closures for seasonal migrants, an economic contraction in destination countries can be passed on to origin countries. In case only the origin country experiences a crisis, temporary return of some emigrants could make an important contribution to the systemic resilience of its essential services. More generally, greater global resilience requires that systemic resilience also becomes a policy goal in origin countries and is supported by destination countries.

From protecting the employment of citizens¹ to protecting the provision of essential services

The protection of the employment opportunities for citizens is typically a key consideration in assessments of the impacts of immigration, in public debates about migrants, and in the design of labour migration policies. Migration impact assessments usually include analyses of the effects of immigration on the wages and employment of citizens (e.g. Migration Advisory Committee 2012). Public debates about immigration are often characterised by an 'us versus them' frame that foregrounds the (presumed conflictual) relationship between migrants and citizens (e.g. Anderson 2013). In almost all countries, most labour immigration policies (except for the most highly skilled migrants) include a 'labour market test' that requires employers to provide evidence of efforts to search for workers domestically before applying for a work permit for migrant workers. There are obvious political explanations for these approaches and policies based on conventional thinking: governments need to be seen to give some priority to their citizens in accessing national labour markets which necessitates the existence of rules that protect employment opportunities for citizens.

How to protect and enhance the resilience of the provision of essential goods and services is an overarching (new) objective that might reduce concerns about protecting employment opportunities for citizens – because the primary issues do not relate to efficiency or distribution but to the protection and stability of the provision of essential services. In other words, given that essential services are necessary for basic social functioning and people's survival, the 'ends' (resilience of provision) can become much more important considerations than the 'means' (e.g. what combination of migrants and citizens provide the service). While this might lead to lower barriers for the recruitment of migrants, prioritising systemic resilience could also lead to deteriorating working conditions and greater exploitation among migrant workers in essential services, justified by the need not to endanger the functioning of essential services.

Covid-19 exposed the often precarious employment conditions of 'key workers' who work in contexts that increase their vulnerability to infection and are often employed on temporary contracts with limited rights. Trade unions and migrant activists protested that while some work was recognised as "essential", workers themselves were treated as "disposable" (Coleman, 2020; Dias-Abey, 2020). Many commentators called for stronger rights and greater security for existing migrants in essential services, as well as more legal pathways and opportunities for future migrants to work in these occupations. These debates raise the important broader question of how the socio-economic vulnerabilities of migrants employed under restricted rights shape their role in facilitating systemic resilience.

From short term to long term

Considering systemic resilience requires a change in temporal framing. Most analyses and policy debates on migration are focused on the short term, but a concern with systemic resilience demands a longer-term view. While there has been a considerable increase in recent years in studies that analyse the long-term consequences of migration (e.g. Sequeira et al. 2020), they have not, to the best of our knowledge, looked at how migrants shape systemic resilience.

Drawing lessons from past events (including Covid-19) requires us to attend to future 'extreme' contingencies in current decision making, thinking about long-term processes and short-term system dynamics concurrently (Cavelty, Kaufmann, Kristensen 2015). Since extreme events arise rarely, valuing resilience means thinking in the medium to long term, and its attainment may mean trading off short-term gains including profit margins (for employers) and electoral success (for politicians). Different stakeholders are subject to different pressures to think in the short term. For democratic

While 'citizens' and 'migrants' are typically counterposed in public debate in many states it over-simplifies and overlooks the fact that many residents may not be citizens yet have the right to unrestricted access to the national labour market (e.g. non-citizens with permanent residence status).

politicians, incentives are weighted very heavily towards pursuing short-term objectives, but resilience requires a time horizon that extends beyond the electoral cycle. These kinds of pressures also feature in debates about sustainability which, like resilience, demands a shift to more long-term thinking.² However, resilience also requires an explicit awareness of risk, and even unquantifiable uncertainty.

The shift in temporal framing will also need to accommodate the temporalities of migrant decision-making. It is not new to note that people may temporarily tolerate harsh working conditions for the promise of a better future. Recent research has examined the imbrication of temporalities, public policies and migratory decision-making in certain contexts (see for example Griffiths et al. 2013 for a review and more recently Mavroudi et al. 2017). This work has explored subjective experiences of time including how this is shaped by immigration policies. However, it has so far not been connected to other public policies, and the focus has been on personal and familial endurance rather than systemic resilience.

A new politics of labour immigration

Given the inherently political nature of migration, taking systemic resilience seriously as a policy goal, and making the above-described changes, will require a new politics of labour migration especially with regards to what is currently termed medium and low-skilled labour migration. This new politics will need to facilitate and encourage policy debates and collective decision-making that embrace some difficult trade-offs for societies in destination countries: let wages and prices in social care rise or recruit migrants to fill shortages at existing wages? Finance the excess capacities in healthcare that are needed for emergency situations or minimise costs and rely on crisis response policies? Rely on migrant workers to maintain domestic food production or allow for more imports of food?

In a post-Covid-19 world, debates and decisions on these trade-offs need to go beyond the conventional short-term focus on efficiency (what are the economic costs and benefits of immigration today?), welfare (what are the fiscal effects of migrant workers in a particular year?) and distribution (what are the impacts of migrant workers on different groups of citizens?) and consider longer-term concerns including systemic resilience in the provision of essential goods and services. This will entail deciding on how much systemic resilience is ultimately desired, as there may be a point where the short-term costs of raising resilience further outweigh the long-term benefits. It will also require intensified international collaboration in the context of growing pressures towards protectionism. Given the debates about how essential services fared during the Covid-19 pandemic and the role played by migrants in this context, there may now be greater scope for both debating these difficult trade-offs and engaging in greater international cooperation.

5. A new agenda for comparative migration research: how do migrants shape systemic resilience?

There has not yet been research on how international migration affects the systemic resilience of essential services. The Covid-19 pandemic has highlighted the contributions migrants make to the provision of essential economic activities and services, both in countries where these goods and services are consumed/accessed and along global supply chains. Migrants' jobs and their behaviour in these jobs may well differ from those of citizens in ways that matter for resilience. For example, recalling the features of resilient systems identified in section 3, migrant workers might be especially flexible, or conversely, immigration requirements might reduce flexibility. Similarly, migrants' social capital may play roles in transnational networks that are relevant during crises. Thus, the employment of migrants could affect both the magnitude of the decline in performance of a system following a shock as well as the recovery time (see Figure 1).

See the UN Sustainble Development Goals, https://www.un.org/sustainabledevelopment/development-agenda/).

Examining the link between migrants and systemic resilience requires *comparative* research at several levels. Migration is only one among various factors affecting resilience. A comparative approach is needed to disentangle the effects of migrant workers from the impacts of other factors, especially the characteristics of citizens employed in essential services and the effects of policies and institutions. For example, the resilience of the provision of health services in a particular country is likely to be shaped by its general systemic characteristics including how work is organised, regulated and has been prepared for a crisis. At the same time, migrant workers can affect resilience in various direct and indirect ways, many of which might not be obvious and need to be "discovered" through research and experience. Therefore, we do not attempt to provide a list of concrete research questions for comparative analysis. Instead, we identify three types of comparative research set-ups that might shed light on how migrants shape systemic resilience of essential services: comparisons between migrants and citizens within one system (e.g. a system for providing social care in a particular country), comparisons across systems (e.g. across systems for providing care in different countries), and comparisons of the politics of resilience strategies.

Comparing migrants and citizens employed within the same system

The first type of comparative research explores effects on systemic resilience that are specific to migrants and do not arise for citizens even when working in the same jobs. There are a number of reasons why such migrant-specific effects can arise, including the migratory process: in the case of temporary migration, labour supply is conditional on ongoing possibilities to migrate. In the case of more permanent migration, it is conditional on the renewal of residence and work permits. The Covid-19 pandemic highlighted that these conditions can translate into migrant-specific vulnerabilities for systemic resilience: border closures prevented migration, quarantine delayed and discouraged migration, and status renewals became uncertain. Ad-hoc policies mitigated these problems but did not fully resolve them (section 1). Migrants might also choose to stay away from the destination country or to leave the country, as was observed for some migrants working in social care in Germany.³

However, the possibility to recruit migrants from abroad can also be an important source of resilience. From the perspective of destination countries when domestic sources of labour and skills are under strain during a crisis, migrants can be a temporary "back-up" from abroad, provided the origin country is not as badly affected as the destination country. Such temporary support can be arranged through cross-border networks (formal or informal), and migrants are well-positioned to create cross-border networks. In the context of established bilateral or multilateral migration schemes, recruitment of migrants for essential services could be organised especially quickly.

In the destination country, unlike citizens, migrants face constraints imposed by immigration controls, and this could affect systemic resilience. Work and residence permits are often tied to a particular employer, which rules out changing jobs and equates losing the job with losing the right to residence. Therefore, migrants are often especially committed to their current job even under the difficult conditions of a crisis, thereby contributing to systemic resilience. As discussed earlier, employment restrictions can make migrants much more exploitable than citizens, and some employers might lower employment conditions in a way that has adverse impacts on systemic resilience. Similarly, migrants' access to local healthcare and child care is often restricted (especially for irregular migrants), which can undermine their ability to work. In Portugal, for example, most migrants (including applicants for asylum) were temporarily granted the same access to healthcare as citizens.⁴ Finally, medium and low-skilled migrants often have limited rights to family reunification (Chaloff and Poeschel 2017). Migrants

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See a blogpost by A. Safuta and K. Noack, available at https://www.compas.ox.ac.uk/2020/a-pandemic-and-then-what-the-effects-of-the-coronavirus-pandemic-on-migrant-care-workers-in-germany/

Euronews article dating from March 29th, 2020, available at https://www.euronews.com/2020/03/29/coronavirus-portugal-grants-temporary-citizenship-rights-to-migrants

living more often alone than citizens may be advantageous in a pandemic but lack of family support could be detrimental in other crises.

In addition to the process of migration and the related effects of migration controls, the individual migration experience could matter for systemic resilience. The fact that migrants needed to adapt to the new environment in the destination country might mean that they adapt to a crisis situation comparatively easily. If they previously worked in similar roles in the origin country, this might help them develop workarounds: migrants might think more "out of the box" because they are aware of different approaches. Diversity of work teams in terms of prior experiences, talents or training has been linked to stronger team performance (see e.g. Horwitz and Horwitz 2007).

Fourth, migrants' average age and health characteristics may differ from those of citizens. Emigration often takes place at a young age and so migrants might on average be comparatively young while they work in the destination country. This may matter for resilience, as young persons faced a lower risk of falling ill from Covid-19 (Promislow 2020). It may also affect their adaptability. In addition, migrants might self-select based on the strength of their health (see e.g. Lariscy et al. 2015). A "healthy-migrant effect" would play a role for systemic resilience, notably during pandemics. If, on the other hand, migrant workers are poorly housed, they can face an especially high risk of infection (Koh 2020).

For most of these differences between migrants and citizens, the implications for resilience can be studied within a single system, as long as it employs both migrants and citizens in substantial numbers. Using observations on both groups over time (at least before and after a shock), one can examine empirically how migrant workers fared, behaved, and affected the resilience of the provision of a particular essential service compared with citizens.

Comparing migrants' roles across systems

The role of migrants in shaping systemic resilience may be largely determined by policies, regulations and institutions that may differ between particular essential services and between countries (section 2). This means that an effect ascribed to migrant labour might reflect the structure of an essential service – for example, a structure that relies on the strong involvement of migrant labour. In order to reach reliable empirical conclusions for research and policy, it will therefore be important to distinguish between effects specific to migrants (as discussed above) and effects from certain roles that migrants play in the specific institutional structure of an essential service. In other words, we need to study comparatively how different institutions and policies (such as different institutional designs of the care system) shape the resilience of the provision of an essential service, and what this means for the role of migrants.

For example, if national immigration controls allow limiting the employment of migrants to specific parts of the country (a policy that varies considerably across countries), labour migration policy can be used to assign migrant health professionals to positions in rural areas — and a sufficient presence of health professionals in rural areas may be important for the systemic resilience of healthcare. However, in other contexts such a policy might undermine resilience: migrants tend to be more geographically mobile within the destination country (Boman 2011), and such flexibility can become particularly important during a crisis.

In systems for essential services that rely on flexible labour markets, migrants might work disproportionately in roles with low pay, non-standard working hours, and limited contracts. If the existence of these jobs affects systemic resilience (either positively through e.g. enhanced flexibility, or negatively through e.g. poor working conditions), migrant workers impact on resilience. Research has found that the availability of migrant labour can affect the skills mix and use of capital in production and may in some cases expand the number of labour-intensive jobs (e.g. Lewis 2011). This suggests that migrants play specific roles in systems and can affect systemic resilience by influencing some of the institutional characteristics of the system itself.

When analysing the role of migrants within different systems for providing an essential good or service, it is important to consider the transnational dimension. The resilience of a supply chain is often dependent on laws and policies in a number of different jurisdictions, including the migration and labour policies of countries other than that of the country of final destination. Thus importing certain crops for example does not per se reduce reliance on migrant labour systemically, although it might alleviate national political concerns about this reliance by effectively outsourcing them to other countries. Such interdependencies through supply chains highlight the need for international collaboration in order to increase systemic resilience.

The following questions thus arise for comparative research on the role of migrants across countries with different systems for providing an essential service: how do systems that strongly rely on migrant labour perform in terms of systemic resilience compared with systems that make much more limited use of migrant labour? In other words, what does it mean for resilience when an essential service has come to rely heavily on migrant labour, compared with systems that have moved towards greater mechanisation, employment of citizens at rising wages, or reliance on imports (and thus greater use of migrants in the supply chain abroad)? Such comparative research can draw on cross-country differences in the reliance of essential services on migrant labour, differentiating by migrants' roles and relating this to observed differences in resilience.

Comparing the choice and determinants of resilience strategies across systems

Building on research that assesses the effects of migrants on resilience within and across systems, it is important to ask whether and why particular resilience strategies are more or less likely to be adopted in different national contexts. We need to understand the factors that constrain and influence the (non-adoption of) particular resilience strategies by national governments, which requires comparative political and institutional analysis. It also requires that we examine how resilience strategies in particular countries are related to the institutions and policies of other states. For example, as Covid-19 revealed, facilitating labour immigration during a global pandemic requires that sending states facilitate labour emigration.

As discussed above, policy responses to Covid-19 could include a change in the use of migrant labour within a given system (i.e. without changing the broader institutional and policy framework of the system) or a 'regime switch' to a different system (e.g. a change to a social care system with different institutional features that are more supportive of systemic resilience). The political choice among these strategies can be influenced by a range of factors. A first obvious factor are the material interests of different groups and the effects of different resilience strategies on them. A change in the use of migrant workers (e.g. in their numbers, the roles they fill, and/or the rights they are given) will create costs and benefits for different political actors and groups, and the same holds for a 'regime change' such as a significant change in labour market regulations and/or associated welfare policies. The distributional and other consequences of different strategies for improving systemic resilience can be expected to play an important role in whether or not particular policies are adopted (compare Martin 2020). Similarly, stakeholders will seek to influence what exactly qualifies as an essential good or service. A comparison of official lists of essential services published by Italy, Spain and the United States, for example, reveals a strong overlap but also notable differences (Poeschel 2020).

Effects and path dependencies of institutions and associated social norms are also likely to matter for the choice of resilience strategy. A long tradition of regulating labour markets and societal norms that value high degrees of socio-economic security, solidarity, and social protection might significantly constrain an increase in the reliance on migrant workers on temporary contracts, to make the provision of a particular essential service more flexible and thus more resilient. Regime change will depend on the characteristics and rigidities in the prevailing institutions and norms. Again, this may vary across countries and thus play an important role in explaining the adoption of different resilience strategies.

Third, public attitudes to labour migration and concrete resilience strategies are likely to matter as well. An increase in the use of migrant labour in essential services may well lead to a rise in low-skilled immigration, as many essential jobs are in low-wage occupations. We know from existing research that public attitudes to labour migration critically depend on the skill and perceived contributions of the migrant, and in most countries they are much more positive to higher-skilled than to low-skilled migration (see, for example, Hainmueller and Hopkins 2014). An important question for research is whether and how Covid-19 has impacted on these attitudes, and specifically whether the recent apparent public appreciation of key workers in many countries has improved public attitudes toward lower-skilled migrant workers doing essential jobs. Comparative research could explore whether and why the impact of Covid-19 on public attitudes differs across countries, as this may have significant consequences for the resilience strategies considered most acceptable by policymakers.

Conclusion

The Covid-19 pandemic has raised new and urgent research and policy questions about the factors that shape the resilience of essential services to major shocks, especially with regards to food and agriculture, health services, and social care. There is little doubt that epidemics and pandemics will happen again but their effects will depend critically on actions to improve the resilience of the provision of essential economic activities and services. As migrants often represent substantial shares of 'key workers' albeit to different degrees across countries, it is important to analyse their role in shaping systemic resilience in different institutional contexts. Existing research on the effects and regulation of labour migration has largely focused on 'efficiency' (costs and benefits of immigration) and 'distribution' (effects of immigration on citizens) as key outcomes of interest without paying significant attention to issues related to systemic resilience.

This paper provides a basic framework and conceptual building blocks for analysis and policy debates about the role of migrant workers in the provision and resilience of essential services. Bringing together key insights from research on labour migration (specifically the role of migrant workers in addressing labour and skills shortages) and work on systemic resilience in other disciplines, we explain why and how a concern for the resilience of essential services should make us rethink how the impacts of migrant workers are assessed and how labour migration and related public policies are designed. Taking systemic resilience seriously as a policy goal requires us to shift the focus of analysis and policy debates from the role of migrants in specific occupations and sectors in particular countries to transnational systems of production and service provision. There is a need for greater attention to medium and long-term effects of labour migration as well as to the role of international supply chains and international collaboration. This in turn might result in a reduction in the relative importance typically attached to the protection of citizens in labour migration policy-making. Analyses of migrants and systemic resilience also demand greater consideration of the inter-linkages between migration and other public policy areas which, among other things, requires a multidisciplinary approach.

Some of these changes – such as the greater emphasis on the long term, the analysis of migrants' effects along the entire transnational supply chain, and linking migration policies with other public policies – would help address what in our view have been long-standing gaps and deficiencies in research and policy debates on labour migration. The new research agenda we propose, to help understand the link between migrants and systemic resilience, requires a *comparative* approach at several levels, to disentangle the effects of migrant workers on systemic resilience from the effects of policies or institutions. We need comparative analysis of how migrants and citizens affect systemic resilience *within given systems*, and of how and why resilience varies *across systems* characterised by different institutional and policy frameworks and, therefore, different degrees of reliance on and roles for migrant labour. The comparative institutional analysis also needs to pay attention to politics and systemic changes over time, considering whether, how, and why different systems change, including but not limited to their use of migrant labour.

The new analysis of the role of migrant labour in shaping systemic resilience across institutional contexts that we propose in this paper is closely connected to, but different from, discussions about restrictions on low-skilled labour migration and the exploitation of migrants in low-waged jobs. As we point out in Section 5, analysing how migrants can shape systemic resilience requires a consideration of how pre-crisis policies and institutions, the crisis itself and any policy responses to it affect migrants themselves. This type of analysis can produce important and, we would argue, urgently needed insights on the many inter-relationships and trade-offs between facilitating greater systemic resilience through particular uses of migrant labour (e.g. through the enhanced flexibility that migrants on temporary contracts may provide) and the employment conditions and socio-economic security of migrants. We thus consider our rethink and approach as encompassing rather than only complementary to analysis and debates about the effects of the pandemic and policy responses on migrants themselves.

One of the criticisms of resilience-thinking is that it takes socio-economic problems as matters of fact that must be adjusted to rather than challenges that can and must be tackled in their own terms. We recognise that it is often important to understand structural causes and not simply ameliorate symptoms. However, shocks do occur and some are outside of human control. In a globalised and interconnected world, it is increasingly likely that these shocks are themselves globally interconnected. Building systemic resilience is not attempting to cement the status quo but rather to prepare for uncertainties in the future.

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